



## AGENDA: REGULAR SESSION

WEDNESDAY, MARCH 16, 2022

WASCO COUNTY BOARD OF COMMISSIONERS

<https://wascocounty-org.zoom.us/j/3957734524> OR Dial [1-253-215-8782](tel:1-253-215-8782) Meeting ID: 3957734524#

While these virtual options are provided, we cannot guarantee connection or quality of the call.

**PUBLIC COMMENT:** *Individuals wishing to address the Commission on items not already listed on the Agenda may do so during the first half-hour and at other times throughout the meeting; please wait for the current speaker to conclude and raise your hand to be recognized by the Chair for direction. Speakers are required to give their name and address. Please limit comments from three to five minutes, unless extended by the Chair.*

**DEPARTMENTS:** Are encouraged to have their issue added to the Agenda in advance. When that is not possible the Commission will attempt to make time to fit you in during the first half-hour or between listed Agenda items.

**NOTE:** With the exception of Public Hearings, the Agenda is subject to last minute changes; times are approximate – please arrive early. Meetings are ADA accessible. For special accommodations please contact the Commission Office in advance, (541) 506-2520. TDD 1-800-735-2900. If you require an interpreter, please contact the Commission Office at least 7 days in advance.

*Las reuniones son ADA accesibles. Por tipo de alojamiento especiales, por favor póngase en contacto con la Oficina de la Comisión de antemano, (541) 506-2520. TDD 1-800-735-2900. Si necesita un intérprete por favor, póngase en contacto con la Oficina de la Comisión por lo menos siete días de antelación.*

9:00 a.m.	<b>CALL TO ORDER</b> Items without a designated appointment may be rearranged to make the best use of time. Other matters may be discussed as deemed appropriate by the Board. <b>Corrections or Additions to the Agenda</b> <b>Discussion Items:</b> <a href="#">Seufert Tower Lease</a> ; <a href="#">USFS Patrol Agreement Modification</a> ; <a href="#">NCPHD Budget Committee Appointment</a> ; <a href="#">AOC Committee Representative</a> (Items of general Commission discussion, not otherwise listed on the Agenda) <b>Consent Agenda:</b> <a href="#">3.2.2022 Regular Session Minutes</a> (Items of a routine nature: minutes, documents, items previously discussed.) <b>Public Comment at discretion of Chair</b>
9:30 a.m.	<a href="#">Planning Commission Decision Appeal 921-18-000086-PLNG</a> – Daniel Dougherty
11:30 a.m.	<a href="#">Planning:</a> <a href="#">DLCD Grant</a> <a href="#">Facility Use MOU</a> } Kelly Howsley-Glover
11:45 a.m.	<a href="#">Wasco County Owned Land Sales</a> – Jill Amery
11:55 a.m.	<a href="#">Wasco County Office Printer Fleet</a> – Andrew Burke
BREAK	
2:00 p.m.	<a href="#">Gorge Commission Update</a> – Krystyna Wolniakowski
2:15 p.m.	<a href="#">Point in Time Count</a> – Kenny LaPoint
2:30 p.m.	<a href="#">MCEDD:</a> <a href="#">State Parks Grant Application</a> <a href="#">Work/Strategic Plan</a> } Carrie Pipinich
3:00 p.m.	<a href="#">State Homeland Security Grant Applications</a> – Sheridan McClellan
	<b>COMMISSION CALL</b>
	<b>NEW/OLD BUSINESS</b>
	<b>ADJOURN</b>

If necessary, an Executive Session may be held in accordance with: ORS 192.660(2)(a) – Employment of Public Officers, Employees & Agents, ORS 192.660(2)(b) – Discipline of Public Officers & Employees, ORS 192.660(2)(d) – Labor Negotiator Consultations, ORS 192.660(2)(e) – Real Property Transactions, ORS 192.660(2)(f) To consider information or records that are exempt by law from public inspection, ORS 192.660(2)(g) – Trade Negotiations, ORS 192.660(2)(h) – Conferring with Legal Counsel regarding litigation, ORS 192.660(2)(i) – Performance Evaluations of Public Officers & Employees, ORS 192.660(2)(j) – Public Investments, ORS 192.660(2)(n) – Security Programs, ORS 192.660(2)(n) – Labor Negotiations





WASCO COUNTY BOARD OF COMMISSIONERS  
REGULAR SESSION  
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This meeting was held on Zoom

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or call in to [1-253-215-8782](tel:1-253-215-8782) Meeting ID: 3957734524#

PRESENT: Kathy Schwartz, Chair  
Steve Kramer, Vice-Chair  
Scott Hege, County Commissioner  
STAFF: Kathy Clark, Executive Assistant  
Tyler Stone, Administrative Officer

Chair Schwartz opened the session at 9:00 a.m.

Additions to the agenda:

- An additional Grant Application has been added to the 3:00 p.m. agenda item
- Recognition of contributions made by Sherry Holliday, County Commissioner
- BOPTA Update

**Discussion Item – Seufert Tower Lease**

County Sheriff Lane Magill explained that this is the main base radio station for the Sheriff's Office and the Fire Department. The original lease was from 1998 and is out of date. There have been changes to the ownership of the property and the legal language needed to be revised. County Counsel had a conflict; therefore, the lease has been reviewed by our Conflict Counsel. It was also sent to the Fulton family's representative and they have approved the lease. The site is on the upgrade list to be addressed in the next couple of years. The lease is reviewable on an annual basis.

**{{Vice-Chair Kramer move to approve the Seufert Hill Communications Site Lease between Gard & Maxine Fulton, LLC and the Wasco County Sheriff's Office. Commissioner Hege seconded the motion which passed unanimously.}}**

**Discussion Item – USFS Forest Patrol Agreement Modification**

Sheriff Magill explained that every year we have been allocated \$18,000 to patrol the Mt. Hood National Forest; a Special Deputy is hired for that work. The U.S. Forest Service is short staffed locally and has allocated \$36,000 for this year. That will add more hours and help offset our expenses.

**{{{Commissioner Hege moved to approve USFS Grant Agreement 18-LE-11060600-005 Modification 006. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

**Discussion Item – NCPHD Budget Committee Appointment**

Chair Schwartz, who also serves as Chair for the North Central Public Health District Board, explained that she reached out to former County Commissioner Scott McKay to recruit him for this position. He has been approved by the NCPHD Board; he is very qualified and has been a good liaison.

**{{{Commissioner Hege moved to approve Order 22-009 appointing Scott McKay to the North Central Public Health District Budget Committee. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

**Discussion Item – AOC Committee Representative**

Vice-Chair Kramer explained that this is a subcommittee of the Association of Oregon Counties' Natural Resource Committee. He said he has acted as our representative to that subcommittee and is happy to continue in that role if it is the will of the Board. He said we will need to send in a letter notifying AOC of our designation in order to comply with the Committee's bylaws.

**{{{Commissioner Hege moved to appoint Commissioner Steven D. Kramer to represent Wasco County on the AOC Federal Land Management Subcommittee. Chair Schwartz seconded the motion which passed with the following vote: Chair Schwartz "Yay;" Commissioner Hege "Yay;" Vice-Chair Kramer "Abstain."}}}**

**Public Comment – Proposed Navigation Center**

Shelly Anslinger of The Dalles said she has questions regarding the Navigation Center that she would like the Board to consider prior to approving funding.

- She noted that the Center is intended to serve the region but it appears that all of the funding is coming from Wasco County – will any other entities in the region be contributing?

- She asked who will pay to sustain the facility once it has been built.
- She asked if the Center will be built in phases or all at once.
- She said the use of the building is confusing and asked if there is a definite plan.
- She observed that they will not be serving community meals from the Center but it has a commercial kitchen in the plan – why?
- She noted that the pallet shelters seem to work where they are but are in the plan to be moved to the Center property – why?

Ms. Anslinger concluded by saying that she does not feel like the location, near car dealerships and a farm store, is a good place if they want to access services, shops and transportation as stated in their plan.

Bob Schultens of The Dalles said he does not have a problem with the concept of the Navigation Center but has issues with the location and the transparency of the process. He noted that Mid-Columbia Community Action Council (MCCAC) has asked the County for money. He said that in the past the property was within an Enterprise Zone (EZ) to encourage economic development. That changed in November without notifying the community. He said they should have polled the community. They looked at other locations. If they are going to put it in a business area, they should talk to the businesses. He pointed out that there are 3 hotels in that area and the Navigation Center will be the first thing visitors see which will discourage repeat visits.

Commissioner Hege asked about Mr. Schultens' comment regarding the EZ. Mr. Schultens said that he is not sure, but the property used to be a benefit to be a businesses in that area. It was posted in the newspaper, but most people do not get their information from the newspaper any more. If the Board is going to put money toward a project, they should know what is happening. At the City zoom meeting, they would not let the opposition speak until they realized they had allowed supporters to speak. He said this is already a high-crime area; his business has had people coming through the lot breaking off side-view mirrors on the cars. The City Police tell them they cannot do much more than take a report. He said they have had 62 issues brought to the police without much response. This Center will create more problems. The Hospice program in the area has had problems with trees being burned. He said he wants to know the plan for better protection. There are people living close to this property and they have children. He said this is the first community organization they have spoken to about this issue.

Rod Peterson of Peterson's Mobile Village in The Dalles said he has 90 units and his residents are very concerned about this. It is a family park and he has a lot of concerns – the kids play in a field right across the street from the proposed location for the Navigation Center.

Chair Schwartz explained that there is a hearing scheduled for 9:30 a.m.; she said that people are welcome to return at the end of the day to continue public comment. She estimated that they would be able to start that between 3:00 and 3:15 p.m.

**Agenda Item – Planning Commission Decision Appeal  
921-18-000086-PLNG**

At 9:31 a.m. Chair Schwartz opened the hearing on agenda item 921-18-000086-PLNG. This is an application for approval of the following:

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forestry" to "Forest Farm";
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

The property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon. The property is more specifically described as Lot 2 North 12 East Section 22; Tax Lot 4400.

This is a quasi-judicial application and therefore the decision must be based on the relevant criteria. Those criteria include: Oregon Revised Statute (ORS) 197.732; Oregon Administrative Rules (OAR) Chapter 660, Division 4, Sections 0025, and 0028; Planning Goal 2, Part II Exceptions, (OAR 660-015-0000(2)); and Planning Goal 4, Forest Lands (OAR 660-015-0000(4)). The application also must comply with applicable provisions in the Wasco County Comprehensive Plan. Those standards are described in the staff report. Generally, unless otherwise noted, if an application is found to be consistent with the LUDO it is considered consistent with the Comprehensive Plan

She described the procedure as follows:

1. Disclosing any ex parte contact, bias or conflicts of interest.

2. Describe the Rules of Evidence.
3. Planning department staff will present their report
4. Opportunity for the applicant to speak
5. Those who wish to speak in favor of the proposal
6. Those who wish to speak in opposition of the proposal
7. Applicant rebuttal
8. Questions by Commissioners of staff, applicant, proponent, or opponent
9. Close the hearing and record and begin deliberation. Only Commissioners, or staff if questioned, may contribute to this discussion.

She asked if any of the Board members had an actual or potential conflict of interest. There were none

She asked if any of the Board members have a bias or ex parte contacts to disclose. There were none.

She asked if any Board members had conducted a site visit. Commissioner Hege replied that he has seen the property many times. Vice-Chair Kramer said he has driven by and seen maps.

Chair Schwartz explained the Rules of Evidence as follows:

- Please do not present irrelevant, immaterial, or unduly repetitious testimony or evidence.
- Evidence should be of a quality that a reasonable person would rely on it in the conduct of their daily affairs.
- Testimony and evidence must be directed toward the criteria applicable described in the staff report or other criteria you believe applies to the application.
- Failure to raise an issue with in sufficient detail to allow us the ability to respond to it may prohibit you from raising it to the Land Use Board of Appeals.

She added that the failure to raise constitutional or other issues relating to proposed conditions of approval, again in sufficient detail to allow us to respond to the issue, may prohibit you from raising the issue in circuit court.

Chair Schwartz asked staff to present their report.



Senior Planner Daniel Dougherty noted that information has been submitted since March 3<sup>rd</sup>, that information is not in the Board Packet. Information was submitted by the appellant on March 15<sup>th</sup> and has been added to the record. Mr Wilson also submitted two additional pieces of information on March 15<sup>th</sup>, the first is a letter from U.S. Forest Service Unit Forester Kristin Dodd regarding best management practices; the second is a citation concerning the national resource conservation services soil rating system. Mr. Sargetakis, attorney for the Sheila Dooley and Jill Barker, also submitted written comment yesterday. In addition, Sheila Dooley submitted additional materials including a report issued by Valley Science & Engineering that provided review, summary and conclusions that seem to refute Mr. Wilson's submitted soil survey which was conducted by Gary Kitzrow. Because Sheila Dooley's comments and soil report were submitted at 11:30 p.m., staff has not been able to complete more than a cursory review of those materials. All submissions have been added to the record.

Additionally, one of the two managing soil scientists for Valley Science & Engineering sent email communication to staff prior to staff's receipt of Ms. Dooley's submission. Mr. Dougherty read the text of the email exchange into the record:

From Valley Science and Engineering's Brian Rabe (3.14.2022):

"Good Afternoon, Daniel- I want to confirm that a request to change the zoning from F280 to FF10 requires the property to predominately consist of Class 7 and Class 8 soils. Please confirm and advise. Thank you."

Daniel Dougherty's response on March 15, 2022:

"Good Morning, Soil classification is definitely one factor; but it is not necessarily the only factor that is considered for a Goal Exception, change of land use and zone designation."

Reply from Mr. Rabe on March 15, 2022:

"Thank you. My understanding is that LCC is one of the 'go/no go' criteria for a change from resource zone to non-resource throughout this state, i.e. predominately Class 7 and Class 8 east of the Cascades. That is what I am asking to confirm."

Mr. Dougherty stated that staff has not been able to perform the actual research necessary to respond to that question.

Mr. Dougherty continued by reviewing his slide presentation, saying that the presentation would include an overview of the request and area involved, a history and scope of the remand hearing, applicable rules and questions from the Board (the complete slide presentation is included in the Board Packet):

Mr. Dougherty explained that the request is as follows:

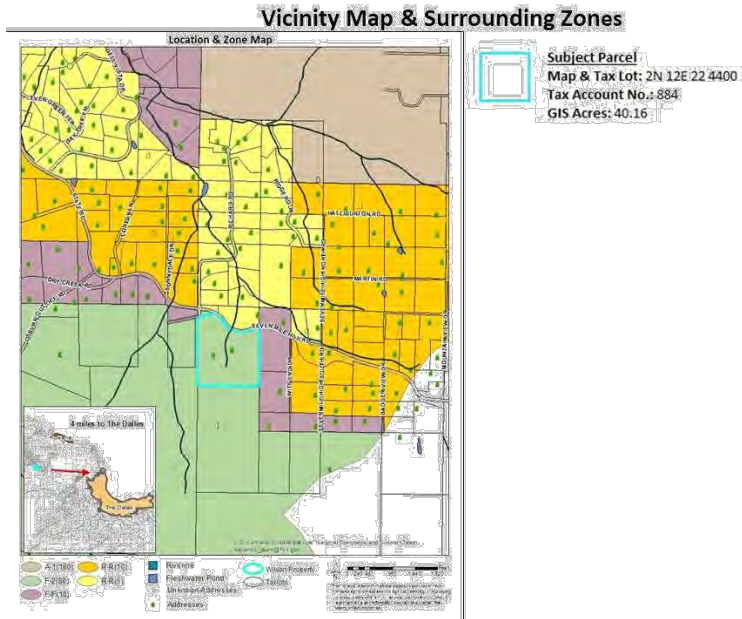
- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forestry” to “Forest Farm”;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections)

The scope of the Remand Hearing is: Staff findings and the Planning Commission’s recommendations made were limited to OAR 660-004-0025 and OAR 660-004-0028.

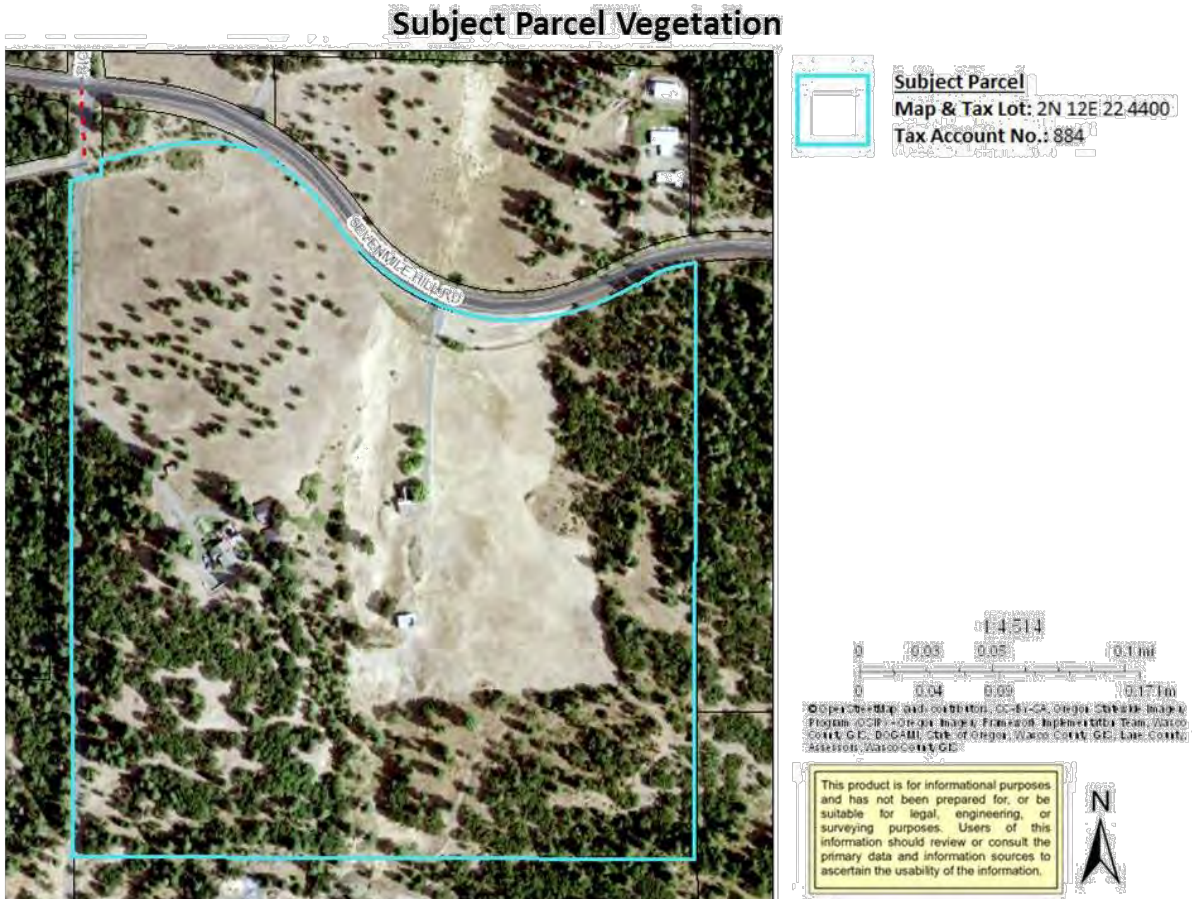
As illustrated on the map below, the subject parcel for this request is located at Township 2 North, Range 12 East, Section 22, Tax Lot 4400. The subject parcel and parcels to the south and southwest are within the Forestry land use designation & Forest (F-2) Zone (minimum 80 acres).

Parcels to the north, northwest, and east are within the Residential land use designation & are within Rural Residential Zones R-R (5) & R-R (10) (minimum acreage 5 & 10 acres). Lands also fall into the Forest-Farm land use designation within the Forest-Farm [F-F(10)] Zone (minimum acreage 10 acres). The purpose of the forest-farm zone is to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space. Essentially a buffer zone between residential & resource uses.

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The 2018 Oregon Statewide Imagery Program image provides a fairly updated view of vegetation growth on the subject parcel. Scattered tree and shrub vegetation exists on the northwest portion of the property, but generally, tree growth is isolated in the east, south, and southwest portions of the property.



The image below was submitted with the applicant's remand request packet.

Existing tree growth and areas without or lacking significant tree vegetation are self-evident. Of note, the Bonneville Power Administration (BPA Line) easement area that runs northwest to southeast is clearly visible in this image.



Mr. Dougherty explained the timeline for the Remand Hearing as follows:

- Initial application submitted on May 23, 2018
- WC-Planning Commission Hearing on April 2, 2019 (Recommended Approval)
- WC-Board of Commission Hearing on June 5, 2019 (Approved)
- Appealed to the Land Use Board of Appeals (LUBA)
  - Decision Remanded on January 14, 2020
- Request for Remand Hearing received on June 13, 2021
- Planning Commission Hearing on December 7, 2021
  - OAR 660-004-0025 (Recommend Denial)
  - OAR 660-004-0028 (tie (3-3) vote, Recommend Denial per WC-PC Bylaws)

The Land Use Board of Appeals (LUBA 2019-065) addressed four “Assignments of Error” that challenged Wasco County’s record evidence finding and conclusions that approved Mr. Wilson’s goal exception request under OAR 660-004-0025, Exception Requirements for Land Physically Developed to Other Uses, and OAR 660-004-0028, Exception Requirements for Land Irrevocably Committed to Other Uses. LUBA agreed with the appellants on all of the Assignments of Error and the decision was remanded.



Mr. Dougherty explained the facts and analysis pertaining to OAR 660-004-0025 as follows:

OAR 660-004-0025 subsection (1) provides:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1).*
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. (The complete rule can be found in Attachment C Page 12). Specifically, the rule requires:*
- a. Specific area(s) be shown on a map or described and keyed to the appropriate findings of fact;
  - b. Identify the extent and location of the existing physical development
  - c. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

Exception requirements for land physically developed to other uses: Applicant must demonstrate that because the parcel is so physically developed, resource use is precluded.

Situation at the Site of Exception:

- Specific area(s) must be shown on a map or described and keyed to findings;
- Identify the extent and location of the existing physical development;
  - Structures, roads, sewer and water facilities, and utility facilities
- Allowed uses cannot be used to justify physically developed exception



The applicant submitted the following site map illustrating the built environment and approximated fire buffer areas for roads, structures, and power lines. It is important to remember that roads & access drives cannot be used to justify a physically developed exception. The Applicant estimates that 32.81% of the subject parcel is physically developed; however, there was no land use criteria provided demonstrating how the applicant calculated the fire fuel break areas.



## OAR 660-004-0025 Applicant Site Map

### Applicant Estimates

- Power Lines / 15' from center line
- Structures / 50' (fire fuel break)
- Seven Mile Hill Road / 50' buffer
- Driveway Easement / 50' buffer

Total = 571,187 ft<sup>2</sup>

### Total

32.81% of total area

(See Attachment D Exhibit 4)

Staff analyzed the required fire safety criteria and provided the fire buffer zone area calculation methodology and estimates in the staff report. Staff utilized Chapter 10 Fire Safety Standards to calculate fire buffer zone areas for existing structures and access drives. Specifically, Sections 10.120 & 10.140, which require 50' fire fuel break areas for structures & 10' fire fuel break areas for private access drives.

Staff analysis did not address the unconfirmed 50' fire and maintenance buffer areas that the applicant calculated for the "driveway easements" or "7 Mile Hill Road". However; Staff confirmed the "public road maintenance area" with the

Wasco County Public Works Director Arthur Smith.

Director Smith provided the following comment on November 15, 2021: "We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard." (See SR Page 24 for complete quote).

Staff also confirmed by phone with Wasco Electric Cooperative regarding the 15 foot from the center line maintenance easement for power lines.

Given the available data and using the criteria in Chapter 10, Staff estimates that approximately 18% of the subject parcel is physically developed and no longer available for resource uses.

Staff's approximations were based on best available information and applicable land use criteria (see map below). The estimates do not necessarily reflect absolute accuracy, and should not be considered to unconditionally negate the applicant's submitted calculations for physical development.

#### Staff Information & Estimates

- *Chapter 10 Fire Safety Standards*
  - *Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break*
    - *50 foot fire fuel break around structures*
  - *Section 10.140 - Access Standards - Providing safe access to and escape from your home*
    - *A fire fuel break extending 10 feet either side of the center line of the driveway is required*
- Public Road Maintenance Area (4-6' on each side of county road)
- Power Line Maintenance Easement Area (15' from centerline)



OAR 660-004-0025

### Staff Estimates

- Actual Development = 14,620 SF
  - Structural Fire Break = 113,500 SF
  - Access Drive Fire Break = 67,740 SF
  - Power Line Easement = 112,800 SF
  - Public Road Maintenance = 6,690 SF
- Total = 315,350 SF

### Total

18% Physically Developed

Staff Facts and Analysis pertaining to OAR 660-004-0025 are as follows:

- Given the available data and using the criteria in Chapter 10, Staff estimates that approximately 18% of the subject parcel is physically developed and no longer available for resource uses.
- Staff's approximations were based on best available information and applicable land use criteria. The estimates do not necessarily reflect absolute accuracy, and should not be considered to unconditionally negate the applicant's submitted calculations for physical development.

Staff Findings and Planning Commission Recommendation pertaining to OAR 660-004-0025 are as follows:

- *Sandgren v. Clackamas County*, facts must demonstrate the property is physically developed to such an extent that all resource uses are precluded.
- *Dooley et al v. Wasco County*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.



**PLANNING COMMISSION RECOMMENDATION:** Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommended that the Wasco County Board of Commissioners deny the request based on the physically developed exception.

Mr. Dougherty explained the facts and analysis pertaining to OAR 660-004-0028 as follows:

*Exception Requirements for Land Irrevocably Committed to Other Uses* Subsection 1 provides

(1) *A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable.*

- Impracticable is the standard not “Impossible”; however, as
- Provided for in *1000 Friends of Oregon v. Yamhill County*, the impracticable standard is a demanding one.
- Impracticability of allowed resource use is demonstrated through the relationship between the exception area (subject parcel) and the lands adjacent to it.
- • Among other criteria within the rule, subsections (2)(a), (2)(b), and (2)(c), require that information about the subject parcel, adjacent parcels and their relationship with each other be submitted and analyzed.

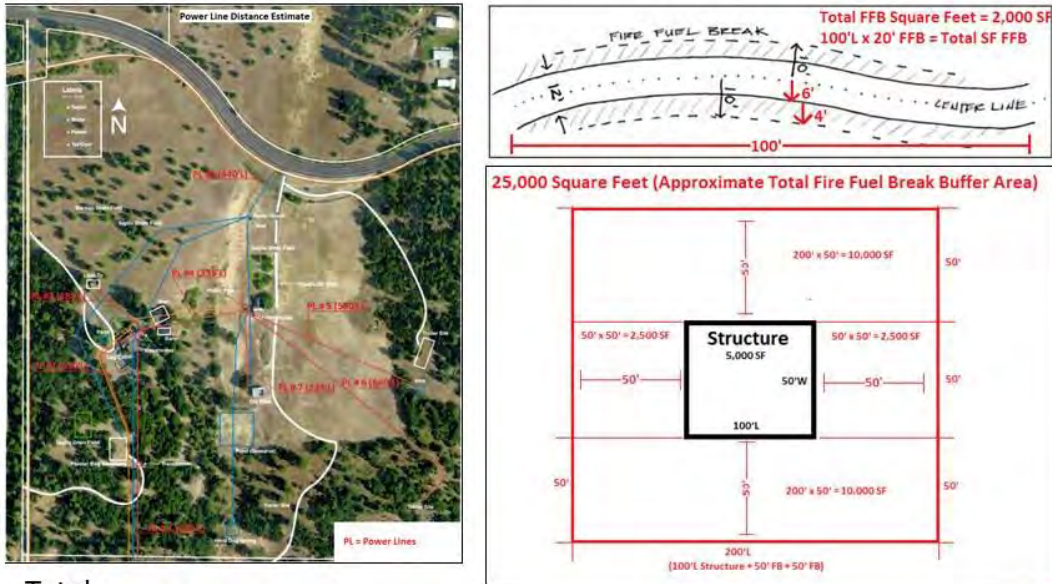
However, Mr. Dougherty explained that the focal point of analysis is the relationship between the subject parcel and adjacent uses.

For analysis based on OAR 660-004-0028(2)(a), Mr. Dougherty began with the analysis of the characteristics of the exception area; the analysis was divided into:

- Physical Development & Fire Buffer & Maintenance Area Estimates; and then the
- Undeveloped Areas & Soils of the subject parcel (exception area).

Mr. Dougherty reminded the Board that he previously had talked about the physical development of the parcel. Approximately 18% of the subject parcel is physically developed and no longer available for resource uses (see map below).

### Physical Development & Fire Buffer & Maintenance Area Estimates



**Total**  
Staff Estimates: 18% Physically Developed  
Applicant Estimates: 32% Physically Developed

*Pioneering pathways to prosperity.*

As seen on the map (below), the parcel contains a:

- Delineated non-fish bearing wetland;
- Additionally, you can see where areas of the property are mowed. The applicant provides that there's no history of crop use with the exception of grass hay grown in the pasture area
- Denser tree growth is found at the east edge, south, and southwest areas of the parcel.



### OAR 660-004-0028(2)(a) Undeveloped Areas & Soils

- North-South Wetland (non fish bearing)
- Grass hay farmed in pasture area
- Tree growth on east edge, south, and southwest areas

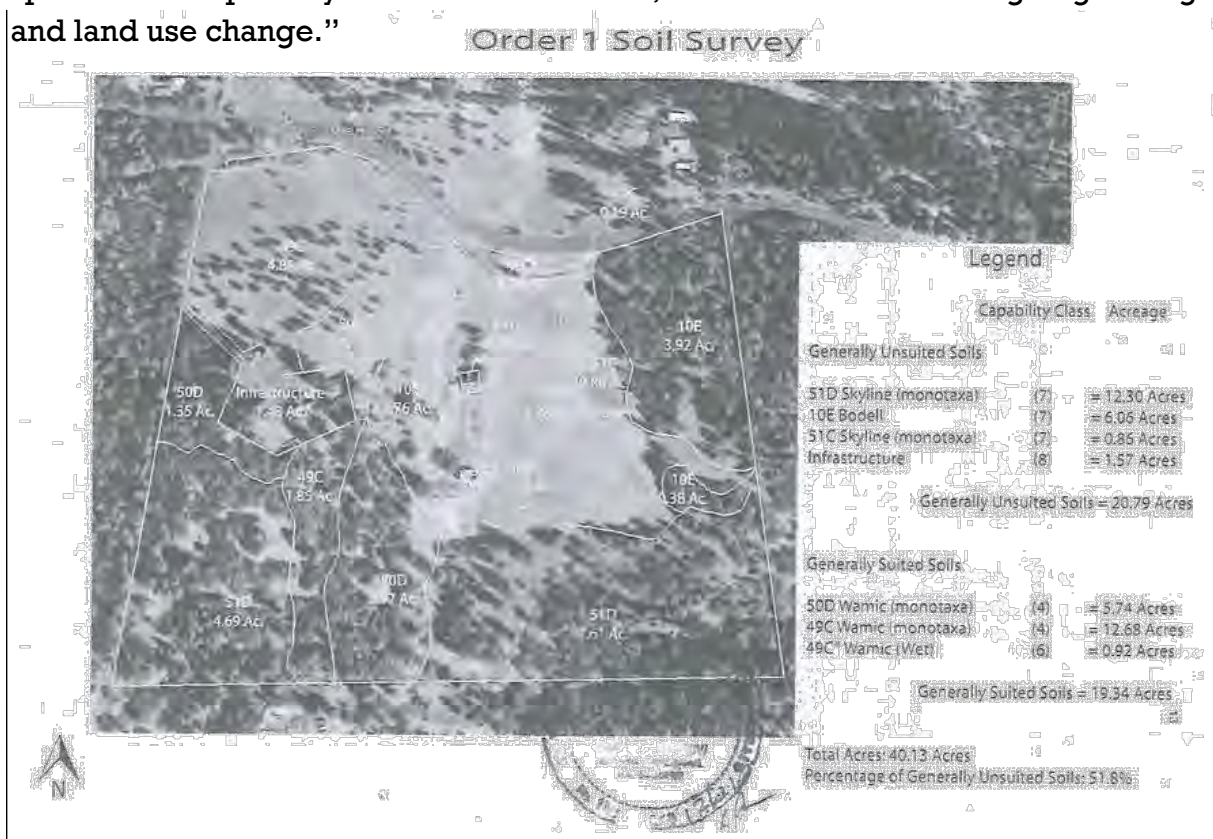


Regarding the undeveloped areas and soils (see Survey Map below), Mr. Dougherty stated that:

Remand materials contained an Order 1 Soil Survey that was conducted on the subject parcel. This survey is titled **“Wilson – Order 1 Soil Survey”** in the Staff Report.

- Order 1 (or first order) surveys are made of very detailed information about soils, generally in small areas such as the subject parcel. Order 1 soil surveys are more specific to a given area than Order 3 soil surveys.
- The previous application utilized soil data derived from the 1982 Order 3 United States Department of Agriculture (USDA) “Soil Survey of Wasco County, Oregon, Northern Part”.

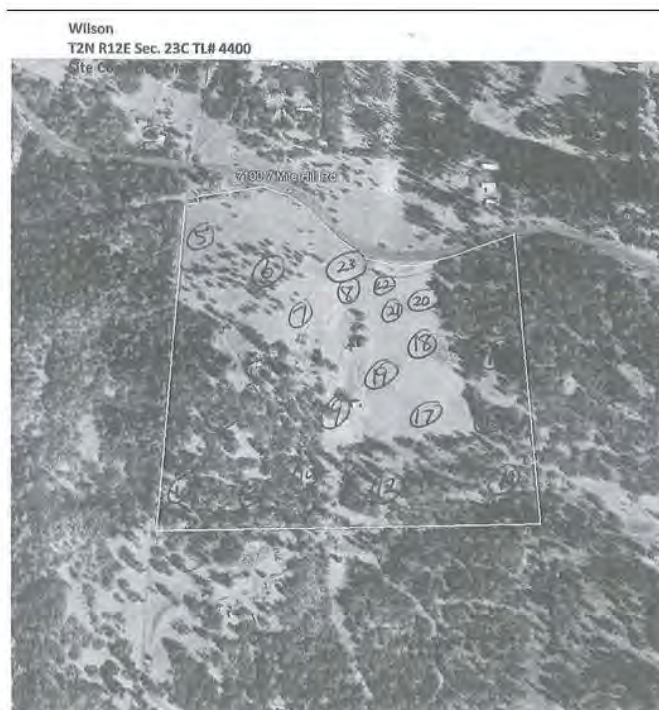
Regarding the difference between Order 1 & 3 Soil Surveys, Mr. Kitrow provided additional comment on March 3, 2022, stating that “An Order 3 map is very broad and non-specific in make-up by definition. The current USDA Soil Survey for the study-acres was completed at an *Order 3 level*. The associated USDA soil maps were published at a scale of 1: 24,000. Order 3 soil surveys are general, non-site-specific soil inventories designed to be used by ranchers, farmers and timber operators and oftentimes in Wasco County yield soil maps showing two or more non-specific soil mapping units (51D Wamic-Skyline Complex is a good example). The intent of these surveys was *NOT* to provide site specific soil capability information for small, finite land bases undergoing zoning and land use change.”



The Oregon Department of Land Conservation and Development (DLCD) Farm Forest Specialist Hilary Foote, found the soil survey to be complete and consistent with reporting requirements for agricultural soils capability.

The Order 1 Survey was conducted by Soils Scientist Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist. There is no indication that the information provided within the soil report is incomplete or inaccurate. Staff deems the facts, findings, and conclusions within the “Wilson – Order 1 Soil Survey”, to be complete, consistent, and accurate.

Specifically, the “Wilson – Order 1 Soil Survey” provided soil testing analysis for 23 specific areas on the subject parcel, where findings found that the USDA Order 3 survey appears to over represent Wamic soil mapping units “given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region.”



#### **Undeveloped Areas & Soils**

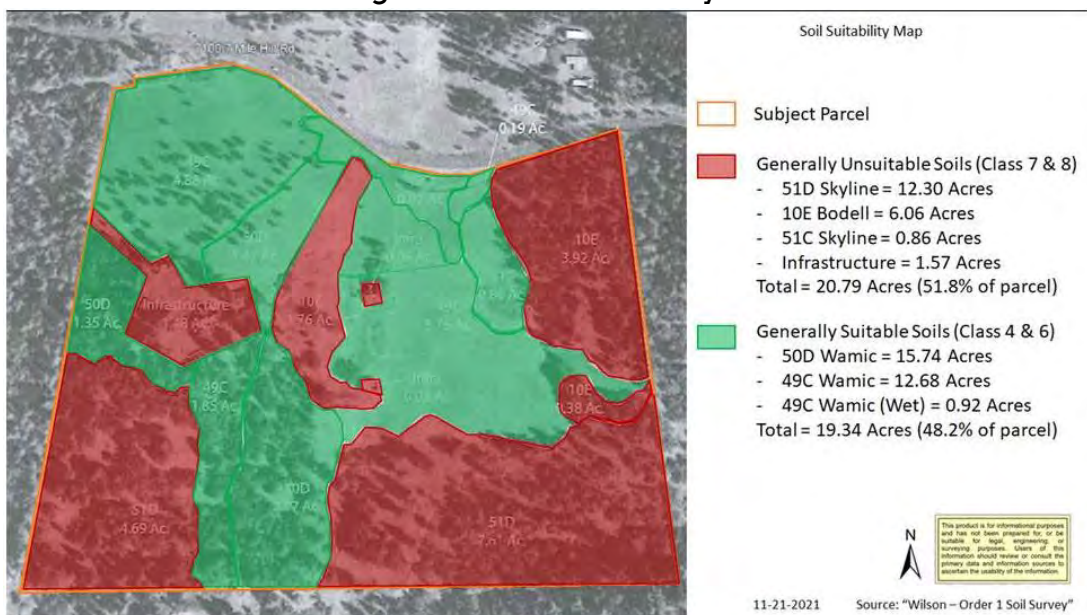
##### **“Wilson – Order 1 Soil Survey”**

- Found to be complete and consistent according to DLCD Farm Forest Specialist
- Conducted by Soils Scientist Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist.
- Survey contains detailed soil testing analysis for 23 study areas on subject parcel

Staff colorized the soil suitability map to better illustrate the survey’s mapped soil units and suitability. The Order 1 Survey’s conclusion provided that:

- A preponderance of the subject parcel (51.8% / 20.79 Ac.) is made up of the shallow, generally unsuited Class 7 Skyline, Bodell soil units and Class 8 Infrastructure.

- In order to illustrate specific details about soils, staff utilized The “Soil Survey Single Phase Interpretation Sheets in Oregon” or better known as the “Green Sheets”, and obtained comment from Mr. Kitzrow.
- On November 26, 2021, Mr. Kitzrow provided the following comments concerning the Skyline soil mapping unit: “The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a Non-Commercial Forest Soil. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.”
- The parcel also contains (48.2% / 19.34 Ac.) of Class 4 and 6 Wamic units. As provided in the “Green Sheets”, these soil mapping units are generally suitable and have the capability to provide:
  - Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed;
  - Ponderosa Pine (20-49 cubic feet per acre potential yield category);
  - No Windbreaks;
  - Fair or Poor rating for Wildlife Suitability





- This soil data is derived from a 1982 published Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”
- As shown, the soil mapping units as illustrated actually reflect Mr. Kitzrow’s commentary concerning the prevalence of the Wamic Mapping Units throughout the area.
- Importantly, the map also demonstrates that what the Land Designation is for a property does not necessarily equate to a drastic difference in the Soil Mapping Unit. For example, the Order 3 Map provides that four distinct tax lots (3 of which are within the Forest-Farm Zone and 1 within the Forest (F-2) Zone) all primarily contain the same 49C Wamic soil mapping unit.
- In comparing the Order 3 and Order 1 surveys, Mr. Kitzrow’s March 3, 2022, comments provide that “Indeed, Wamic soils are very dominant in this region as a whole. Nonetheless, given the natural variability of

landforms and geomorphic surfaces within the subject property, it makes perfect sense that our Order I Soil Survey for this property would be able to and in fact has delineated out several different and contrasting soil mapping units.”

- Mr. Kitzrow continues, “The poorer capability (Class 7) soils Skyline and Bodell are prominent soils within the subject property. Because there are trees present on these two soils is NOT the governing factor to determine *Soil Capability Class*.” Mr. Kitzrow also provides “In short, the NRCS map scale is too broad, (1 :24,000) (Order III) covers too much area with too little data in the area of Mr. Wilson's property and adjacent properties.”

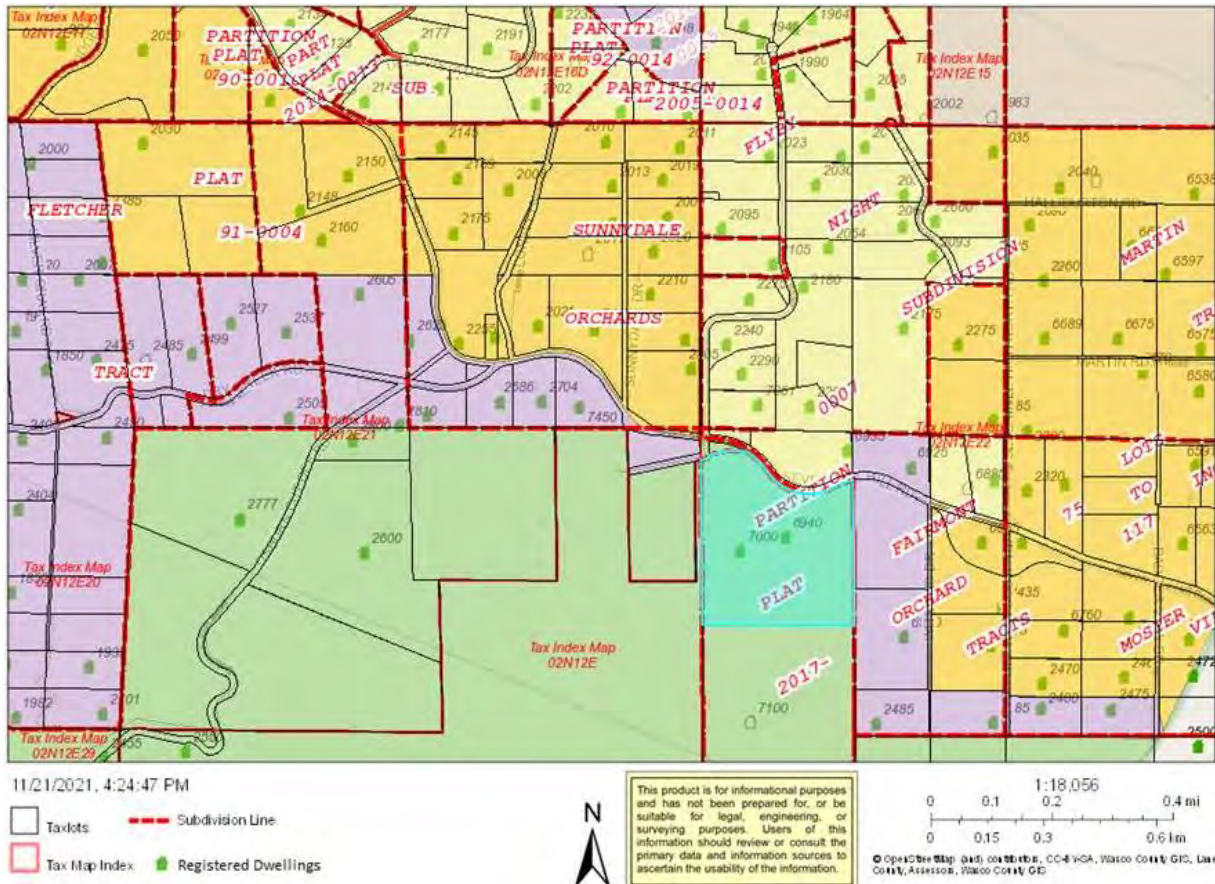




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The primary use in these areas is Residential use however, there does exist small scale farming and forestry uses. (If you have a ten-acre residential parcel, you might also conduct some form of farming or forestry)

Currently, lands within the Forest-Farm (F-F 10) Zone (Non-Resource) require a Conditional Use Permit for non-forest or farm related residential development.

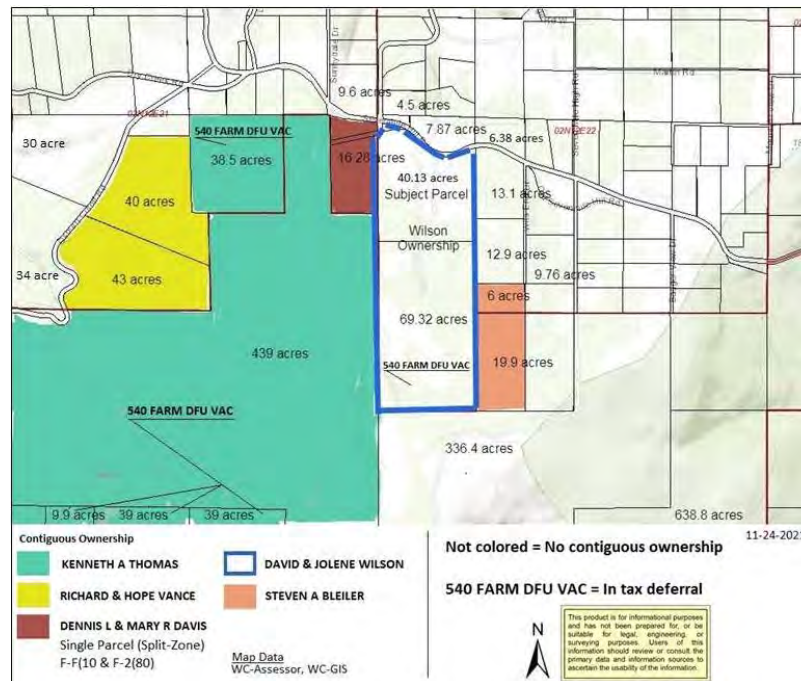


Regarding the map below, lands to the south, and generally towards the southwest, and southeast were, according to past and present staff research, created by deed prior to state & county-wide zoning regulations. A caveat is that because these lands were not created cleanly through a duly recorded subdivision plat, historical research can be difficult.

However, research indicates that that the current 439 acre adjacent southwest parcel owned by Kenneth Thomas and the 40 acre and 43 acre parcels owned by Richard & Hope Vance were all three reduced in size through a series of two partitions occurring in 1984 and 1985 (MIP-84-118 & MIP-85-103). Further west, the 30 acre and 34 acre parcels were also reduced in size through a partition (MIP-86-103). Essentially, these forest lands were not created by deed and left

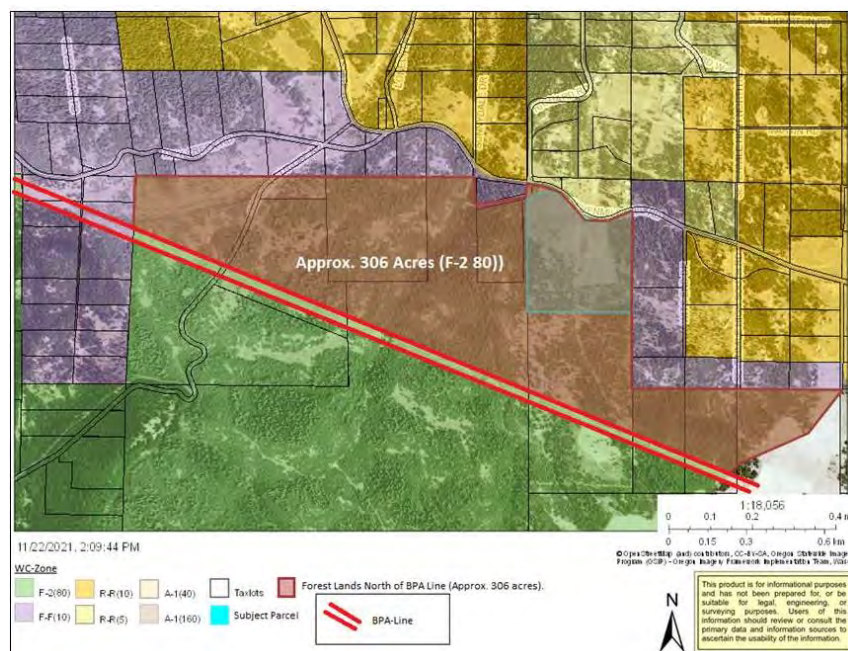
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alone. The parcel sizes have been altered where land use law allowed. The map also illustrates common land ownership of property in the area, and also indicates those parcels in forest-farm tax deferral, as provided by the WC-Assessor's Office. The subject parcel is not within tax deferral.



The following map illustrates the approximate 150 foot Bonneville Power Administration Transmission Line Easement that runs northwest-southeast. Staff estimates that approximately 306 acres of forest lands are located north of the line in this area.

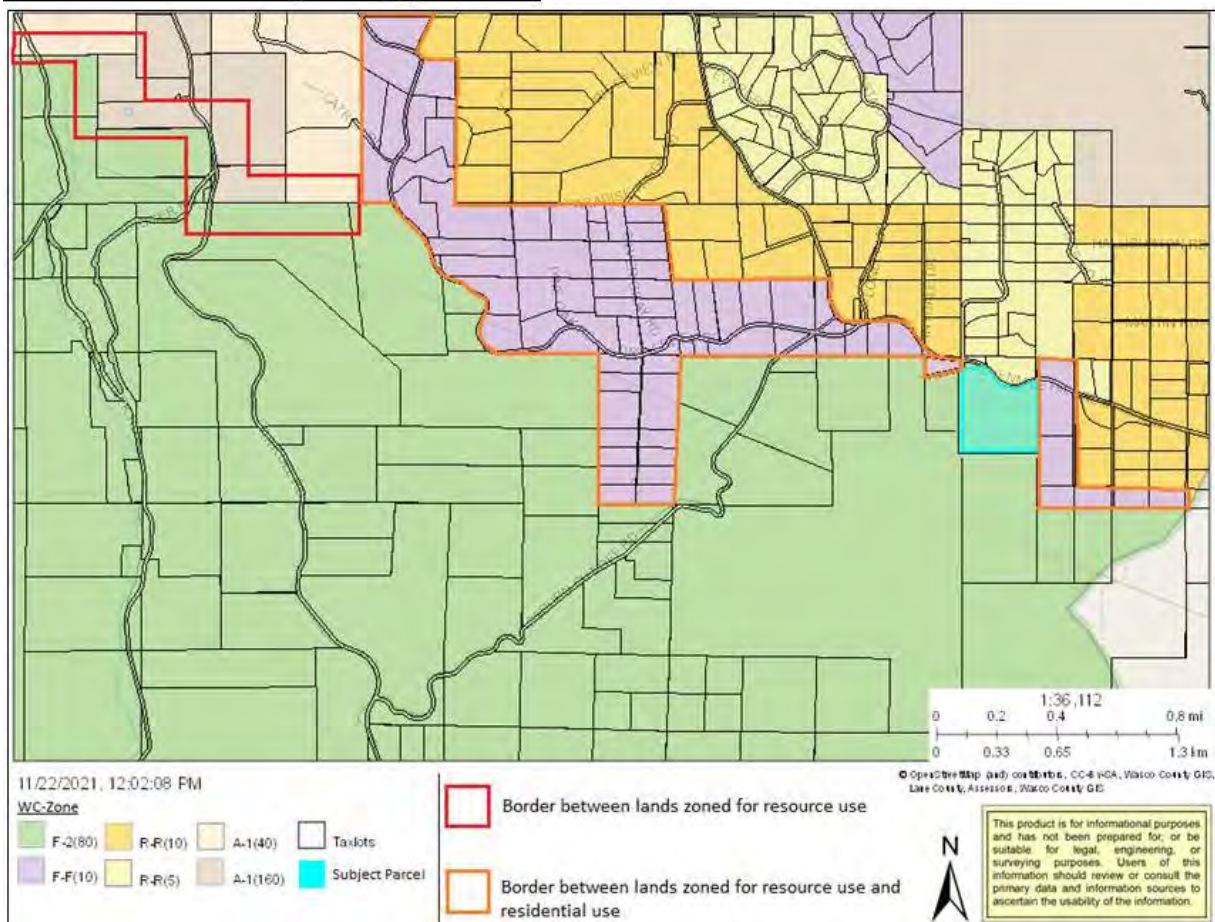
Excluding the adjacent south 69-acre parcel owned by the applicant, the south region is primarily undeveloped, and managed in some way shape or form for forestry uses.



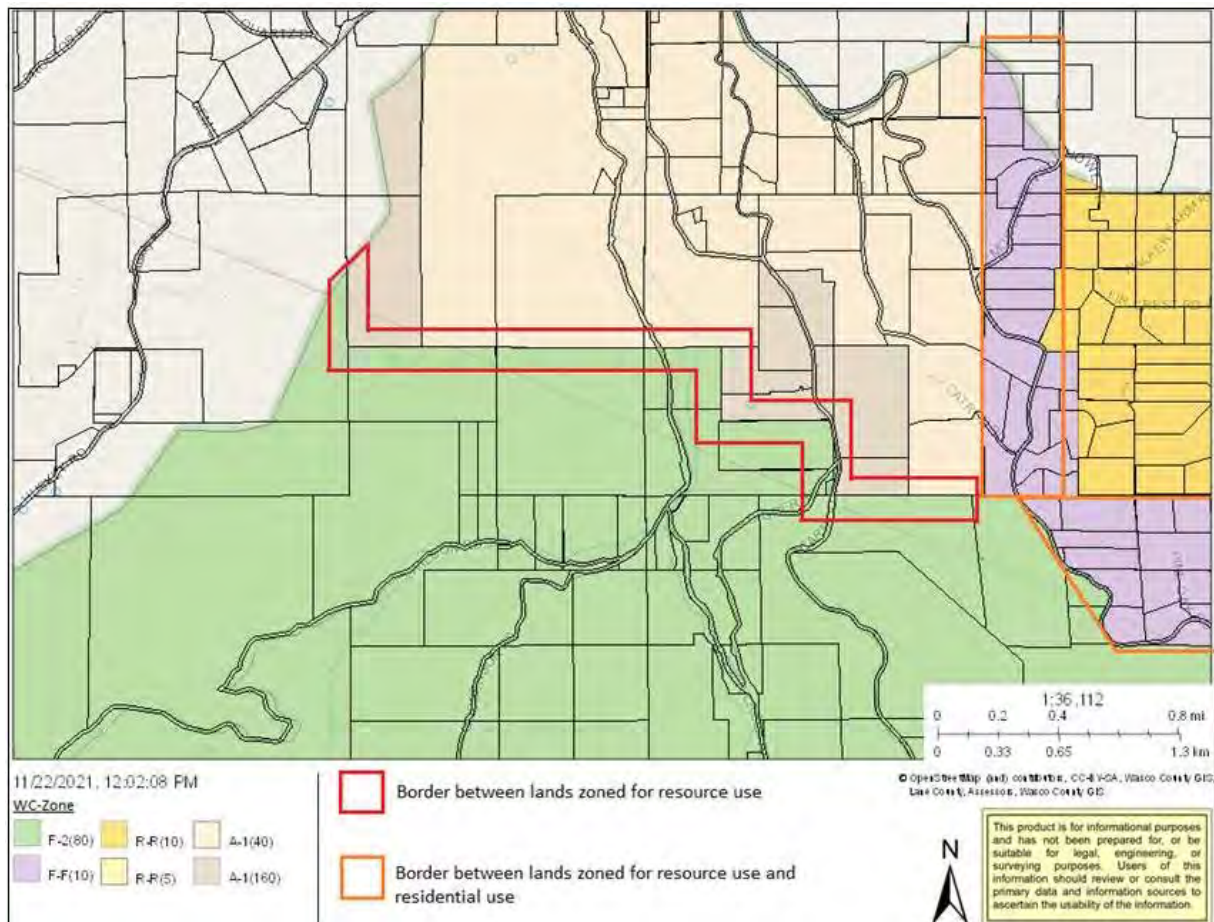


The maps below illustrate the general zoning pattern of the area.

The zoning map provides that lands within the Forest-Farm (F-F 10) Zone (Non-Resource - purple area) in the Seven Mile Hill Road area are a clear demarcation between properties that are within resource zones and those within residential zones. There are no residential zoned lands (yellow & orange) directly abutting resource zoned lands (green), except the subject parcel and a small parcel owned by Wasco County.



Additionally, you can see that there is no buffer zone separating resource zoned lands in this area of Wasco County.



Mr. Dougherty said, moving to subsection (c), we will talk about the relationship between the exception area and the lands adjacent to it by analyzing the soils, general land use history, zoning and use.

The “Wilson – Order 1 Soil Survey’s”, findings and conclusions regarding the subject parcel’s soils differ greatly from those soils mapped in the 1982 USDA Order 3 Soil Survey, which diminishes the relationship between the subject parcel’s soil mapping units and those mapped on adjacent lands.

Regarding the subject parcel’s size, its historical and current use, and its development, the property’s existing relationship is more in line with those adjacent residentially zoned lands to the north, northwest, and east, as opposed to the larger resource lands to the south, southwest, and west.

As provided earlier, the subject parcel’s resource designation & zoning does not fall in line with the land use designation and zoning pattern of the area.

Lastly, considering the “Generally Unsuitable Soil” locations and physical

development on the property in relation to “Generally Suitable Soil” locations, the subject parcel’s relationship between “active” forestry uses occurring on neighboring south, southwest, and west properties and the subject parcel’s “potential” forestry uses are seriously diminished.

OAR 660-004-0028(3) asks applicants to use the aforementioned information and relationship analysis to demonstrate that (a) *Farm use*; (b) *Propagation or harvesting of a forest product*; and (c) *Forest operations or forest practices are impracticable*.

(3) *“Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”*

Mr. Dougherty explained that resource use is impracticable due to a combination of reasons:

- Diminished overall soil capacity
- Mapping of “generally unsuitable soils” as compared to adjacent lands
- Questions concerning soil mapping accuracy of adjacent lands
- Existing development and non-farm/forest residential use
- Surrounding residential uses – north, northwest and east
- Not in line with land designation and zoning map
- Risk of potential conflict of uses

When examined individually, each one of the aforementioned issues and potential conflicts may not necessarily be in and of itself able to justify an exception under this section; however, the issues and conflicts should be viewed as a whole. What are those issues & conflicts?

The diminished soil capacity of the subject parcel; the mapping of “generally



unsuitable” soils as compared to adjacent lands; the question of the Order 3 soil mapping accuracy on adjacent lands; the existing physical development and non-farm/forest residential use of the subject parcel; the surrounding residential uses, the fact that the subject parcel is one of only two resource lands in the Sevenmile Hill area that directly abuts residentially zoned property; and the risk of conflicts between resource uses and residential uses.

Mr. Dougherty pointed out that demonstrating through objective evidence existing conflicts between resource uses and residential uses for this particular parcel is somewhat of a catch-22. In order to document and illustrate actual/on-going resource & residential use conflicts requires an active forest-farm use on the parcel. This would allow the applicant/owner to document those on-going conflicts, but at the same time, an active forest-farm use on the parcel defeats or at the very least significantly diminishes the ability to also demonstrate that resource use is either impossible or “impracticable” on the parcel. So essentially, illustrating resource & residential use conflicts for this parcel whether they’re “occasional” conflicts or “substantial” conflicts is hypothetical, unless of course the applicant begins a resource use as defined by state law and administrative rule. In this case, the applicant has provided that the parcel does not have a history of forest uses and no significant farm uses.

OAR 660-004-0028(6)(c)(A) states as follows:

OAR 660-004-0028(6)

*(6) Findings of fact for a committed exception shall address the following factors:*

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

Mr. Dougherty provided a brief summary, saying OAR 660-004-0028(6)(c)(A) and

(B) which require the consideration of parcel size and ownership patterns. Specifically, subsection (c)(A) requires an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. As provided earlier, parcels to the north, northwest, and east were created by subdivision prior to state and county-wide zoning laws. Parcels to the south, southwest, and southeast appear to have been created by deed prior to zoning laws and subsequently partitioned into smaller units of land in the early 1980s. It is important to note that those units of land in the south are still larger in size than those lots created by subdivision to the north.

OAR 660-004-0028(6)(c)(B) states as follows:

OAR 660-004-0028(6)

*(6) Findings of fact for a committed exception shall address the following factors:*

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

Mr. Dougherty explained that Subsection (c)(B) requires the consideration of contiguous ownerships of land in relation to the land's actual use. In this case, the applicant owns the south adjacent 69 acre parcel which is also within the Forest (F-2) Zone. Unlike the subject parcel, the south parcel is farmed for profit, is in forest-farm tax deferral, and per the Order 3 Soil Survey, contains a majority of Wamic soil mapping units that are shown to be conducive for forest and farm uses. The subject parcel on the other hand, is not actively employed for farm use, is not in tax deferral, and contains a majority of generally unsuitable soils.

For OAR 660-004-0028 the Staff Findings and Planning Commission Recommendations are as follows:

Staff Findings

- 1000 Friends of Oregon v. Yamhill County, the impracticable standard is a demanding one.
- OAR 660-006-0028(1) and DLCD v. Curry County (Pigeon Point), The focal point of analysis of an “irrevocably committed” exception is the relationship between the “exception area” and adjacent lands.
- **PLANNING COMMISSION RECCOMENDATION:** Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that “In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission.” Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

Mr. Dougherty asked if the Board had any questions.

Vice-Chair Kramer asked if the information the Board received this morning is duplicated or are there other findings the Board may need to review. Mr. Dougherty replied that it is new information; both soil reports were conducted by certified scientists. Mr. Rabe reviewed Mr. Kitzrow’s report and refuted the findings.

Vice-Chair Kramer commented that it is irresponsible to submit data so late – 11:30 the night before the hearing. This has been going on for some time and that information should have been submitted earlier. Mr. Dougherty stated that he has not had time to thoroughly review the data to be able to answer the Commissioner’s question with any confidence.

Commissioner Hege asked if the new evidence is admissible and how we are to determine accuracy. Mr. Dougherty replied that the information has been added to the record but staff has not had the necessary time to review the data.

Commissioner Hege asked if the new information is germane to making a decision. Mr. Dougherty responded that while soil classification is one factor, it is not the only factor.

Commissioner Hege stated that they have general data and then 24 samples from

the applicant which have been analyzed with a clear conclusion; now someone else is saying that it is all wrong. Mr. Dougherty answered that he has had very limited time to review the 3-page report; from his understanding, the report somewhat refutes the percentage of Class 7 soil as compared to Mr. Kitzrow's analysis. Commissioner Hege said that it is science; it is hard to understand how it could change. The original analysis indicates that it is not usable.

Chair Schwartz asked if the Board might take a few minutes to read the documents. Commissioner Hege pointed out that the Board can read it but it will just generate more questions and there is not time for that here. He asked how the Board is to determine the viability of information with two certified scientists saying different things.

County Land Use Attorney Chris Crean said that in terms of process, the Board's decision is based on the entire record and the Board is still getting documents and will hear testimony. The Board can close the record and come back to deliberate at which time the Board can ask questions of staff. If both submissions are credible, the Board has support for either decision – the question is which one provides better evidence for the decision.

Chair Schwartz asked if a letter from Kristin Dodd was mentioned. Vice-Chair Kramer replied that there was one this morning but there are already comments from her in the record.

Chair Schwartz asked what green sheets are. Mr. Dougherty replied that they are soil survey information sheets – they are printed on green paper.

Chair Schwartz asked what is meant by "impracticability is demanding." Mr. Dougherty answered that it means it is a high standard to meet.

Chair Schwartz asked what is meant by the "forest use south of the property is diminished relationship." Mr. Dougherty explained that under the statute, we have to examine the relationship between the adjacent properties and the subject parcel; based on that, the relationship is diminished. Commissioner Hege observed that means it is not germane. Mr. Dougherty concurred.

Commissioner Hege said that there was also mention of oak habitat; he asked if the zone change is made, will there be adequate protection measures. Mr. Dougherty responded that any application would have sensitive wildlife zoning applied to those applications.

Commissioner Hege noted that Mr. Hunt, someone who worked the open space of the property, has said it was not worth the time and diesel to bale that field. That is an indication that it is not usable for farm use. He asked if that is a reasonable piece of evidence. Mr. Dougherty stated that it is.

Commissioner Hege said that the definition of the soil classifications seem to be conflicting. Class 4 has very severe limitations for plants and management and that was the best soil on the parcel. There seems to be some opinion that Class 4 is good. Mr. Dougherty explained that you can have Class 4 that is Wamic soil; we then use the green sheets to determine what it is capable of. Severely diminished does not mean it is impossible. We use the green sheets to get a more in depth analysis of what the soil is capable of.

Commissioner Hege observed that with the 24 samples taken, most were Class 7 or higher. He said that the ability to be productive on this land has something to do with the soil, but there are also water issues. That is a factor in determining the viability of the land. Mr. Dougherty responded that that was not included in the applications submission, but it is a factor to consider. He went on to say that Class 7 is not in the green sheets; that is why staff reached out to Mr. Kitzrow for more detailed information. They are not included in the green sheets due to their poor quality.

Commissioner Hege pointed out that the purpose of the forest zone is to protect it for commercial forestry activities. He asked how we define commercial forestry activities that are suitable or desirable. Mr. Dougherty said that it includes both small and large scale forestry; however, LUBA responded that it is not necessarily a requirement. Mr. Crean confirmed that it not whether it is commercial but whether smaller operations should be considered.

Commissioner Hege asked where we draw the line. Mr. Crean replied that is why we consider surrounding properties and what is possible if this parcel were to be combined with adjacent parcels.

Commissioner Hege stated that he thinks the Board should hear testimony and close the record.

Chair Schwartz asked if soil changes over time. Mr. Dougherty answered that he is not an expert.

Chair Schwartz asked to hear from the applicant.



Mr. Wilson's attorney Bill Summerfield said that he believes it is incredibly disrespectful to have information dropped on the Board the morning of the hearing. Staff nor the applicant have time to analyze or respond. It happened at the Planning Commission hearing and again here. He said it is inappropriate to use a hired gun for the soil study process; there are 5 scientists approved by DLCD. Mr. Kitzrow is one of those 5 and did the study. He said that questions posed by the Board indicate that the Board may not know about soils; the soils are not the only consideration. We are overly focused on soils and not focused enough on the residential properties adjacent to the subject parcel – that is the most important criteria before the Board. At the Planning Commission level, staff recommended approval – we should be asking why.

Mr. Summerfield went on to say that “impracticable” and “demanding” are frustrating tests. There are not a lot of objective criteria to use; we can look at the maps and data and ask if this is a parcel I would use for forestry or farm use. One of the factors staff pointed out is that you have to be actively engaged in use. The record includes some information about the use of a wood chipper on the property - that tells you a lot about how it fits with its surroundings. The physically developed standard is impossible to meet but relevant - if 18% is used that is 7 acres if 30 % is used, it is 13 acres that is unusable.

Mr. Summerfield continued, saying when reviewing the Kitzrow study you will see that he dug 24 holes, sifted and analyzed the soil - that is what scientists do. The second review is a paper review - they did not gather and analyze soil. It was commissioned to poke holes and doesn't refute anything. The soil breaks out to about 50% of suitable and unsuitable soil. It is only 1 factor. What LUBA told us, was that we have to have better findings - staff has done that with much more detailed findings. This is the only property that touches farm and forest and residential and breaks the purple line. You need that purple zone as a buffer between production and residential.

Mr. Summerfield said that the Planning Commission worried about opening the flood gates. He pointed out that the applicant has been years in this process. Each property is unique. This is the very unique property. The totality of the circumstances, you are chopping off a fair section as removed from resource. The majority of soils are not resource use. The fact that there is a tree growing is not evidence of suitability. Most important is the relationship - it fits much better as a residential. As staff pointed out, this zone change will not automatically mean home sites. Permits are needed for each and every home site. Each will require a conditional use permit. He concluded by saying that staff has done a bang up job.

Commissioner Hege asked Mr. Summerfield about the certification of the report. Mr. Summerfield explained that you are required to hire one of the 5 approved scientists and they must follow a subscribed method and submit their findings. The DLCD reviews to see if the report meets the requirements. The scientist must certify the truthfulness of the survey.

Chair Schwartz asked if the second report was certified. Mr. Summerfield said that from his very brief read of the document, it has not been certified – it is an opinion letter.

Mr. Wilson said that regarding the certified analyst, the information he gathered goes to DLCD with a \$650 fee to have them review it. There is a group that does this all the time and they review and certify his work. The applicant then can sign a release for the County to have the information. He said that he had no idea how this would go; nothing grows on most of the property. He said he took a risk to have the study done; if it had gone the other way, we would not be here pursuing this. It is expensive to pursue. However, the soils came back as unusable. He said that some of his biggest concerns are that for 10 or more years, he has heard nothing about the timber to the south of the property. For the appellant to keep saying there is management forest by Ken Thomas is just not true. This area is where the climate changes into eastern Oregon climate. There is no forestry to the south of the subject property.

Mr. Wilson said that he is not trying to embarrass anyone, but he does not think the Planning Commission read all the information; the questions they asked indicated that they did not understand. He said that this is important to him and they should have taken the time to read and review the information.

Mr. Wilson went on to say that this will not bring on an onslaught of zone changes. This is an expensive process; he has already spent more than \$80,000 on the process. He said that Mr. Dougherty's report is thorough and he did a very good job as he did at the Planning Commission hearing. If you read and study it, you will understand.

Mr. Wilson stated that in the appellant's information, they claim that immediately behind the subject property is forest land but the map shows it is not so. He said that in his opinion, the documents submitted at midnight last night should just be thrown out. The second scientist did not gather and analyze any samples. Nor did he go through DLCD for review. He said he did not even know about it before today. The appellant did the same thing last time with the Planning Commission –

that is a pattern. You cannot do that in a court of law; it is not fair to anyone.

Mr. Wilson said that the existing homestead and barn are falling down. He said that he tried to block it up so it wouldn't fall but was not able to get a permit to do that. The homestead dates back to 1860 and is probably one of the first homes on 7 Mile. It deserves to be fixed. Then we could add two more homes to the property.

Chair Schwartz asked if anyone wished to speak in favor of the application.

David Rogers of 7 Mile Hill said that he read the majority of the paperwork – there is a lot of redundancy in the record. He said that he was a fertilizer and weed consultant and has been all over the hill. He said he knows the soils and is no stranger to crops and forest practices. He pointed out that people who build there may be better stewards of the land. We need places for people to live. He said it would take 100 years to grow a tree there; you would have to live to be as old as Noah. He said he has been on that property. He said that the laymen on the Planning Commission may not have been able to understand all of this – that is why we have LUBA and Commissioners; they are the guardians of our county. It is a complicated issue that is causing hard feelings among the residents. Any law can be interpreted in more than one way.

Roland Schmidt of State Road stated that this is a good use for this property. He has watched a few people attempt to farm it and they give up in a year. There is not much you can do with it as a resource land.

Chair Schwartz asked if anyone wished to speak in opposition of the application.

Attorney Mike Sargetakis, representing the appellants, said that he provided comments yesterday. He noted that the appellant did not get the soil report until last night. He said he would recommend keeping the record open to allow time for review and response. He pointed out that the areas that are moved have the better soil qualities. He stated that regarding the issue of profitability, there is an exceedingly low floor – it is measured by gross income. The historic use of the property for hay and the existence of ponderosa pine mean a profit can be made. He concluded by saying that if the County wants to spend more time on drafting findings, he can submit draft findings for their review.

Appellant Sheila Dooley of Mosier apologized for the late submissions. She pointed out that DLCD does not review the soil reports for accuracy; they review for completeness. LUBA addressed the issue of the forest land to the south.

Valley Science and engineering reviewed the soil survey; they were unable to confirm the report's findings that the site qualifies as non-resource land. Based on information from the report and the NRCS soil survey, Valley Science concluded that 11 of the soil sample sites represent soils that appear to be Class 6 or better instead of Class 7. Based on their review, the Class 6 or better soil represent better than 50% of the average; therefore, the site doesn't satisfy the criteria for conversion to a non-resource zone.

Ms. Dooley said that the previous NRCS soil survey found the soils to be more productive than average (all class 4) and suited to growing Ponderosa Pine and Oregon white oak. These trees as well as fir trees are growing on the areas not mowed and are visible in the photographs. These trees as well as fir trees are growing in areas of the property not mowed nor visible in the aerial or other photographs. The applicant's soil survey found a difference of less than an acre and a half between the suited and unsuited soils – this is out of 40 acres. They labeled over an acre and a half of infrastructure when there is actually only .2 acres of actual infrastructure if you include the 2 unusable buildings.

Ms. Dooley went on to say that the applicant's soil survey incorrectly labeled areas as infrastructure which is vacant land in treed areas. These are visible in photographs on pages 592 and 593. There are no Class 8 soils on the property, just areas of Class 4 soils that have been labeled Class 8 infrastructure. The mowed areas are mostly all Class 4 soils which is a suited soil.

Ms. Dooley commented that she was unable to locate some of the test hole numbers on the map due to the presence of so many trees; most of these in areas that supposedly can't grow trees. There are numerous pine, oak and fir trees present on the property – most of these are in areas classified as unsuitable Class 7. Areas not used to grow hay are similar in appearance to other Mosier forest zone properties; pine, oak and fir trees are often found growing together. Pine and oak trees have similar soil requirements according to the Soil and Water Conservation District. Ponderosa Pine is a suitable tree for reforestation and is a marketable species. According to ODF, it is a species quite often used in the Mosier area. The staff findings in the LUBA record states that the property contains merchantable timber. The OSU Extension stated that if healthy Ponderosa pine is present on the property that is a good indication that it will do well if planted.

Ms. Dooley continued by saying that the December 7<sup>th</sup> Planning Commission staff report stated that "The subject parcel has been removed from farm/forest tax

deferral. The property is part of a 109 acre tract which as all rated as suitable soil on the NRCS survey. This 109 acre tract is owned by the applicant; the adjoining 69 acre parcel is under farm deferral. In 2018, the applicant received retroactive approval of the 7,000 square foot agricultural exempt building in conjunction with his existing and future farm use described in his farm plan. At the Planning Commission hearing in January, 2018, his attorney stated that the applicant makes substantial income from farm production each year the property has been in deferral. The applicant stated he is planning to farm an additional 20 acres, waiting to plant more alfalfa, plowing additional land adjacent to his 6 acres of barley/oats and planning to expand the farm use and increase the number of cattle grazed.

Although the applicant is farming this 69 acre parcel, he has chosen to not actively farm the 40 acre subject parcel beyond growing grass/hay. Choosing to not actively farm this parcel, plant trees or let them come back naturally or not reinstate a tax deferral was most likely done to support the claim that the property should be rezoned. As the entire record, including the new evidence, does not demonstrate that the property is either physically developed to such an extent that it is no longer available for resource use of irrevocably committee to non-resource uses, the rezone request should be denied.

Phil Swaim of Mosier said he has been driving past this property since 1965. The previous owners in the 1960's and 1970's baled hay and raised cattle on the property.

Mr. Swaim said regarding the issue of buffer zones, the parcel only touches a buffer zone that is an RR10 on the north side of the property. All the other contacts with the parcel are FF10 zoned which is purple on the map. The conflict between zones that you have is a conflict – you will always have conflict between neighbors no matter what the zoning. He said that he has conflicts with his neighbors and all are in the FF10 zone. Saying you will protect the residential people from farming activities is kind of a moot point.

Mr. Swaim went on to say regarding commercial versus small scale timber production – for the last 10 years in this country, the majority of supply has come from small-scale wood lot owners. Most of the mills these days are sized for the smaller trees – there is a penalty for having larger diameter trees over 21 inches in diameter. Growing trees is a long-term project and not something where you get profitability every year or every 10 years. He said that he is sure that Ken Thomas, who probably owns 10,000 acres in Wasco County, doesn't make a



profit every year on his property. To say that there is not forest property directly south of the Bonneville Power line showing on the map, it is all there. It might not be a dark green but pictures produced by the applicant at the hearing in December showed a washed out photo to the southeast that is actually a hay field and grazing property. To the northeast is wheat land and barley. Driving up over 7 Mile, when you get over interface between resource zone and residential again at the top of 7 Mile you will get into the zones that are agricultural too – just a mile away from the subject property.

Mr. Swaim pointed out that DLCD has a disclaimer on their paperwork that says it is not certifying the accuracy of the soil study.

Mr. Swaim said that the applicant has put forth a new site plan that is radically different from the one in the LUBA record. Commenting on this application is made difficult as the facts and numbers keep changing. There are non-existent buffer requirements including a 50-foot road setback along 7-Mile Hill Road, although none is required as per Arthur Smith. The non-existent 50-foot buffer zone contains 60 plus pines of 2-40 feet in height.

In regards to the 30' wide easements for power lines, there is no such requirement for underground utilities. The only power lines of concern are those owned and maintained by Wasco Electric Coop. There are no required setbacks for buried lines but on page BOCC 1-49 there is a long list of buried lines with a 30' easement. The applicant has claimed a total of 10,024 feet of power lines. In reality there appears to be only 450 linear feet of overhead power lines shown on the new site plan.

The applicant has included a buffer of 50' each side from structures. The Wasco County LUDO does not prohibit trees within 50 feet of a structure. The 50-foot wide fire fuel break maintenance standards include having trees limbed up approximately 8 feet and removing brush from the area.

Mr. Swaim said that in the original report from 2018, when this all started, it listed the log house as 2,680 square feet including decks. In the new site plan the dimensions of the log house are shown as 80 x 100 feet or 8,000 square feet. They expand beyond that to take up nearly an acre to include a safety zone. He said he questions what he is supposed to respond to when there are changes from hearing to hearing.

Mr. Swaim said he has been driving past that property for over 55 years and

never seen any trailer sites of any permanency on the property to show that it was developed. There might have been some temporary camp trailers in there, but they are gone. He said that 2/3 of the 40 acre parcel is tree covered, 90% of the alleged bad soils on the south and east are tree covered. There are over 500 pine trees growing on 28 acres, many that are merchantable. The balance of the acreage, the mowed hay field, is of prime soil type that could grow about anything. Trees would naturally reseed if it was left unmowed, even with Douglas fir, as evidenced by a water course down the center of the property as shown by a willow tree growing there which requires a lot of water.

Mr. Swaim asked that the application be denied.

Appellant Jill Barker of Mosier said Regarding Wilson's remand application, the statement that there is a "literal moonscape nature of the adjoining properties south of the subject property" cannot be substantiated. That same land to the south and east has been productive forest, hay and grazing fields including that formerly owned by Grant Robbins since the 1970s. This is hardly a moonscape.

The new site plan map submitted in the Remand application has changed considerably from the original site plan submitted in the original 2019 LUBA record. There is much new infrastructure shown that does not exist, such as 3 trailer sites as well as additional driveways, powerlines and septic drain fields.

It appears that this nonexistent infrastructure has been included to add to buffer zones in an attempt to preclude forestry use.

The applicant appears to be adding this proposed physical development to make a "physically developed" case after the fact. LUBA ruled that the property was not physically developed based on the evidence. Is the applicant trying to show that it is more developed than it actually is, suggesting that it is "irrevocably committed" to non-resource use?

It is completely irresponsible to allow more residential development in a high fire risk, high wind area in an unprecedented drought condition with declining aquifers and wells. Oregon Department of Forestry has identified the area as one of particularly high fire risk. "Dwellings increase risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that results in increased cost." (BOCC 1-13)

The description of potential conflict between residential and forestry use is unfounded. There is no house on the tract to the west of the property and the

applicant's house is on the adjoining parcel to the south. Both properties are zoned F-2. To the north across the road there is a tree farm. The house on the property to the east is on the other side of that property and located south of the subject property. (Location & Zone Map, BOCC 1-33)

It was stated at the Planning Commission hearing by the applicant's attorney that the property was not in the Big Game Winter Range. As a correction, the GIS map shows this property as being in EPD 8: Sensitive Wildlife Habitat Overlay Zone, which is the Big Game Winter Range.

Not everyone realizes that growing trees is a long-term investment as it can take a 60 to 80 year cycle to grow a tree. We have over 300 acres of forest land in Mosier southwest of the subject property. Much of it is similar in appearance to the Wilson property with the same pine/oak habitat along with Douglas fir that the Mosier area is known for. We have replanted areas that have been grazed or mowed or let them grow back naturally with very favorable results.

The areas on the subject property that have been mowed are very suitable for growing trees (nearly all class 4 soils in the applicant's soil survey) and in the past produced hay each year. Ms. Barker said that in 1977, she assisted in the purchase of hay from that same field from the previous owner. The fact that the applicant is not using most of his property for forest purposes and has not replanted the open field with trees or let them grow back naturally does not make it any less valuable as forest land.

Ms. Barker said she finds it obviously refutable to claim that soils on the applicant's property that are presently growing many trees are supposedly nevertheless incapable of growing trees due to unsuitable soil classifications.

Some years ago, in the process of doing fire fuel reduction on the property, the mechanical grub hoeing of the understory removed many young seedling and sapling trees in those areas. In spite of this, there are still numerous trees in the alleged "unsuitable" soil areas as shown in aerial photographs.

As the property does not meet the criteria for either a physically developed or irrevocably committed exception, the application should be denied.

Chair Schwartz asked if the applicant had any rebuttal.

Mr. Summerfield said the Commissioner has read the definition of Class 4 soils – yes, they are resource soils but they are not the best resource soils. As to the

allegation that this is some long game with Mr. Wilson not farming the property as a way to get a zone change – the reason he is not farming the property is that it won't support the use. The best evidence of that is Mr. Hunt's letter. Regarding Mr. Sargetakis' letter about generating a gross profit, gross profit is not the test in Oregon. He said that anyone can make a gross profit; for instance, his neighbor sells eggs and that would be a gross profit. It is more nuanced than that with gross profit being just one factor. Other factors are also considered to determine if it makes sense for the property to produce income.

Mr. Summerfield went on to say that he had an opportunity to go through the soil review that was submitted this morning. There seems to be a fundamental misunderstanding in that review about what it means when the property is less than 50% productive soils – that is also not the test; it is one factor.

Mr. Summerfield said that the commenters want to comingle the 69 acre property that Mr. Wilson owns to the south with the subject property when it is convenient for them. He stated that staff did a very good job in analyzing that in the staff report. You do not comingle those properties in looking at this application. He said that there have been allegations about the site plan being changed; it was changed only to reflect reasonable buffer zones around each structure which makes sense. You can't grow resource product on top of structures or even right up next to it. That is the only change that occurred. Nobody is trying to pull the wool over anyone's eyes; we are just trying to depict for you what it would be like to try to use this property for resource.

Mr. Wilson noted that the site plan change was made in response to a request from LUBA. He said he did not make it up; Dave Roberts walked the property to verify the changes. He stated that he can take the Board to the property and show them the water and phone lines. On the east side of the property is shows manufactured homes with power – they were not camp trailers. The manufactured homes were not there legally but they were there for a number of years. They had power and a well and the folks thought they owned them until it was learned that they were illegal.

Mr. Wilson provided copies of a letter from Kristin Dodd (attached). He said that he received the letter 2 days ago and submitted it as part of the record. He pointed out that mowing is a good thing; he likes the property to look nice. He said there are some better soils. He stated that the trees are on the perimeter borders – oak and scattered pine. He reported that at least 60% of the pine has died. The trees across the road were planted 30 years ago and are now about the

size of Christmas trees – you are not going to make any money in your lifetime growing trees there. The lower pasture was like it is now over 100 years ago. If you look at the website you will learn what gross is. The willow tree by the old homestead is right over the old septic system – willows need a lot of water and it is the only one there. He said that the fir trees are small and he has never cut one down. They are not visible from 7 Mile Road. There are some young trees growing on the county road but he said he counted about 35 – not over 300 – and very few are taller than he is.

Commissioner Hege said that there has been a suggestion that we close the record; Mr. Sargetakis has suggested we keep it open. Mr. Crean said that the requirement to hold the record open only applies at the first evidentiary hearing which has already taken place. The Board can close the hearing today and schedule a future hearing to deliberate. If the Board keeps it open, they will need to have it all in and a time for rebuttal. The Board can continue the hearing, close the record or hold the record open for submissions.

Commissioner Hege asked for staff recommendation. Mr. Dougherty said he is in favor of making sure that the decision makers have the time they need to make a reasonable decision. Commissioner Hege stated that the Board already has so much information and this process has been going on for an extended period of time. He said his inclination is to close the record. Mr. Dougherty stated that he does not believe there is any more information the Board needs. Mr. Crean said he would tend to agree.

Vice-Chair Kramer said what they have heard today is repetitive and he is in favor of closing the record. Chair Schwartz agreed.

Chair Schwartz asked if it is legal to submit written testimony so late. Mr. Crean replied that it is; the Board accepted oral testimony today, written is equally permissible. Commissioner Hege said that it is normal but unfortunate.

Some discussion ensued regarding the date for deliberations.

**{{Vice-Chair Kramer moved to close the public record for the Planning Commission Appeal 921-18-000086-PLNG Hearing and continue the hearing to the April 6, 2022 Board session at the earliest time available on the agenda. Commissioner Hege seconded the motion which passed unanimously.}}**

Planning Director Kelly Howsley-Glover asked if it is the Board's desire to have



the staff update the staff report with additional analysis. Vice-Chair Kramer replied that he is fine with the information already presented. Commissioner Hege said that if the late information submitted needs to be analyzed and presented, that should be done but there is no need for a new staff report.

Chair Schwartz closed the hearing at 12:24 p.m.

Chair Schwartz called for a recess at 12:24 p.m.

The Session reconvened at 12:30 p.m.

**Agenda Item – DLCD Technical Assistance Grant**

Ms. Howsley-Glover explained that this grant is for Wasco County to provide resources to other counties as they go through the process of updating their Comprehensive Plans and LUDOs.

Commissioner Hege commented on how great it is for us to be able to take all we learned through our process and put it into a format for other counties. He asked if the \$8,000 is enough to support that work. Ms. Howsley-Glover replied that it is.

**Commissioner Hege move to approve The Department of Land Conservation & Development 2021-2023 Technical Assistance Grant Agreement #TA-23-207. Vice-Chair Kramer seconded the motion which passed unanimously.}}**

**Agenda Item – Facility Use MOU**

Ms. Howsley-Glover said she reached out to the Maupin City Manager to use space once a month so Planning could offer more accessible services to the south county residents. She said they will try it out for the summer and evaluate the program.

**{{{Commissioner Hege move to approve the Memorandum of Understanding regarding licensed (No Charge) use of facility at Maupin Civic Center by Wasco County Planning Department Personnel. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

**Agenda Item – Wasco County Owned Land Sales**

County Assessor/Tax Collector Jill Amery reviewed the memo included in the Board Packet saying that the auction is scheduled for May 24<sup>th</sup>. She added that

they have taken the condition of the properties when pricing the properties.

**{{Vice-Chair Kramer move to approve the sale of Tax Account Properties 17279, 17280 and 7311 as outlined in the Wasco County Sale of Tax Foreclosed and Surplus Real Property Policy. Commissioner Hege seconded the motion which passed unanimously.}}**

**Agenda Item – Wasco County Office Printer Fleet**

Information Systems Director Andrew Burke reviewed the memo included in the Board Packet saying that there are 16 units that need to be upgraded; some are out of their lease term while others are nearing the end of their lease term. He said he would recommend moving from Ricoh to Solutions Yes. He added that he did an analysis of the cost to purchase hardware and maintain it in-house which proved to be well above the cost of either service provider. He reported that we have had service issues with Ricoh and believes we will see an improvement in service with Solutions Yes. The total hardware cost is approximately \$25,000.

Commissioner Hege asked if we will be getting new hardware. Mr. Burke responded affirmatively saying that each lease will include maintenance and toner. He said that they offer Kyocera products.

Commissioner Hege asked if the print drivers will be updated. Mr. Burke replied that they will have a transition plan in place.

Commissioner Hege asked if not every printer will have color. Mr. Burke replied that it will depend on the department needs. The default will be black and white with the capacity to do color if needed.

**\*\*\*The Board was in consensus for Information Services to move forward with a transition from Ricoh to Solutions Yes for printer leases and services.\*\*\***

Chair Schwartz called a recess at 12:42 p.m.

The Session reconvened at 2:00 p.m.

**Agenda Item – Gorge Commission Update**

Columbia River Gorge Commission Executive Director Krystyna Wolzniakowski reviewed the letter included in the packet. She reported that just last week the Commission reviewed the Scenic Area LUDO for Wasco County; it was passed unanimously and has been submitted to the Secretary of Agriculture and the

Forest Service; they have 90 days to concur. Once the Secretary concurs, the counties have 30 days before their ordinance is in effect.

Chair Schwartz stated that she listened to the Gorge Commission; it was quite a process with a lot of questions. When they got to Wasco County's, there were no questions – it was just passed unanimously.

Columbia River Gorge Commission Senior Planner Joanna Kaiserman thanked Ms. Howsley-Glover for the big lift accomplished with a short staff and tight turnaround. She said that the LUDO was thoroughly reviewed and there were no significant issues that would bring it out of compliance.

Columbia River Gorge Commission Chair Robin Grimwade echoed Ms. Kaiserman's sentiments expressing kudos to the Wasco County team and Ms. Howsley-Glover's letter that allowed them to get to the heart of the issue.

Ms. Wolniakowski said they are preparing a climate change action plan to support more adaptation or mitigation efforts either singly or in conjunction with others. The draft plan is 80 pages; they received good comments from the Commission and public comments which will be incorporated into the next draft. That draft will be released on April 1, 2022 for a 60 day review period. During that time, they will hold 2 open houses in April and 2 in May to answer questions and take comment. Once that data is incorporated, the plan will go back to the Commission in June or July for review and finalization. It will be a living document; as new research and opportunities emerge, it will change. She added that they heard testimony from Debbie Ferrer regarding a climate change task for being formed; she looks forward to working with that group as well.

Chair Grimwade said the public feedback is important to see what adjustments need to be made and then they would like to implement the plan as quickly as possible. It is a comprehensive document and is on par with other agency documents he has seen. We need to understand the impact on the financial sector as well as others.

Ms. Wolniakowski said that there is a lot of technology in this area. The Gorge is already suffering from a drought and the goal is to help sustain our region. They hope to provide an executive summary that will help people navigate the document. They have been working on the plan for a year and are eager to get all the comments they can to create a robust and relevant document.

Ms. Wolniakowski went on to say that one of the other aspects of their work is a

limitation in information management for the entire Gorge. Although they do have a GIS system, they sometimes have trouble getting the information. She stated that they received a grant to explore better systems and Ms. Howsley-Glover has been very helpful in sharing what they use for their permitting system. She said they would like to have information as good as that or even better so they can be a resource to the counties in the scenic area. They are currently interviewing County planning directors to gather information and ideas.

Commissioner Hege referred to the Climate Change Action Plan asking if there are economic factors included in that. Ms. Wolniakowski responded affirmatively saying that economic vitality is one of the indicators. She stated that a lot more information is needed; they need to look at indicators that are relevant to their work and sphere of influence.

Commissioner Hege asked how the conversation is going with the ongoing funding request to make our counties whole in implementing the Gorge Commission Management Plan. Ms. Wolniakowski replied that she reached out to DLCD Community Services Division Manager Gordon Howard to ask about how to do that through the DLCD. Now that former Wasco County Planning Director Angie Brewer is working there, she has also reached out to her. They will be talking about that and how the Gorge Commission can influence the process to get more resources for the counties.

#### **Agenda Item – Point in Time Count**

Mid-Columbia Community Action Council Executive Director Kenny LaPoint reviewed the presentation included in the Board Packet. He explained that this is a federally mandated count for persons experiencing homelessness. Every other year it is a full count which is what took place this year. He reviewed the numbers saying that the majority of the counting is done out in the community; numbers increased in all categories.

Commissioner Hege observed that these are some significant increases; he asked how our numbers compare to other counties, regions or states. Mr. LaPoint replied that increases are significant across our region. He added that he believes they did a better job on our count this year which means we got people who were here but not counted in previous counts. He said, looking at other rural communities across the state, we are on the higher end. There were just a few that had higher increases. He said that across our region, Wasco County had the

most significant increase. He stated that the longer someone experiences homelessness, the more likely they are to have mental health and/or substance abuse issues. We have more shelter beds available now. We are doing a better job of counting, so the next count will provide a better comparison.

Chair Schwartz thanked Mr. LaPoint for his presentation, saying that we hear a lot of anecdotal stories – it is good to have more reliable data.

**Agenda Item – MCEDD: State Parks Grant Application**

MCEDD Deputy Director of Economic Development Carrie Pipinch Said that one of the pieces that needs to happen for this grant application to move forward is to obtain a signed resolution from the Board of County Commissioners. This funding is to support the acquisition of a piece of the parcel owned by NORCOR and would cover \$1 million of the acquisition costs. The property is adjacent to the property the County will acquire from Google through the SIP agreement. Commissioner Hege asked how big the property is. Mr. Stone replied that it is 7 acres total.

Commissioner Hege said that it used to be its own parcel and NORCOR went through the process to include it. Mr. Stone commented that the other two acres are wetlands. The 5 acres is what NORCOR leveled.

Commissioner Hege commented that the appraised price is high. Ms. Pipinich said they will have to have it reappraised for the grant process.

Chair Schwartz noted that obtaining this grant to purchase the property will require us to use it as a park and recreation facility for 20 years. She asked if we have to accept the grant if things don't fall into place. Ms. Pipinich replied that we do not have to accept the grant. Chair Schwartz stated that this topic is on the agenda for NORCOR tomorrow.

**{{{Commissioner Hege move to approve Resolution 22-001 authorizing Wasco County to apply for a local government grant from the Oregon Parks and Recreation Department for acquisition and to delegate authority to the County Administrative Officer to sign the application. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

**Agenda Item – MCEDD: EDC Strategic Action Plan**

Ms. Pipinich reviewed the report included in the Board Packet saying that their Mission and Vision stayed basically the same; the Goal Areas shifted slightly but



are similar to the previous Goal Areas.

Commissioner Hege asked if Ms. Pipinich is involved in the vital sign indicators at the Gorge Commission to make sure that is front and center for them. Ms. Pipinich replied that she has participated in that over the years. She has not seen any updated information but MCEDD does participate in that process. Commissioner Hege said that he is concerned that it will get pulled into the Climate change discussion and he is not sure that is the appropriate place for that.

Ms. Pipinich continued to review the report. At her conclusion, Commissioner Hege asked how the conversation is going regarding the Child Care Center. Ms. Pipinich replied that they have broken into smaller work groups to bring back information to the larger group. Vice-Chair Kramer said it is important that we are ready to get some of the funding that is becoming available – a bill for \$100 million passed for child care.

<b>Agenda Item – State Homeland Security Grant Applications</b>
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Emergency Management Manager Sheridan McClellan explained that he is seeking approval to submit two applications. He explained that there are two pots of money from the State – one is non-competitive and is allocated based on a formula; the other is allocated through a competitive grant process. He said that one application is for the non-competitive funds and the other for the competitive funds. The money would go to communications and a triage plan.

**\*\*\*The Board was in consensus for both applications to move forward for submission.\*\*\***

Chair Schwartz asked if equipment will go into County buildings. Mr. McClellan replied that the equipment would go to the Courthouse, Public Works and other County buildings as well as to first responders. He said he would be back in the fall with grant agreements if we are awarded funding.

Mr. McClellan said that the Board received documents this morning for a FEMA grant he would like to submit on behalf of Wamic in order to purchase 3 generators. There is a 25% match requirement; however, Oregon just passed a general fund appropriation bill for \$20 million to provide the matching funds for these grants. For us to get that match, we have to submit a letter of intent; he is seeking approval to send that letter.

**\*\*\*The Board was in consensus to send a letter of intent to submit for State funding to be used for FEMA grant matching funds.\*\*\***

**Public Comment – Proposed Navigation Center**

Aaron Carter of The Dalles said he attended the meeting for allocation of funds. This is not a county issue it is a city issue. It was a little frustrating to hear the Sheriff at Rotary campaigning money for a canine unit and now a large sum of money is being allocated for the Navigation Center. There are already issues in that area, and other counties will take advantage of this. He asked what it will do and what it will cost - it is a lot of money. He asked that the Board consider all of those questions as they make decisions.

Marilyn Arthur of The Dalles said that she and her husband have lived in The Dalles since 2016. They support the Mid-Columbia Community Action Council Navigation Center. For 6 years they have been involved in trying to help houselessness in various ways. She served on the The Dalles Housing Coalition helping to put on 3 Community Connect events for the homeless. From 2017 – 2020, they volunteered at the Warming Shelter and this year volunteered for the Point in Time Count. Through these involvements they have seen firsthand the houselessness issues including mental health and weather and the frustrations in addressing them. Now, under the direction of Kenny La Point, we have the Navigation Center giving us hope to solve these problems in a comprehensive way. She asked how she can look a freezing cold anxious woman in the eye during a Point in Time Count interview and not want something better for her? By helping her we help everyone resulting in a feeling of pride in our community. She thanked the Board for their support.

One Community Health Executive Director Max Janasik said that he is in support of the Navigation Center. He stated that has 190 patients that are houseless. In working with the team at MCCAC, they are impressed with the work Mr. LaPoint has been doing to help individuals to become independent and contributing members of the community. Mr. LaPoint is skilled at bringing in funding to support this work. The location is donated. He said he understands there are perspectives on the location but it is conveniently located for services and it is a tremendous cost savings. These folks don't want people camping on their property and we can be proactive in getting people off the streets.

One Community Health's Director of Preventative Health Gladys Rivera said she echos Mr. Janasik's comments. She said that the Navigation Center will bring

services together in one place. One Community Health will continue to provide basic and urgent care. She went on to say that housing and homelessness have been identified as top community priorities and this project addresses all of them in one location; it would be hard not to support it.

Ms. Rivera continued saying our region has great diversity with strong Latinx and Native communities. It is refreshing to see that the Navigation Center will also have a culturally specific focus through agencies like The Next door, Nch'I Wana Housing and the Oregon Human Development Corporation. MCCAC and its partners have proven success in addressing poverty, preventing houselessness and quickly reintegrating houseless community members back into permanent housing. She urged the Board to support the Navigation Center at its proposed location.

Ms. Anslinger stated again that the location of the Center is the concern, not the concept. She said that just because the property was donated, does not mean it is the right place. She said that she does not know what other properties were considered. She added that these people are in crisis mode; she is concerned that we are not going to be able to sustain professional staffing which is expensive.

Chair Schwartz asked if Ms. Anslinger asked if she had taken any of her questions to Mr. LaPoint. Ms. Anslinger said she would love to but has not been able to visit with him.

Chair Schwartz encouraged anyone with questions have a conversation with Mr. LaPoint.

Jamie Reineccius said he grew up in this area and has been here for 30 years; in that time he has seen a lot of programs come through. He stated that Mr. LaPoint has a lot of knowledge and we are relying on his abilities for this to be successful. This is a lot of money and there are other issues that need to be addressed – kids, the elderly and properties. We might be a beacon to draw people who need help and we cannot support that. He asked if this is the right solution and what is the long term plan for maintaining the program. There needs to be infrastructure in place to sustain it.

Some discussion ensued around a community discussion. Commissioner Hege said that there are good questions that could and should be answered. Chair Schwartz said it is important to have these conversations with Mr. LaPoint.

Mr. Schultens said there is depth here that is not coming to the surface. He said that they tried to meet with the Planning Commission and the City of The Dalles. He said they did meet with Mr. LaPoint and he gave them his plan. Then other items came up like incorporating low-income housing. We need to have the community involved in the decision making. There is also talk about the hospital being place in that area. There is also discussion about the ball fields moving. He said the community has questions that need to be answered prior to the County donating money to the project.

Mr. Reineccius said if we get the money we could do this rather than this is what it will do. Adding the low income housing is different than the center. It is a city issue, not county, and it will create a beacon. We have had vehicles stolen. It is concerning.

Aaron Carter stated that the Board should have the answers to the questions before donating money. This is not good vs bad or we do not want to help. It is the question of is this the most effective way to get the job done. There have been no promises or guarantees.

Chair Schwartz said she does not have a plan right now but will take all the comments to heart.

#### Commission Call

Vice-Chair Kramer reported that County Solutions met on March 8<sup>th</sup> and talked about veterans housing. He said he reached out to Health and Human Services and Veterans; they will meet again to see if they can move forward on a model for counties to add resources to AOC to provide for an outreach staff to help navigate these issues.

Chair Schwartz pointed out that MCCAC has a Veterans housing program. Vice-Chair Kramer said he would loop Mr. LaPoint into the conversation. They are housing 28 veterans in our community with wrap around services.

Vice-Chair Kramer went on to say that Mr. Blumenauer's wilderness plan is gaining steam; he will be following up on that with Hood River and Clackamas Counties.

Commissioner Hege reported that BOPTA has only one hearing this year which indicates that the Assessor is appropriately assessing and proactively resolving issues. He noted that John Hutchison is stepping down this year and they are

looking for new board members. The BOPTA Board wanted us to know how great our staff is – both in the Clerk’s and Assessor’s offices. They could not say enough good things. County Counsel is also invaluable to help with the legal issues. He said that the Board members do a great job.

Vice-Chair Kramer said that the Courthouse Task Force met and we are on the list and have been funded for our planning process to remodel the first floor of the Courthouse and elevators. This year, due to extra funding, all applying counties received funding. We will get \$705,000 in large part due to the fact that we have been setting side reserve funds to complete the project.

Chair Schwartz observed that March is Women’s History Month as established in 1987; she would like to take a moment to recognize a woman who made a difference in Wasco County as the first woman County Commissioner since the County was formed in 1854. Commissioner Holliday was also the first woman to Chair the Board of Commissioners; Chair Schwartz is the second. Commissioner Holliday passed away in 2019; there is a plaque on the 3<sup>rd</sup> floor of the County Courthouse memorializing her service. Vice-Chair Kramer thanked Chair Schwartz for the recognition, saying that Commissioner Holliday was a personal friend and he worked with her for 17 years in volunteer emergency services. Chair Schwartz commented that she was an employee of the County during the time Commissioner Holliday was on the Board.

Chair Schwartz adjourned the session at 3:41 p.m.

Summary of Actions
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**MOTIONS**

- **To approve the Seufert Hill Communications Site Lease between Gard & Maxine Fulton, LLC and the Wasco County Sheriff’s Office.**
- **To approve USFS Grant Agreement 18-LE-11060600-005 Modification 006.**
- **To approve Order 22-009 appointing Scott McKay to the North Central Public Health District Budget Committee.**
- **To appoint Commissioner Steven D. Kramer to represent Wasco County on the AOC Federal Land Management Subcommittee.**
- **To close the public record for the Planning Commission Appeal 921-18-000086-PLNG Hearing and continue the hearing to the April 6, 2022 Board session at the earliest time available on the agenda.**



- **To approve The Department of Land Conservation & Development 2021-2023 Technical Assistance Grant Agreement #TA-23-207.**
- **To approve the Memorandum of Understanding regarding licensed (No Charge) use of facility at Maupin Civic Center by Wasco County Planning Department Personnel.**
- **To approve the sale of Tax Account Properties 17279, 17280 and 7311 as outlined in the Wasco County Sale of Tax Foreclosed and Surplus Real Property Policy.**
- **To approve Resolution 22-001 authorizing Wasco County to apply for a local government grant from the Oregon Parks and Recreation Department for acquisition and to delegate authority to the County Administrative Officer to sign the application**

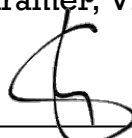
CONSENSUS

- **For Information Services to move forward with a transition from Ricoh to Solutions Yes for printer leases and services.**
- **To send a letter of intent to submit for State funding to be used for FEMA grant matching funds.**
- **To send a letter of intent to submit for State funding to be used for FEMA grant matching funds.**

Wasco County  
Board of Commissioners

  
Kathleen B. Schwartz, Commission Chair

  
Steven D. Kramer, Vice-Chair

  
Scott C. Hege, County Commissioner



## DISCUSSION LIST

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[SEUFERT TOWER LEASE](#) – Lane Magill

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[USFS AGREEMENT MODIFICATION](#) – Lane Magill

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[NCPHD APPOINTMENT](#) – Kathy Schwartz

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[AOC COMMITTEE REPRESENTATIVE](#)

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## DISCUSSION ITEM

### Seufert Fulton Tower Lease

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[TOWER LEASE](#)

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[MOTION LANGUAGE](#)

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SEUFERT HILL COMMUNICATIONS

SITE LEASE

GARD & MAXINE FULTON, LLC (Lessor), represented by Scott Elston and/or Judy Urness, hereby leases to WASCO COUNTY SHERIFF'S OFFICE (Lessee) a municipal corporation, its successors and assigns, and Lessee hereby leases from Lessor, the following described real property situated in Wasco County, State of Oregon, described as follows:

A 50' x 50' tract of land located in section 29, Township 2 North, Range 14 East, W.M., the center of said tract located North 56-00 East, a distance of 2,217 feet from the center of the FAA radio range tower now installed on Lessor's property in the Northwest Quarter of Section 32, Township 2 North, Range 14 East, W.M. together with the right to Lessee of access, to and from said tract of land over and across the lands of Lessor.

1. This lease shall replace the lease entered into between GARD and MAXINE FULTON, LLC and WASCO COUNTY SHERIFF'S OFFICE on January 26, 2000.
2. The lease term shall begin July 1, 2022, and continue until June 30, 2023. Thereafter, the lease shall renew each year for a one year term, unless either party gives notice of an intent to terminate or review the lease terms at least 60 (sixty) days prior to termination.
3. Lessee shall pay to Lessor an annual rent of One Thousand Five Hundred dollars (\$1,500.00) payable July of each year for the 12 month period commencing with July of the year payment is made.
4. The leased property shall continue to be used by Lessee for the operation and maintenance of a communication facility consisting of an antenna tower and building to house communication equipment (Lessee Facilities). Lessee may, with written consent from Lessor, sub-lease space on its antenna tower and within its radio building to third parties (occupants/sub-lessees) for communication purposes provided that said communication activities do not interfere with pre-existing communication users located on the Lessors' property and further provided that the third party obtain a separate easement from Lessor for ingress and egress across



Lessor property to the site.

5. For any sublease entered into after the effective date of this Lease with entities other than those listed in Paragraph 6 below, Lessee shall notified Lessor and provide a copy of the sublease agreement. Thereafter, Lessor shall be entitled to twenty-five percent (25%) of the rent collected from the new subleases. Lessee shall remit the Lessor's portion of the sub-lessee's rent, along with an accounting of the rent collected, on an annual basis in July of each year for the fiscal year prior.
6. Current occupants/sub-lessees of Lessee Facilities are Wasco County Sheriff's Office, Mid-Columbia Fire and Rescue, Amateur Radio Emergency Services and Bi-Coastal Media. These occupants and their agents are granted ingress and egress rights across Lessors' property. These occupants and their agents, when exercising rights of ingress and egress, shall stay on the road except the shortest possible distance from the road to the Lessee Facilities, and leave the gate locked/unlocked as found. Future occupants, if any, will also comply with these requirements.
7. Lessee shall require all occupants/sub-lessee (including those listed in Paragraph 6) to contact the Wasco County Sheriff's Office for an entry key. Wasco County Sheriff's Office will verify, (1) the occupant/sub-lessee is authorized to access the property and, (2) the occupant/sub-lessee is operating a vehicle(s) that do not create significant fire risk to the property.
8. Lessee agrees to grant to Lessor, without charge, space within Lessee Facilities, not to exceed that required by one (1) radio transmit/receive unit, provided that the frequency utilized does not interfere with pre-existing communication services on the site.
9. To the extent permitted under Oregon law, Lessee hereby agrees to indemnify Lessor against all loss, cost, damage and expense which Lessor may hereafter sustain, in any manner arising, growing out of, or resulting from Lessees use of or activities upon Lessors' lands. Lessee shall provide Lessor with a Certificate of Insurance each year of the Lease.
10. Upon execution hereof this lease between GARD & MAXINE FULTON, LLC Lessor, and
11. WASCO COUNTY SHERIFF'S OFFICE, Lessee, becomes effective July 1, 2022

CONTACTS:

Gard and Maxine Fulton, LLC

c/o Scott Elston

9737 SW Lynwood Terrace, Portland OR 97225

[scott.elston@fctg.com](mailto:scott.elston@fctg.com) (Cell 503.880.4447)

Judy Urness

[judyurness@gmail.com](mailto:judyurness@gmail.com) (Cell 541.993.2640)

Wasco County Sheriff's Office

Sheriff Lane Magill

511 Washington Street, Suite 102

The Dalles OR, 97058

[lanem@co.wasco.or.us](mailto:lanem@co.wasco.or.us) (Cell 541.980.8741)

Chief Deputy Scott Williams

[scottw@co.wasco.or.us](mailto:scottw@co.wasco.or.us) (Cell 541.263.0429)

Telephone: 541-506-2580

Fax: 541-506-2581

GARD & MAXINE FULTON, LLC

WASCO COUNTY BOARD OF  
COMMISSIONERS

\_\_\_\_\_  
Kathleen B. Schwartz, Chair

\_\_\_\_\_  
Name:

\_\_\_\_\_  
Steven D. Kramer, Vice-Chair

Date: \_\_\_\_\_

\_\_\_\_\_  
Scott C. Hege, County Commissioner

APPROVED AS TO FORM:

\_\_\_\_\_  
Kristen Campbell, County Counsel



## MOTION

**SUBJECT:** Seufert Tower Lease

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I move to approve the Seufert Hill Communications Site Lease between Gard & Maxine Fulton, LLC and the Wasco County Sheriff's Office.



## DISCUSSION ITEM

### USFS Patrol Agreement Modification

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[18-LE-11060600-005 MODIFICAITON 006](#)

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[MOTION LANGUAGE](#)

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**MODIFICATION OF GRANT OR AGREEMENT**

PAGE OF PAGES

1

2

1. U.S. FOREST SERVICE GRANT/AGREEMENT NUMBER:  
18-LE-11060600-005

Cooperative Law Enforcement Agreement

2. RECIPIENT/COOPERATOR GRANT or  
AGREEMENT NUMBER, IF ANY:3. MODIFICATION NUMBER:  
0064. NAME/ADDRESS OF U.S. FOREST SERVICE UNIT ADMINISTERING  
GRANT/AGREEMENT (unit name, street, city, state, and zip + 4):Mt. Hood National Forest  
16400 Champion Way  
Sandy, OR 97055Columbia River Gorge National Scenic Area  
902 Wasco Ave Ste 200  
Hood River, OR 970315. NAME/ADDRESS OF U.S. FOREST SERVICE UNIT ADMINISTERING  
PROJECT/ACTIVITY (unit name, street, city, state, and zip + 4):USDA Forest Service  
Northern Oregon Zone LEI  
16400 Champion Way  
Sandy, OR 970556. NAME/ADDRESS OF RECIPIENT/COOPERATOR (street, city, state, and zip +  
4, county):Wasco, County of  
511 Washington St., Suite 207  
The Dalles, OR 97058-22377. RECIPIENT/COOPERATOR'S HHS SUB ACCOUNT NUMBER (For HHS  
payment use only):

N/A

**8. PURPOSE OF MODIFICATION**CHECK ALL  
THAT APPLY:This modification is issued pursuant to the modification provision in the grant/agreement  
referenced in item no. 1, above.☐

CHANGE IN PERFORMANCE PERIOD:

☒

CHANGE IN FUNDING: This modification adds \$18,260.00 for CY 2022

☐

ADMINISTRATIVE CHANGES:

☒OTHER (Specify type of modification): This modification adds the CY 2022 Annual Operating Plan and Financial  
Plan.**Except as provided herein, all terms and conditions of the Grant/Agreement referenced in 1, above, remain unchanged and in full  
force and effect.**

9. ADDITIONAL SPACE FOR DESCRIPTION OF MODIFICATION (add additional pages as needed):

**10. ATTACHED DOCUMENTATION (Check all that apply):**☐

Revised Scope of Work

☐

Revised Financial Plan

☒

Other: CY 2022 Annual Operating Plan and Financial Plan

**11. SIGNATURES****AUTHORIZED REPRESENTATIVE:** BY SIGNATURE BELOW, THE SIGNING PARTIES CERTIFY THAT THEY ARE THE OFFICIAL REPRESENTATIVES OF  
THEIR RESPECTIVE PARTIES AND AUTHORIZED TO ACT IN THEIR RESPECTIVE AREAS FOR MATTERS RELATED TO THE ABOVE-REFERENCED  
GRANT/AGREEMENT.

11.A. Wasco County Sheriff SIGNATURE

See attached Annual Operating Plan and  
Financial Plan for signatures.

(Signature of Signatory Official)

11.B. DATE  
SIGNED

11.C. U.S. FOREST SERVICE SIGNATURE

See attached Annual Operating Plan and  
Financial Plan for signatures.

(Signature of Signatory Official)

11.D. DATE  
SIGNED

11.E. NAME (type or print):

11.F. NAME (type or print):

11.G. TITLE (type or print):

11.H. TITLE (type or print):





USDA Forest Service

OMB 0596-0217  
FS-1500-19

## 12. G&A REVIEW

12.A. The authority and format of this modification have been reviewed and approved for signature by:

JESSICA CLARK

Digitally signed by JESSICA  
CLARK  
Date: 2022.02.01 07:44:00 -08'00'

JESSICA CLARK (18-LE-11060600-005 Mod 6)

U.S. Forest Service Grants & Agreements Specialist

12.B. DATE  
SIGNED

### Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

FS Agreement No. 18-LE-11060600-005  
Cooperator Agreement No. \_\_\_\_\_  
Modification No. 006**EXHIBIT A****COOPERATIVE LAW ENFORCEMENT ANNUAL OPERATING PLAN &  
FINANCIAL PLAN****Between****WASCO, COUNTY OF,  
WASCO COUNTY SHERIFF'S DEPARTMENT****And the****USDA, FOREST SERVICE  
MT. HOOD NATIONAL FOREST  
AND COLUMBIA RIVER GORGE NATIONAL SCENIC AREA****2022 ANNUAL OPERATING AND FINANCIAL PLAN**

This Annual Financial and Operating Plan (Annual Operating Plan), is hereby made and entered into by and between Wasco, County of, Wasco County Sheriff's Department, hereinafter referred to as "Cooperator," and the USDA, Forest Service, Mt. Hood National Forest and Columbia River Gorge National Scenic Area, hereinafter referred to as the "U.S. Forest Service," under the provisions of Cooperative Law Enforcement Agreement #18-LE-11060600-005 executed on the last date of last signature. This Annual Operating Plan is made and agreed to as of the last date signed below and is for the estimated period beginning January 1, 2022 and ending December 31, 2022.

Previous Year Carry-over: \$0.00

Current Calendar Year Obligation: \$18,260.00

**CY 2022 Total Annual Operating Plan: \$18,260.00****I. GENERAL:**

- A. The following individuals shall be the designated and alternate representative(s) of each party, so designated to make or receive requests for special enforcement activities.

**Principal Cooperator Contacts:**

<b>Cooperator Program Contact</b>	<b>Cooperator Administrative Contact</b>
Scott Williams 511 Washington St. Suite 102 The Dalles, OR 97058 Telephone: 541-506-2580 FAX: 541-506-2581 Email: <a href="mailto:scottw@co.wasco.or.us">scottw@co.wasco.or.us</a>	Brenda Borders 511 Washington St. Suite 102 The Dalles, OR 97058 Telephone: 541-506-2580 FAX: 541-506-2581 Email: <a href="mailto:brendab@co.wasco.or.us">brendab@co.wasco.or.us</a>

**Principal U.S. Forest Service Contacts:**

<b>U.S. Forest Service Program Manager Contact</b>	<b>U.S. Forest Service Administrative Contact</b>
Ross Gamboa 16400 Champion Way Sandy, OR 97055 Telephone: 503-668-1789 FAX: 503-668-1738 Email: <a href="mailto:ross.gamboa@usda.gov">ross.gamboa@usda.gov</a>	Rachele Avery 16400 Champion Way Sandy, OR 97055 Telephone: 503-668-1625 FAX: 503-668-1771 Email: <a href="mailto:rachele.avery@usda.gov">rachele.avery@usda.gov</a>

- B. Reimbursement for all types of enforcement activities shall be at the following rates unless specifically stated otherwise:

Wages at the prevailing rate of \$66.00/hour plus fringe benefits for the individual officer at the rate of \$99.00/hour.

Vehicle use rate of \$90.00 per ten hour day

**II. PATROL ACTIVITIES:**

- A. Time schedules for patrols will be flexible to allow for emergencies, other priorities, and day-to-day needs of both the Cooperator and the U.S. Forest Service. Ample time will be spent in each area to make residents and visitors aware that law enforcement officers are in the vicinity.
- B. Timely reports and/or information relating to incidents or crimes that have occurred on National Forest System lands should be provided to the U.S. Forest Service as soon as possible.

The primary patrol activities will be during the summer months of May through September; the tour of duty will be ten hours per day on Friday, Saturday and Sunday, and include the national holidays of May 30, 2022, July 4, 2022 and September 5, 2022. Patrol activities may also occur during other months, as funding permits and as agreed to between the Cooperator and U.S. Forest Service. Patrol dates may be varied to address operational needs after mutual agreement between the Cooperator's and the U.S. Forest Service's representatives.

Each tour of duty should begin between 12:00 PM and 4:00 PM and remaining work hours may be varied as agreed to between the Cooperator and U.S. Forest Service.

The assigned Deputies will check in, as practical with the Ranger District Office or U.S. Forest Service Law Enforcement Officer when they begin their tour of duty, in person, by radio or telephone.



During scheduled vacations the cooperator, when possible, provide fill in Deputies for patrol.

The assigned Deputies would be available for other support and assistance as requested by the U.S. Forest Service.

There are patrol related activities, which will impact the Cooperating Deputy's time and will cause them to be away from the patrol route (court, reports, or responding to incidents off National Forest). No adjustment to this plan will be required so long as the activities are held to, not more than 5 percent of the Deputy's scheduled time.

1. Patrol on following U.S. Forest Service roads:

Any and all Forest Service roads within the Mt. Hood National Forest and the Columbia River Gorge National Scenic Area within Wasco County.

2. Patrol in the following campgrounds, developed sites, or dispersed areas:

Clear Lake Campground	Rock Creek Campground
Eightmile Campground	McCubbins Gulch
Frog Lake Picnic Area	Barlow Crossing Campground
Barlow Creek Campground	White River Station Campground
Bear Springs Campground	Clear Creek Campground
Forest Creek Campground	Little Badger Campground
Fifteenmile Campground	Pebble Ford Campground
Knebal Springs Campground	Lower Crossing Campground
Underhill Site	

Patrol routes may be varied at the discretion of the assigned Deputy in order to effectively deal with incidents at other locations as they occur.

Search and rescue within the Mt. Hood National Forest and the Columbia River Gorge National Scenic Area, within Wasco County, is the responsibility of the Cooperator. The role of the assigned Deputies to this agreement is to take initial action on search and rescue incidents and to coordinate subsequent (short term) activities.

Total reimbursement for this category shall not exceed the amount of: \$18,260.00

### III. EQUIPMENT:

*See Cooperative Law Enforcement Agreement Provisions IV-K, IV-L, and IV-M for additional information.*

- A. The U.S. Forest Service agrees to reimburse the Cooperator for equipment and supplies in an amount not to exceed \$1,000. All purchases must be approved by the U.S. Forest Service prior to purchase. Documentation of such purchases shall become part of the Cooperative Agreements' official file.



- B. The U.S. Forest Service may loan the Cooperator equipment as needed, when mutually agreed. While in possession of the Cooperator, maintenance of this equipment shall be the responsibility of the Cooperator and shall be returned in same condition as time of transfer.

U.S. FOREST SERVICE SHALL:

1. Grant permission, subject to U.S. Forest Service limitations and regulations, and those included herein, to the Cooperator for law enforcement purposes, for use of the Mt. Hood National Forest radio frequencies. Various channel guard tones are also authorized for use as required.
2. Restrict the use of radio frequency to official business.
3. Retain control of the use of these radio frequencies.
4. Not charge for the use of the radio frequencies.

COOPERATOR SHALL:

1. Grant permission, subject to State limitations and regulations, and those included herein, to the U.S. Forest Service for law enforcement purposes, for use of the Cooperator radio frequencies. Various channel guard tones are also authorized for use as required.
2. Restrict use of the radio frequency to official business.
3. Retain control of the use of these radio frequencies.
4. Recognize that fire traffic may have priority use of the frequency and that any transmissions during the time of a fire shall be coordinated with the on-scene Incident Commander and/or Columbia River Interagency Dispatch Center.
5. Ensure any radio transmissions in the 162-174 VHF Band are operating in the narrowband mode.

Total reimbursement for this category will be paid out of the Patrol Activity funds in Section II. Total reimbursement for this category shall not exceed the amount of: \$1,000.00

IV. SPECIAL ENFORCEMENT SITUATIONS:

- A. Special Enforcement Situations include but are not limited to: Fire Emergencies, Drug Enforcement, and certain Group Gatherings.
- B. Funds available for special enforcement situations vary greatly from year to year and must be specifically requested and approved prior to any reimbursement being authorized. Requests for funds should be made to the U.S. Forest Service designated representative listed in Item I-A of this Annual Operating Plan. The designated representative will then notify **Error! Reference source not found.** whether funds will be authorized for reimbursement. If funds are authorized, the parties will then jointly prepare a revised Annual Operating Plan.





1. **Drug Enforcement:** This will be handled on a case by case basis. The request will normally come from the Patrol Captain; however, it may come from the Special Agent in Charge or their designated representative. Reimbursement shall be made at the rates specified in Section I-B. Deputies assigned to the incident will coordinate all of their activities with the designated officer in charge of the incident.
2. **Fire Emergency:** During emergency fire suppression situations and upon request by the U.S. Forest Service pursuant to an incident resource order, the Cooperator agrees to provide special services beyond those provided under Section II-A, within the Cooperator's resource capabilities, for the enforcement of State and local laws related to the protection of persons and their property. The Cooperator will be compensated at the rate specified in Section I-B; the U.S. Forest Service will specify times and schedules. Upon concurrence of the local Patrol Captain or their designated representative, an official from the Incident Management Team managing the incident, Cooperator personnel assigned to an incident where meals are provided will be entitled to such meals.
3. **Group Gatherings:** This includes but is not limited to situations which are normally unanticipated or which typically include very short notices, large group gatherings such as rock concerts, demonstrations, and organization rendezvous. Upon authorization by a U.S. Forest Service representative listed in Section I-A for requested services of this nature, reimbursement shall be made at the rates specified in Section I-B. Deputies assigned to this type of incident will normally coordinate their activities with the designated officer in charge of the incident.

This includes but is not limited to situations which are normally unanticipated or which typically include very short notice, large group gatherings such as rock concerts, demonstrations, and organizational rendezvous.

## **V. BILLING FREQUENCY:**

*See Cooperative Law Enforcement Agreement Provisions II-H and III-B for additional information.*

- A. The Cooperator will submit invoices for reimbursement of services provided under Section II of this agreement monthly or quarterly, at the discretion of the Cooperator.

USDA Forest Service  
Albuquerque Service Center  
Payments-Grants and Agreements  
101B Sun Ave NE  
Albuquerque, NM 87109  
FAX: (877) 687-4894  
E-Mail: SM.FS.asc\_ga@usda.gov and rachele.avery@usda.gov



The Cooperator will prepare an itemized statement for each invoice submitted to the Albuquerque Service Center. The statement will be in sufficient detail to allow the U.S. Forest Service to verify expenditures authorized. The itemized statement for reimbursement will also include the following information:

1. Areas patrolled and miles traveled on NFS lands.
2. Person-hours worked in NFS patrol areas.
3. Copies of completed Daily Activity Reports.
4. Copies of invoice submitted.

The statement should be sent to the following address:

USDA Forest Service, Law Enforcement & Investigations  
Northern Oregon Zone  
ATTN: Ross Gamboa, Captain  
16400 Champion Way  
Sandy, OR 97055

Or to the following e-mail address  
rachele.avery@usda.gov

- B. The following is a breakdown of the total estimated costs associated with this Annual Operating Plan.

Category	Estimated Costs	Not to Exceed by %
Patrol Activities	\$18,260.00	N/A
Training	N/A	N/A
Equipment	\$1,000.00 (from Patrol Activities)	N/A
Special Enforcement Situations	N/A	N/A
<b>Total</b>	<b>\$18,260.00</b>	<b>N/A</b>

- C. Any remaining funding in this Annual Operating Plan will be deobligated at the request of the U.S. Forest Service. *See Cooperative Law Enforcement Agreement Provision IV-D.*
- D. By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this agreement.

In witness whereof, the parties hereto have executed this Annual Operating Plan as of the last date written below.



---

LANE MAGILL, Sheriff  
County of Wasco

Date

---

KATHY SCHWARTZ, Commissioner  
County of Wasco

Date

---

META LOFTSGAARDEN, Forest Supervisor  
U.S. Forest Service, Mt. Hood National Forest

Date

---

DONNA MICKLEY, Forest Supervisor  
U.S. Forest Service, Columbia River Gorge National Scenic Area

Date

C CORIELL

Digitally signed by C  
CORIELL  
Date: 2022.02.15  
15:58:11 -08'00'

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ANDY CORIELL  
Acting Special Agent in Charge, Pacific Northwest Region

Date

The authority and format of this modification (18-LE-11060600-005 Mod 006) has been reviewed and approved for signature.

JESSICA  
CLARK

Digitally signed by  
JESSICA CLARK  
Date: 2022.02.01  
07:34:27 -08'00'

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JESSICA CLARK  
U.S. Forest Service Grants Management Specialist

Date

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to complete this information collection is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

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## **MOTION**

**SUBJECT: USFS Patrol Agreement Modification**

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I move to approve USFS Grant Agreement 18-LE-11060600-005 Modification 006.



## DISCUSSION ITEM

### NCPHD Appointment

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[SCOTT MCKAY APPLICATION](#)

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[ORDER 22-009 APPOINTING SCOTT MCKAY TO THE NCPHD BUDGET COMMITTEE](#)

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[MOTION LANGUAGE](#)

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## INFORMATION AND QUALIFICATION FORM

### North Central Public Health District Budget Committee

### Wasco County Representative

VOLUNTEER POSITIONS  
WASCO COUNTY, OREGON

#### BACKGROUND

The NCPHD Budget Committee meets each year to:

- Receive the budget document
- Hear the budget message
- Hear & consider public comment
- Discuss and revise the budget as needed
- Approve the budget for recommendation to the District Board

#### APPLICATION

Provide personal qualifications for this specific volunteer position.

Supplementary information may be attached. Do not provide confidential information.

Name: Scott McKay

Address: ██████████ ██████████ The Dalles, OR 97058

Phone (home) ██████████ Phone (work)                     

E-mail ██

Signature: Scott McKay

Date: March 8, 2022 Number of years as a Wasco County resident:                     

Your objectives/goals? Desired contributions and accomplishments? Effective use of the dollars

available dollars to provide the best possible care to our citizens



If the cost of providing public health services far outweigh the ability to fund them. Are you willing to make the difficult funding decisions and communicate the results to the public?

Comments: Yes, I have considerable experience in making those decisions and communicating them to our citizens

Education (school, college, training, apprenticeships, degrees, etc.)

\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_

Experience (work, volunteering, leadership roles, achievements etc.)

\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_  
\_\_\_\_\_ Date(s): \_\_\_\_\_

General Comments/Additional Relevant Information

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Send completed form to:      Wasco County  
   511 Washington Street, Suite 101  
   The Dalles OR 97058  
   (541) 506-2520  
   (541) 506-2551 (fax)



IN THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF THE APPOINTMENT OF SCOTT MCKAY TO REPRESENT WASCO COUNTY ON THE NORTH  
CENTRAL PUBLIC HEALTH DISTRICT BUDGET COMMITTEE

**ORDER #22-009**

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Board of Commissioners being present; and

IT APPEARING TO THE BOARD: That the North Central Public Health District has requested a representative of Wasco County to serve on their Budget Committee; and

IT FURTHER APPEARING TO THE BOARD: That Scott McKay is willing and is qualified to be appointed to represent Wasco County on the North Central Public Health District Budget Committee.

NOW, THEREFORE, IT IS HEREBY ORDERED: That Scott McKay be and is hereby appointed to represent Wasco County on the North Central Public Health District Budget Committee; said term to expire on December 31, 2023.

DATED this 16<sup>TH</sup> day of March, 2022.

APPROVED AS TO FORM

Wasco County Board of Commissioners

\_\_\_\_\_  
Kristen Campbell, County Counsel

\_\_\_\_\_  
Kathleen B. Schwartz, Chair

\_\_\_\_\_  
Steven D. Kramer, Vice-Chair

\_\_\_\_\_  
Scott C. Hege, County Commissioner



## MOTION

**SUBJECT: NCPHD Budget Committee Appointment**

---

I move to approve Order 22-009 appointing Scott McKay to the North Central Public Health District Budget Committee.



## DISCUSSION ITEM

**AOC Committee Representative**

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[AOC MEMO](#)

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Hello,

AOC's Federal Land Management Subcommittee (a subcommittee of the Natural Resources Steering Committee) will meet on March 31st at 1:30 p.m. The meeting will be held virtually. The agenda and meeting link will be sent in a separate email.

Per the subcommittee [bylaws](#), eligible counties are those that qualify for national forest road receipts or successor safety net road receipts. An eligible county becomes a member by payment of the dues assessment for the current year.

Each member county holds one position on the Board of Directors and has one vote. The member county must appoint one of its governing body members to vote on its behalf.

The county makes the appointment of its voting member by a letter signed by the majority of the governing body and delivered to subcommittee staff when it pays its dues to the subcommittee. If the county changes its voting member, it must do so by letter signed by the majority of the governing body and delivered to subcommittee staff.

If you have paid your 2021 Federal Land Management Subcommittee dues, please send a letter designating the Commissioner who will be the voting member for your County to Drenda Howatt, Legislative Affairs Manager, [dhowatt@oregoncounties.org](mailto:dhowatt@oregoncounties.org), no later than March 21st. The letter must be signed by the majority of the governing body.

Please let me know if you have any questions.

Thank you,  
Drenda

--

**Drenda Howatt**

Legislative Affairs Manager (Natural Resources, Veterans)  
Association of Oregon Counties



## CONSENT AGENDA

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[MINUTES: 3.2.2022 REGULAR SESSION](#)

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**WASCO COUNTY BOARD OF COMMISSIONERS  
REGULAR SESSION  
MARCH 2, 2022**

This meeting was held on Zoom

<https://wascocounty-org.zoom.us/j/3957734524>

or call in to [1-253-215-8782](tel:1-253-215-8782) Meeting ID: 3957734524#

**PRESENT:** Kathy Schwartz, Chair  
Steve Kramer, Vice-Chair  
Scott Hege, County Commissioner  
**STAFF:** Kathy Clark, Executive Assistant  
**ABSENT:** Tyler Stone, Administrative Officer

Chair Schwartz opened the session at 9:00 a.m.

Changes to the agenda: Ms. Clark asked to add a letter of support for a School District 21 grant application to the Discussion List.

**Discussion Item – Letter of Support**

North Wasco County School District 21 Chief Financial Officer Kara Flath explained that they are applying for an education grant to hire a Safe Routes to Schools Coordinator who will work with the City and County, parents, staff and community partners to educate the public on safe routes to school. The District has already developed recommendations, especially for Chenoweth and Colonel Wright Elementary Schools. The grant will be between \$100,000 and \$150,000. She asked that the letter mention the County's willingness to work with the coordinator.

Commissioner Hege said he thinks it is a good program. He asked if this would be a temporary position or permanent. Ms. Flath replied that there are programs available to support the position. She agreed that stability is a concern; she thinks it will take two years to assess the effectiveness of the program and she hopes to be able to sustain it beyond that.

Commissioner Hege stated that he supports the letter and is willing to help in any way he can.

Vice-Chair Kramer agreed with Commissioner Hege's comments. He asked if the letter is time sensitive. Ms. Flath responded that applications are due by March 16<sup>th</sup>.

**\*\*\*The Board was in consensus to provide a letter of support for North Wasco County School District's application to the Safe Routes to School grant program.\*\*\***

**Discussion Item – Building Codes IGA Amendment**

Ms. Clark explained that this has been in place since shortly after Wasco County took over the Building Codes program. It provides a safety net to allow inspections to continue under most circumstances.

Chair Schwartz pointed out that the amendment not only extends the agreement but applies an annual spending cap.

Commissioner Hege said that our approach to Building Codes is working well and he supports extending the agreement; it is nice to have a backup.

**{{{Vice-Chair Kramer moved to approve IGA 90G000359 Amendment 2 extending cooperative Building Codes services with the State Building Codes Division through March 1, 2027. Commissioner Hege seconded the motion which passed unanimously.}}}**

**Discussion Item – Red Cross Proclamation**

Chair Schwartz said that the Red Cross is a wonderful organization that works behind the scenes – she has seen them work locally; they have many wonderful volunteers. She stated that she is very proud to make this proclamation.

Commissioner Hege read the proclamation (included in the Board Packet).

**{{{Commissioner Hege moved to proclaim March, 2022 as American Red Cross Month throughout Wasco County. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

**Consent Agenda – 2.16.2022 Regular Session Minutes**

**{{{Commissioner Hege moved to approve the Consent Agenda. Vice-Chair Kramer seconded the motion which passed unanimously.}}}**

Chair Schwartz opened the floor to public comment. There was none.

**Agenda Item – Smoke Mitigation Grant Agreement & IGA**

Wasco County 4H and Extension District Family and Community Health Director Lauren Kraemer explained that the grant will allow the Extension Service District to develop a regional smoke management plan in collaboration with the County and community partners. She said that she hopes to have the project completed in a year at which time they will hold a tabletop exercise to test the plan.

Vice-Chair Kramer said he thinks this is a fine program that needs to move forward. He said that since there is an accompanying IGA between the County and OSU, he would like to hear from County Counsel.

County Counsel Kristen Campbell said that she has worked extensively with Ms. Kraemer and DEQ and has no concerns.

Ms. Kraemer stated that they applied for and received three grants that will support this work. A grant from OHSU will support the installation of air quality monitors. They hope to get more monitors that can be installed at schools. Eventually, the monitors should be able to notify citizens directly if there is an air quality alert. This grant is for a plan to respond to smoke in the region. She hopes to have an Americorps intern to work on this along with 25% of her time. There is a lot of interest in participating from our partner agencies. A more long-term project will be to find ways to reduce smoke.

Chair Schwartz asked about personal protective equipment that people may need when there is smoke in the area. She asked if part of the work will be to educate the public. Ms. Kraemer confirmed that there will be education on what kind of masks are effective, the need for air purifiers, etc. She added that there is funding for low-income families to access those measures; they also just received 10,000 smoke-rated masks to help respond to an event.

**{{Vice-Chair Kramer moved to approve DEQ Smoke Management Community Planning Grant Agreement # 046-22 and the IGA between Wasco County and OSU Extension Services for implementation of said grant. Commissioner Hege seconded the motion which passed unanimously.}}**

**Commission Call**

The Board discussed the possibility of moving to hybrid meetings starting March 16<sup>th</sup>. It was determined that if staff can accommodate that start date, they would move forward with it.

The Board discussed the possibility of identifying a meeting space that would accommodate more people without being crowded. Ms. Clark said she would look into the possibilities.

Sheila Dooley asked if the Wilson Hearing will be hybrid. Commissioner Hege replied that it may be but in any case, a remote option will be available.

Chair Schwartz adjourned the session at 9:40 a.m.

Summary of Actions
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**MOTIONS**

- **To approve IGA 90G000359 Amendment 2 extending cooperative Building Codes services with the State Building Codes Division through March 1, 2027**
- **To proclaim March, 2022 as American Red Cross Month throughout Wasco County.**
- **To approve the Consent Agenda – 2.16.2022 Regular Session Minutes.**
- **To approve DEQ Smoke Management Community Planning Grant Agreement # 046-22 and the IGA between Wasco County and OSU Extension Services for implementation of said grant.**

**CONSENSUS**

- **To provide a letter of support for North Wasco County School District's application to the Safe Routes to School grant program.**

Wasco County  
Board of Commissioners

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Kathleen B. Schwartz, Commission Chair

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Steven D. Kramer, Vice-Chair

---

Scott C. Hege, County Commissioner



## AGENDA ITEM

### Planning Appeal

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[REMAND HEARING SCOPE](#)

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[SUMMARY OF INFORMATION](#)

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[STAFF REPORT TO BOARD OF COMMISSIONERS](#)

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[EXHIBITS](#)

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[PLANNING COMMISSION AGENDA PACKET FOR HEARING DATED 12.7.21](#)

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[REMAND REQUEST LETTER – SUMMERFIELD/WILSON 7.9.21](#)

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[LOCATION & SITE MAPS](#)

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[SUPPLEMENT TO COMPLETE RECORD 9.17.19](#)

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[COMPLETE RECORD 6.18.2019](#)

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# **WASCO COUNTY BOARD OF COUNTY COMMISSIONS AGENDA PACKET**

## **FOR**

Hearing Date: March 16, 2022  
Hearing Time: 9:30 pm  
Hearing Location: Electronically via Zoom  
Meeting ID: 3957734524#

**HEARING DETAILS: File # 921-18-000086-PLNG. A hearing to address issues that were remanded by the Land Use Board of Appeals (LUBA No. 2019-065) on January 14, 2020. This remand hearing is for a Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10). Applicant and Property Owner: David Wilson. Zone: Forest, F-2. The 40-acre subject property is located on the south side of Sevenmile Hill Road, southeast of Sevenmile Hill Road's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as Township 2 North, Range 12 East W.M., Section 22, Tax Lot 4400; Account 884**







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**MEMORANDUM TABLE OF CONTENTS**

**Date:** March 7, 2022  
**To:** Wasco County Board of County Commissioners  
**From:** Wasco County Planning Office  
**Subject:** Submittal for Hearing dated March 16, 2022  
**Re:** #921-18-000086-PLNG Remand of LUBA: Comp Plan Amendment; Exception to Statewide Planning Goal 4; Zone Change

<b><u>Item</u></b>	<b><u>Page</u></b>
Attachment A - Remand Hearing Scope	BOC 1 - 1
Attachment B - Summary of Information	BOC 1 - 2
Attachment C – Board of County Commissioners Staff Report	BOC 1 - 6
Attachment D – Exhibits	BOC 1 - 103
Attachment E – Planning Commission Agenda Packet for hearing dated 12-7-21	BOC 1 - 662
Remand Request Letter – Summerfield / Wilson dated 7-9-21	BOC 1 – 1341
Location & Site Maps	BOC 1 - 1389
Supplement to Complete Record #921-18-000086-PLNG dated 9-17-19	BOC 1 – 1391
Complete Record dated 6-18-19	BOC 1 – 2195





## ATTACHMENT A

### REMAND HEARING SCOPE MEMORANDUM

#### MEMORANDUM

**SUBJECT: REMAND HEARING SCOPE**

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TO: WASCO COUNTY BOARD OF COMMISSIONERS

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FROM: DANIEL DOUGHERTY, SENIOR PLANNER

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DATE: 3/8/2022

#### **Background**

The Wasco County Planning Department processed David Wilson's Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson's Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (See *Dooley et al v. Wasco County*, LUBA No. 2019-065) on January 14, 2020.

LUBA addressed four "Assignments of Error" brought by the appellants who challenged Wasco County's record evidence, findings, and conclusions that approved Mr. Wilson's goal exception request under "OAR 660-004-0025 Lands Physically Developed to Other Uses" exception and "660-004-0028 Land Irrevocably Committed" exception. Three "Assignments of Error" found that the County's findings did not support the conclusion to grant an exception under "660-004-0028 irrevocably committed" exception. The "Fourth Assignment of Error" found an overall lack of record evidence to support the County's findings and conclusions. LUBA ordered the County's decision remanded.

#### **Remand Scope**

Staff findings and the Planning Commission's recommendations for this remand hearing are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028. The Quasi-Judicial Hearing for final determination of this matter is strictly limited to those criteria within OAR 660-004-0025 and OAR 660-004-0028.

#### **Supporting Case Law**

*Von Lubken v. Hood River County*, 19 Or LUBA 404 (1990). On remand from LUBA, a local government is entitled to limit its consideration of a request for land use approval to the issues that were the basis for remand.

*Strawn v. City of Albany*, 21 Or LUBA 172 (1991). City councilors who participated in a decision remanded by LUBA are not bound on remand to vote as they did previously.



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### SUMMARY OF INFORMATION

Prepared for WASCO COUNTY BOARD OF COMMISSIONERS Hearing

FILE #: 921-18-000086-PLNG

HEARING DATE: March 16, 2022

NEWSPAPER PUBLISH DATE: March 2, 2022

#### REQUEST:

Approval for:

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forestry" to "Forest Farm";
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

#### PLANNING COMMISSION

#### RECOMMENDATION:

Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Wasco County Board of Commissioners deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that "In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission." Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

APPLICANT/OWNER: David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

LOCATION: The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

ZONING: Forest (F-2) Zone / EPD-8, Sensitive Wildlife Habitat Overlay Zone

#### Attachments:

Staff Reviewer: Daniel Dougherty, Senior Planner

- A. Remand Hearing Scope Memorandum
- B. Planning Commission Recommendation & Board of Commissioner Options
- C. Staff Report
- D. Exhibits

## ATTACHMENT B

### PLANNING COMMISSION RECCOMENDATION AND BOARD OF COMMISSIONERS OPTIONS

All associated maps are enclosed as **Attachment D Exhibit 15**. The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the March 16, 2021, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings in the staff report, but summarizes the results of Staff's review and the Planning Commission's recommendation.

#### **SCOPE OF HEARING**

The scope of this Remand Hearing is discussed in Attachment A. Findings and conclusions made with regards to other required local and state law pertaining to the original decision will remain in effect.

#### **PLANNING COMMISSION**

##### **RECOMMENDATION:**

Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Wasco County Board of Commissioners deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that "In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission." Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

#### **FORMAT**

Proposed findings of fact and recommendations are provided throughout the Staff Report. **It only takes one Criterion not being met to recommend denial of the request.**



## ATTACHMENT B

### PLANNING COMMISSION RECCOMENDATION AND BOARD OF COMMISSIONERS OPTIONS

#### **BOARD OF COMMISSIONERS OPTIONS**

**Pertaining to OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses.**

- A. Approve, with Recommended Conditions and Findings: Based upon all of the findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*.
- B. Approve, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*.
- C. Deny, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, deny this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*.
- D. Remand, to the Planning Commission: Based on specified insufficient information to make a decision concerning the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*, remand this request back to the Planning Commission for further review.
- E. Continuation: Continue the hearing to a date and time certain.

## ATTACHMENT B

### PLANNING COMMISSION RECCOMENDATION AND BOARD OF COMMISSIONERS OPTIONS

**Pertaining to OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses.**

- A. Approve, with Recommended Conditions and Findings: Based upon all of the findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*.
- B. Approve, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*.
- C. Deny, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, deny this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*.
- D. Remand, to the Planning Commission: Based on specified insufficient information to make a decision concerning the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*, remand this request back to the Planning Commission for further review.
- E. Continuation: Continue the hearing to a date and time certain.

## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forestry” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

**Applicant/Owner:** David Wilson

**Prepared By:** Daniel Dougherty, Senior Planner

**Prepared For:** Wasco County Board of Commissioners

**Procedure Type:** Quasi-Judicial Hearing

### **LUBA Remand**

**Background:** Mr. Wilson’s initial application was received by the Wasco County Planning Office on May 23, 2018. The Wasco County Planning Commission recommended approval of the request on April 2, 2019. The Wasco County Board of County Commissioners approved the request on June 5, 2019. The decision was appealed to the Land Use Board of Appeals (LUBA).

LUBA (See LUBA No. 2019-065, issued on January 14, 2020) addressed four “Assignments of Error” brought by the appellants who challenged Wasco County’s record evidence, findings, and conclusions that approved Mr. Wilson’s goal exception request under “OAR 660-004-0025 Lands Physically Developed to Other Uses” exception and “OAR 660-004-0028 Land Irrevocably Committed” exception. Three “Assignments of Error” found that the County’s findings did not support the conclusion to grant an exception under “OAR 660-004-0028 Irrevocably Committed” exception. The “Fourth Assignment of Error” found an overall lack of record evidence to support the County’s findings and conclusion to grant an exception under “OAR 660-004-0025 Lands Physically Developed to Other Uses” exception. LUBA ordered the County’s decision remanded.

The Wasco County Planning Department processed David Wilson’s Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson’s Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request.

**Planning Commission  
Remand Hearing Date:**

December 7, 2021

## ATTACHMENT C – STAFF REPORT

### Planning Commission Recommendation:

Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Wasco County Board of Commissioners deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that “In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission.” Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

### Board of Commissioners Hearing Date:

March 16, 2022

### Board of Commissioners Hearing Scope:

Findings and conclusions for this remand hearing are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028.

### Location:

The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

### Zoning:

Forest (F-2) Zone

### Comprehensive Plan Designation:

Forestry

### Past Actions:

PLALEG-13-08-0002 (Rezone)  
PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)  
CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)  
PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)  
PLAPAR-17-05-0002 (Partition and Agricultural Structure)  
PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

## ATTACHMENT C – STAFF REPORT

### Submitted Comments:

Submitted comments related to this Remand hearing are addressed in this Staff Report where appropriate and where time allowed. Provided below is list of public comments submitted.

#### Agency Commentary / Attachment D (Exhibit 5)

Arthur Smith, Wasco County Public Works Director

Melanie Brown, Wasco County Chief Appraiser

Hilary Foote, Oregon Land Conservation and Development (DLCD) Farm Forest Specialist

#### Specialist Commentary / Attachment D (Exhibit 10)

Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist.

#### Applicant Commentary / Attachment D (Exhibit 18)

William H. Sumerfield, Attorney for the Applicant David Wilson

Gary Kitzrow, M.S., Certified Soil Classifier (See also Exhibit 10)

David W. Rogers

Steve Hunt

Letter from former Wasco County Planner Karen Mirande added on March 2, 2022, by David Wilson.

#### Public Commentary / Attachment D (Exhibit 19)

Gary Casady

Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker

Sheila Dooley

Jillian Barker

Phil Swaim

### Maps:

Full copies of all maps are located in Attachment D (Exhibit 15).

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

#### **Oregon Administrative Rules (OAR)**

OAR 660-015-0000(2) - Goal 2 Land Use Planning” Statewide Planning Goals and Guidelines

OAR 660-015-0000(4) - Goal 4 Forest Lands

OAR 660-004-00025 - Exception Requirements for Land Physically Developed to Other Uses

OAR 660-004-00028 - Exception Requirements for Land Irrevocably Committed to Other Uses

## **II. BACKGROUND INFORMATION**

**A. Remand History and Issues addressed in this Staff Report:** The Wasco County Planning Department processed David Wilson’s Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson’s Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (LUBA No. 2019-065) on January 14, 2020.

A hearing was conducted before the Planning Commission to consider the Remand request on December 7, 2021.

1. Pertaining to OAR 660-004-00025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-00025, and recommends that the Wasco County Board of Commissioners deny the request based on the physically developed exception.
2. Pertaining to OAR 660-004-00028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that “In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission.” Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

**B. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### C. Public Facilities and Services

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately 0.5 miles east of the intersection of Sevenmile Hill/State/Dry Creek Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See 1997 TLSA full report). A 1998 TLSA memo contained the following statistics (1998 TLSA memo, Page 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

Copies of the “1997 TLSA full report” and “1998 TLSA memo” are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 1.

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwelling units to the area’s traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, the Wasco County 2009 Transportation System Plan utilized the Oregon Highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwelling units will not cause the V/C ratio to rise above 0.70. The TSP predicted that the V/C ratio would reach 0.03 by 2030 at 600 ADT, thus, even with the addition of three new dwelling units, the ADT for State Road/Sevenmile Hill Road in 2030 will only equal 629 ADT, which does not approach the 0.70 V/C ratio, nor the 1,500/day capacity of State Road/Sevenmile Hill Road. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on Wasco County’s transportation facilities.

A copy of the “2009 Wasco County Transportation System Plan” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG.



2. Water and Sewer: Because of the rural nature of the area, there is no public water system that will be available to serve existing or future residences on the subject property or surrounding lands. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' ("TLSA Study Area Ground Water Evaluation – Wasco County, Oregon", Jervey Geological Consulting ("Groundwater Study"), Pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, and are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwelling units will be required to handle its own sewage as required by law. At the development stage, each residential development will have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

A copy of the "TLSA Study Area Ground Water Evaluation – Wasco County, Oregon" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 1.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the existing subject property and each of the three potential properties that may be created. Wasco Electric Co-op currently serves the residence located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

#### **D. Land Use History:**

##### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. These concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Figure 11 within the report is a map that provides combined values that among other properties, rates the subject parcel at “L/H,” meaning low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how land within the Forest (F-2) Zone should be addressed. After the TLSA study, eight parcels of Forest-Farm (F-F 10) Zone (Non-Resource) land in the Sevenmile Hill area north of the subject property were converted to Rural Residential (R-R (10)) Zone, removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Sevenmile Hill Road near the proposed exception area.

##### *Betzing Appeal*

The County’s approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas’ central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of

Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that “dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost.” (Betzing Record, page 230.)

*Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource).

To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject

property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south. (Settlement Agreement, Page 1).

A copy of the "Settlement Agreement" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 2.

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply the Forest-Farm (F-F 10) Zone (Non-Resource) to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) within the Forest (F-2) Zone. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration's (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new Forest-Farm (F-F 10) Zone (Non-Resource) lands on the one hand, and the commercial forestry lands south of the easement on the other.

The Wasco County Planning Commission voted 4-3 to recommend approval to the Wasco County Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### **III. FINDINGS**

#### **1. State Laws – Oregon Revised Statutes, Planning Goals & Oregon Administrative Rules**

##### **A. Introduction**

The applicant seeks the following:

- (1) Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm";
- (2) Exception to Statewide Planning Goal 4 – Forest Lands; and
- (3) Zone Change: Change a legal parcel zoned Forest (F-2) Zone, Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

In order to alter the subject property's land use designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Statewide Planning Goal 4 – Forest Lands, and amend the Wasco County Comprehensive Plan.

An exception to Statewide Planning Goal 4 – Forest Lands is allowed under Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR):

##### **ORS 197.732**

(1) *As used in this section:*

- (a) *“Compatible” is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.*
- (b) *“Exception” means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (A) *Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*
  - (B) *Does not comply with some or all goal requirements applicable to the subject properties or situations; and*
  - (C) *Complies with standards under subsection (2) of this section.*

(2) *A local government may adopt an exception to a goal if:*

*(\*\*\*)*

- (b) *The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*(\*\*\*)*

(4) *A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*

(5) *Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*(\*\*\*)*

**Planning Goal 2, PART II EXCEPTIONS, (OAR 660-015-0000(2))**

*A local government may adopt an exception to a goal when:*

- (a) *The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*
- (b) *The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

*Exception means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that;*

- (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*
- (b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*
- (c) Complies with standards for an exception.*

**Chapter 660, Division 4 INTERPRETATION OF GOAL 2 EXCEPTION PROCESS (OAR-660-004)**

OAR-660-004-0005

**Definitions**

*For the purpose of this division, the definitions in ORS 197.015 and the Statewide Planning Goals shall apply. In addition, the following definitions shall apply:*

- (1) An "Exception" is a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*
  - (b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*
  - (c) Complies with ORS 197.732(2), the provisions of this division and, if applicable, the provisions of OAR 660-011-0060, 660-012-0070, 660-014-0030 or 660-014-0040.*
- (2) "Resource Land" is land subject to one or more of the statewide goals listed in OAR 660-004-0010(1)(a) through (g) except subsections (c) and (d).*
- (3) "Nonresource Land" is land not subject to any of the statewide goals listed in OAR 660-004-0010(1)(a) through (g) except subsections (c) and (d). Nothing in these definitions is meant to imply that other goals, particularly Goal 5, do not apply to nonresource land.*

OAR-660-004-0010

**Application of the Goal 2 Exception Process to Certain Goals**

- (1) The exceptions process is not applicable to Statewide Goal 1 "Citizen Involvement" and Goal 2 "Land Use Planning." The exceptions process is generally applicable to all or part of those statewide goals that prescribe or restrict certain uses of resource land, restrict urban uses on rural land, or limit the provision of certain public facilities and services. These statewide goals include but are not limited to:*

*(\*\*\*)*

- (b) Goal 4 "Forest Lands"; however, an exception to Goal 4 "Forest Lands" is not required for any of the forest or nonforest uses allowed in a forest or mixed farm/forest zone under OAR chapter 660, division 6, "Forest Lands";*

**Planning Goal 4, FOREST LANDS, (OAR 660-015-0000(4))**

*To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.*

*Forest lands are those lands acknowledged as forest lands as of the date of adoption of this goal amendment. Where a plan is not acknowledged or a plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.*

**FINDING:** As provided above, both Goal 2: OAR 660-015-0000(2) and OAR 660-004-0005(1), adopt the legislative (ORS 197.732) definition of "exception" with minor variation. Furthermore, Goal 2: OAR 660-015-0000(2), provides that "[a] local government may adopt an exception to a goal" as long as the underlying request "[c]omplies with standards for an exception." OAR 660-004-0010(1)(b), explicitly provides for a "Goal 2 Exception Process" which "is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land," to include "Goal 4 'Forest Lands.'"

In order to effectuate the applicant's request to change the subject property's land use designation from "forestry" to "forest-farm", state law requires that Wasco County adopt an exception to Statewide Planning Goal 4 – Forest Lands, and amend the Wasco County Comprehensive Plan. In order for Wasco County to adopt an exception to Statewide Planning Goal 4, the applicant must demonstrate through clear and objective evidence compliance with applicable standards provided in either "OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses" or "OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses".

As provided above in Section II.A of this report, the Wasco County Planning Department processed David Wilson's Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson's Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (LUBA No. 2019-065) on January 14, 2020.

The LUBA opinion (See LUBA No. 2019-065) addressed four "Assignments of Error" that challenged Wasco County's record evidence, findings, and conclusions that approved Mr. Wilson's goal exception request under "OAR 660-004-0025 Lands Physically Developed to Other Uses" exception and "660-004-0028 Land Irrevocably Committed" exception. Three "Assignments of Error" specifically found that the County's findings did not support the conclusion to grant an exception under "660-004-0028 Land Irrevocably Committed" exception. The "Fourth Assignment of Error" found an overall lack of record evidence to support the County's findings and conclusions under "OAR 660-004-0025 Lands Physically Developed to Other Uses" exception. LUBA ordered the County's decision remanded.

Mr. Wilson provided new evidence and requests a remand hearing to consider his request. Staff evaluated evidence provided in support of the original request and new evidence submitted. Staff provided findings and recommendations for the Planning Commission that addressed only those issues (Assignments of Error) contested in the appeal to LUBA (See LUBA No. 2019-065).

The Planning Commission met on December 7, 2022, and voted in the following manner:

1. Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Wasco County Board of Commissioners deny the request based on the physically developed exception.
2. Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that “In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission.” Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

On December 15, 2021, staff mailed notice of the Planning Commission’s recommendation to parties who signed in and testified at the hearing and to such other persons as may have requested the same in writing. This Staff Report’s findings are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028. Where applicable, findings address public comments that were submitted during the Planning Commission hearing and those comments submitted prior to this hearing.

**B. *Exception Requirements for Land Physically Developed to Other Uses.***

*OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.*

*OAR 660-004-0025:*

*Exception Requirements for Land Physically Developed to Other Uses*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*
- (2) *Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.*

**FINDING:** Information concerning the “physically developed area” of the subject parcel is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021.

Analysis includes the following: (1) Physical Development & Fire Buffer & Maintenance Area Estimates; (2) Staff Analysis (Physical Development & Fire Buffer & Maintenance Area Estimates); (3) Staff Conclusion and Recommendation; and (4) PLANNING COMMISSION RECCOMENDATION.



**(1) Physical Development & Fire Buffer & Maintenance Area Estimates.** Original application materials provide the following description of the existing physical development of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>. (Original Application, Page 27).

A copy of the "Original Application" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Information submitted on remand provides the following estimates of existing structures and fire buffers:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

Applicant has again discussed the power line buffer with the power company (15' from centerline), and has applied those in the attached calculations, in addition to a 50' buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50' buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Power Lines

15' either side from center line

10,024 linear feet x 30' = 300,730 ft<sup>2</sup>

Structures

50' each side from dimensions below

Log Home 80 x 100 = 36,000 ft<sup>2</sup>

Barn #1 24 x 35 = 16,740 ft<sup>2</sup>

Barn #2 30 x 30 = 16,900 ft<sup>2</sup>

Lean To 16 x 30 = 15,627 ft<sup>2</sup>

Old Homestead Home 55 x 55 = 24,025 ft<sup>2</sup>

Old Homestead Barn 25 x 55 = 16,875 ft<sup>2</sup>

Total square footage developed area 426,887 ft<sup>2</sup>

40 acres = 1, 7 42,700 ft<sup>2</sup>

426,887/1,740,700 = .2452 (24.52% of total area)

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>

50' buffer along driveway easement= 79,300 ft<sup>2</sup>

$571,187 / 1,740,700 = .3281$  (32.81% of total area)

(Remand Letter, Pp. 3-4).

A copy of the "Remand Letter" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

The applicant also submitted a sitemap illustrating approximate locations of existing physical development, infrastructure, and natural features. (See Below "Applicant Site Map").



**Applicant Site Map**

A copy of the "Applicant Site Map", "Aerial Photo" and all maps included in this Staff Report are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 15.

The applicant's site map was not to scale, did not illustrate the estimated distances of utility lines, or provide illustrations of fire fuel break or maintenance buffer zones. Additionally, specific land use criteria that the applicant used in support of the 50' buffer zone requirements that were calculated for the "driveway easements" or "7 Mile Hill Road" was not provided.

No additional information pertaining to the "Physical Development & Fire Buffer & Maintenance Area Estimates" has been provided since the December 7, 2021, Wasco County Planning Commission hearing.

**(2) Staff Analysis (Physical Development & Fire Buffer & Maintenance Area Estimates).** The original staff reviewer conducted a site visit on June 21, 2018, and confirmed the applicant's description of existing physical development on the subject parcel. A driveway runs along the western property line and provides access to the single family dwelling and accessory structure situated on the west portion of the parcel. This driveway also provides physical access to the single family dwelling located on the neighboring south adjacent parcel, that is owned by the applicant (David Wilson).

A decommissioned farm house is situated at the center of the subject parcel and is served by an additional driveway that bisects the property. This area also contains two additional accessory structures (pump house and barn). The property is served by two wells. As provided in submitted well reports, the two wells are capable of serving four dwelling units as each well is permitted to serve two dwellings each. (See below "Physical Development Map").



[illegible]

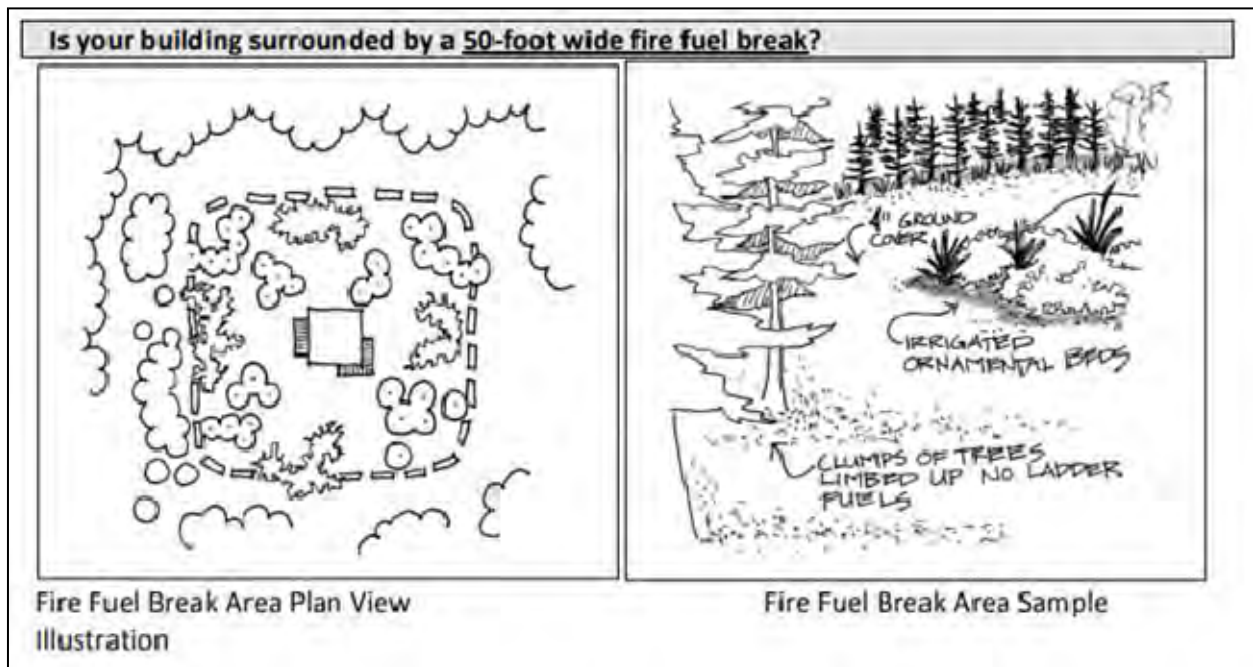
The original staff report provided that approximately 12.5% of the subject parcel was physically developed. It is unclear whether the findings quantified required fire fuel break and maintenance buffer zone areas into the overall percentage of land that is considered “physically developed”. The applicant submitted fire fuel break buffer zone area estimates; however, the methodology used for those calculations is unclear. Staff has provided fire safety criteria and buffer zone area calculation methodology below. Staff analysis did not address the unconfirmed 50’ fire and maintenance buffer areas that the applicant calculated for the “driveway easements” or “7 Mile Hill Road”.

Regarding fire fuel break buffer zones for existing structures, the Wasco County Land Use and Development Ordinance Chapter 10 Section 10.020 - Applicability of Fire Safety Standards, applies to “all rural zones (all zones outside an Urban Growth Boundary).” (Chapter 10, Page 1). All rural zones, including the Forest (F-2) Zone, are subject to fire safety standards; however, the applicability of those standards varies by zone and by use type.

Criteria outlining the creation, design, and maintenance of fuel break buffer zones is provided in Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break. Section 10.120 provides the following:

**Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break**

*Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.*



**MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:**

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,
- Trees kept free from dead, dry, or flammable material;

- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;
- Keep shrubs and ornamental beds 15 feet away from edge of buildings and drip line of tree canopy; and
- Use well irrigated or flame resistant vegetation (See OSU Extension Service publication called "Fire Resistant Plants for Oregon Home Landscapes")

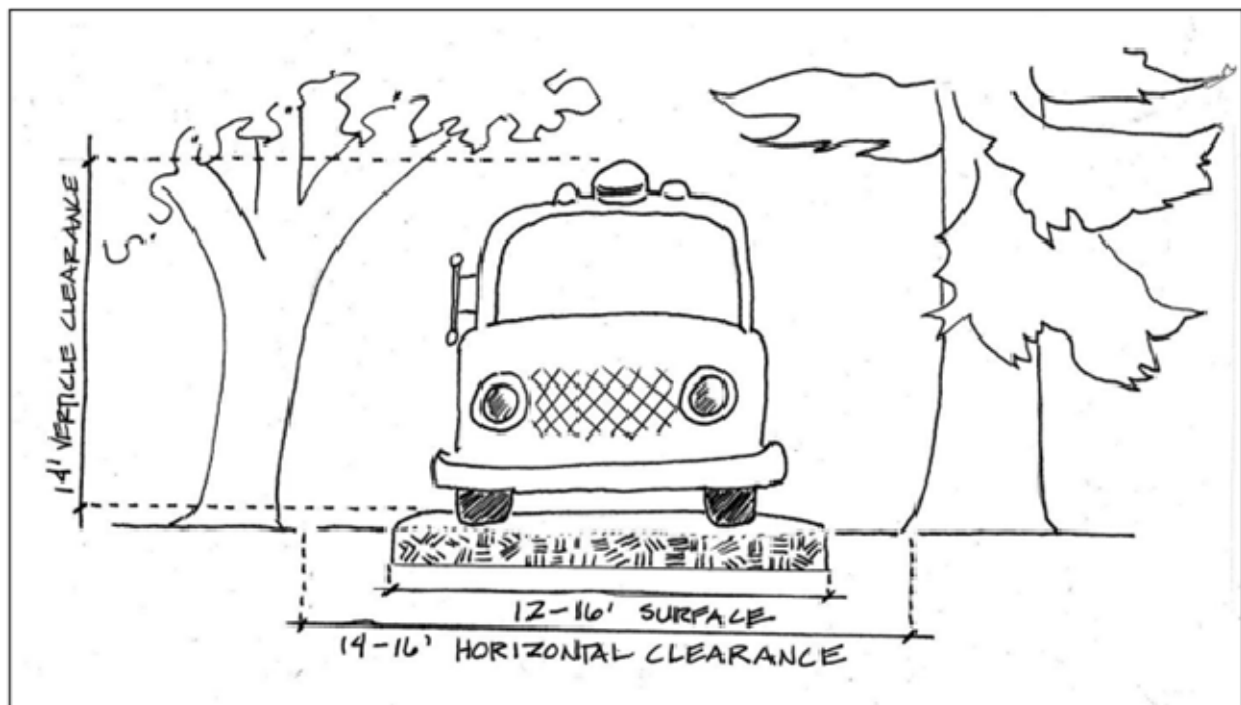
**A.** This standard is applicable to all dwellings, accessory buildings, and agricultural buildings in: - All Zones

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 9-10).

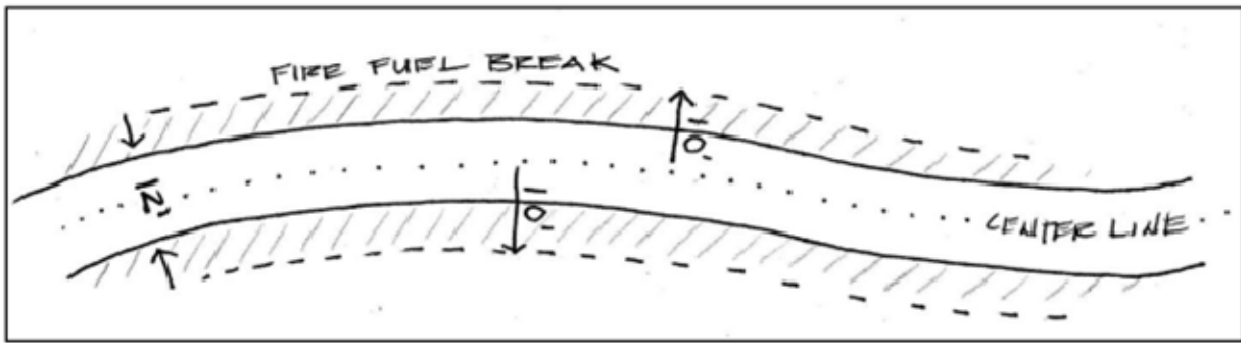
Regarding required fire fuel break buffer zone areas along "residential" private access driveways, the Wasco County Land Use and Development Ordinance (WC-LUDO) Chapter 10 Section 10.140 - Access Standards - Providing safe access to and escape from your home, subsections B & C, requires the following:

**Section 10.140 - Access Standards - Providing safe access to and escape from your home**

**C.** Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



*A fire fuel break extending 10 feet either side of the center line of the driveway is required.*

*C. This Standard is applicable to all residential driveways in: -All Zones*

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 18-19).

A copy of the WC-LUDO Chapter 10 Fire Safety Standards is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG.

One of the primary purposes for fire fuel break buffer zone areas is to “reduce threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” (WC-LUDO Chapter 10 Fire Safety Standards Section 10.010, Page 1). In Wasco County, fire fuel break buffer zone area requirements are explicitly linked to existing and proposed physical development that includes dwellings, accessory structures, agricultural structures, and private access driveways. Fire fuel break buffer zone areas are specifically designed to be kept free from dead, dry, or flammable material and must be rigorously maintained to ensure fuel sources are removed. Although the buffer zone criteria do not mandate the area be completely free of tree and other shrub like vegetation, demonstrating outright compliance or achieving compliance through a Fire Safety Mitigation Plan is required under the WC-LUDO Chapter 10 Fire Safety Standards. Thus, fire fuel break buffer zone areas required under Chapter 10 are considered an integral part of the unit of land’s developed area, and shall be included in the calculated percentage of physically developed areas on the subject parcel for this analysis.

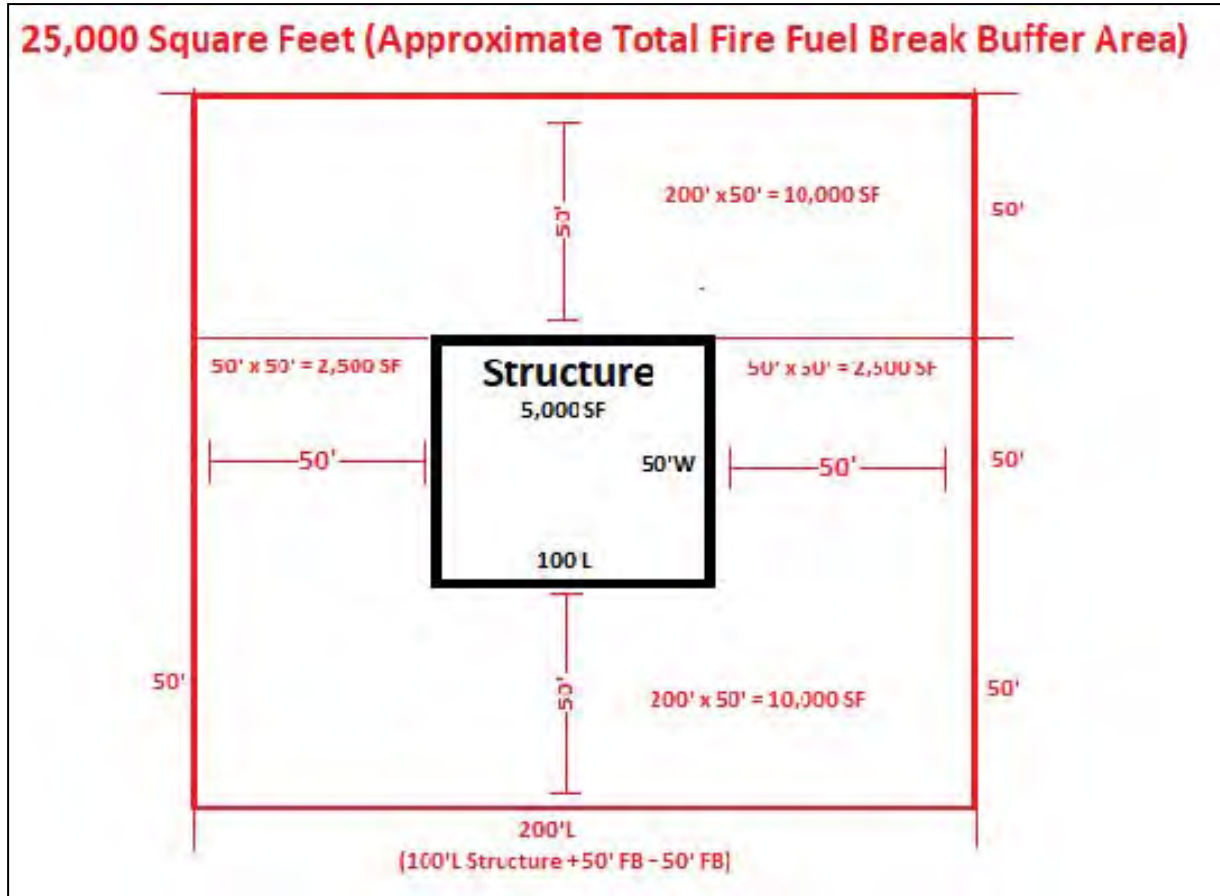
Additionally, private maintenance areas for overhead utility lines and public road rights of way are calculated in this analysis due to their nexus to Chapter 10 Fire Safety Standard’s purpose of “[reducing] threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” *Id.*

*Physical Development & Development Fire Buffers.* Staff analysis utilized information from the Wasco County Assessor’s Office, the application’s site map, and the Wasco County Geographical Information System Measurement Tool to approximate the parcel’s physical development and fire fuel break buffer zone areas. In determining the subject parcel’s physical developed areas, staff took into account that the square feet of private access driveway space cannot be calculated and used as part of the parcel’s physically developed area (See *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, Page 19, “Finally, we agree with petitioners that the county’s findings are inadequate where they fail to explain why the two driveways on the property should be considered as physically developed, when roads are uses allowed by Goal 4.”).



A copy of *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 7.

Fire fuel break buffer zone areas for physical development such as dwelling units, accessory structures, and agricultural structures were calculated (approximated) using the below method:



**Diagram: Fire Fuel Break Calculation Method**

A copy of the “Diagram: Fire Fuel Break Calculation Method” and all created diagrams are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 16.

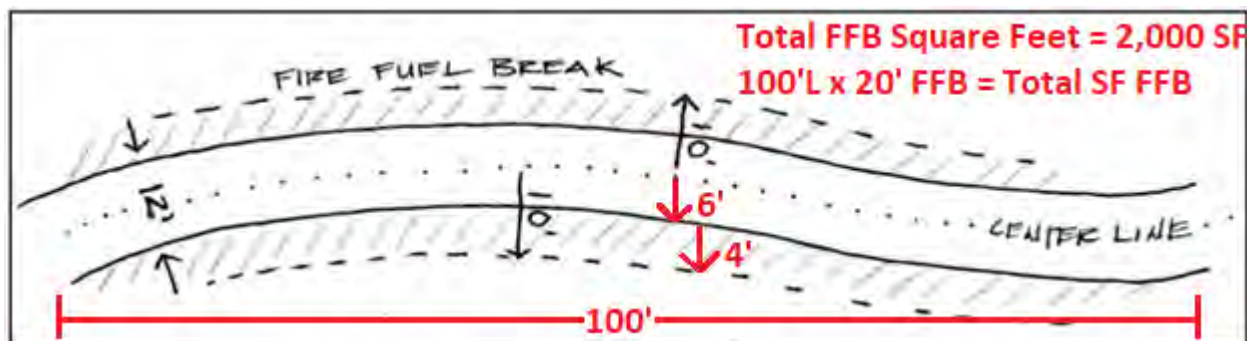
Physical development areas and fire fuel break buffer zone areas for dwelling units, accessory structures, and agricultural structures are provided below:

1. Dwelling unit and developed curtilage (80' x 100' = 8,000 SF) // Fire Break = 28,000 SF
2. Accessory/Agricultural Structure #1 (24' x 35' = 840 SF) // Fire Break = 15,900 SF
3. Accessory/Agricultural Structure #2 (30' x 30' = 900 SF) // Fire Break = 16,000 SF
4. Accessory/Agricultural Structure #3 (16' x 30' = 480 SF) // Fire Break = 14,600 SF
5. Dwelling unit (Old Homestead) (55'L x 55'W = 3,025 SF) // Fire Break = 21,000 SF
6. Agricultural Structure (Old Homestead Barn) (25' x 55' = 1,375 SF) // Fuel Break = 18,000 SF

**Access Drive Fire Buffers.** The following driveway lengths and widths are estimated from the original application materials, site map, Remand Letter, and Wasco County Geographical Information System

Measurement Tool. Although the square footage of existing driveways cannot be considered physical development in this analysis, the required fire fuel break buffer zone areas are considered.

Fire fuel break buffer zone areas for private access drives were calculated (approximated) using the below method:



**Diagram: Access Drive Fire Fuel Break Calculation Method**

Driveway #1: Approx. 20'W x 480'L moving southward from Sevenmile Hill Rd. to driveway split.

Driveway #2: Approx. 20'W x 681'L moving southeast from driveway split to dwelling unit.

Driveway #3: Approx. 20'W x 946'L moving southward from driveway split to south adjacent parcel.

Driveway #4: Approx. 20'W x 1,280' moving southward from Sevenmile Hill Rd. to south adjacent parcel.

The following fire fuel break buffer zone areas were calculated for the existing access drives on the subject parcel:

Driveway #1 Fire Fuel Break Buffer Zone Area: 9,600 SF = 480'L x 20'

Driveway #2 Fire Fuel Break Buffer Zone Area: 13,620 SF = 681'L x 20'

Driveway #3 Fire Fuel Break Buffer Zone Area: 18,920 SF = 946'L x 20'

Driveway #4 Fire Fuel Break Buffer Zone Area: 25,600 SF = 1,280'L x 20'

*Utility Line Maintenance Area.* Staff confirmed by phone with Wasco Electric Cooperative on November 15, 2021, that a 15 foot from center line maintenance easement is provided on each side of overhead power lines, and that the goal of the maintenance easement is to keep areas around power lines free from debris that might obstruct safe transmission of electric power. Staff utilized applicant's submitted sitemap and Wasco County GIS Measurement Tool to approximate and confirm applicant's estimated power line distances and maintenance zones. (See below "Power Line Distance Estimate" Map).



Power Line #1 Maintenance Area Estimate: 19,050 SF = 635'L x 30' (15' from center line)  
Power Line #2 Maintenance Area Estimate: 15,900 SF = 530'L x 30'  
Power Line #3 Maintenance Area Estimate: 5,550 SF = 185'L x 30'  
Power Line #4 Maintenance Area Estimate: 10,050 SF = 335'L x 30'  
Power Line #5 Maintenance Area Estimate: 16,800 SF = 560'L x 30'  
Power Line #6 Maintenance Area Estimate: 25,200 SF = 840'L x 30'  
Power Line #7 Maintenance Area Estimate: 7,050 SF = 235'L x 30'  
Power Line #8 Maintenance Area Estimate: 13,200 SF = 440' x 30'

*Public Roadway Maintenance Area.* Additional information regarding fire fuel break and maintenance areas that are dedicated for publicly maintained roads was requested from the Wasco County Public Works Department. The Wasco County Public Works Director Arthur Smith provided commentary on November 15, 2021:

WC-Public Works Department Director Arthur Smith Commentary (November 15, 2021):

We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection - people can't block a road, it must remain open for travel. However, the county is not obligated to care for or maintain public or private roads, just county roads.

Most county roads are only 22-24 feet in width, but have a 50-60 foot dedicated right-of-way which we manage. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard.

A copy of the Director Smith's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

The applicant provided the following calculation regarding Sevenmile Hill Road maintenance: "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>".

The Wasco County GIS Roads layer provides that Sevenmile Hill Road is a public dedicated and maintained road. Staff utilized Partition Plat 2017-003560 and Wasco County GIS Measurement Tool to approximate the length and width of Sevenmile Hill Road along the subject parcel's north boundary line. The estimated distance is 1,115 feet.

Partition Plat 2017-003560, page 2, provides that Sevenmile Hill Road is at least 60' wide. Considering Director Smith's comments concerning the 50-60' dedicated right-of-way, and the 4-6 foot maintenance area on each side of county roads, staff estimates the dedicated maintenance area for Sevenmile Hill Road that directly applies to the subject parcel is approximately 6,690 SF = (6' x 1,115').

A copy of "Partition Plat 2017-003560" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 6.

Total estimated actual physical development square footage = 14,620 SF  
Total estimated fire fuel break buffer zone area development square footage = 113,500 SF  
Total estimated fire fuel break buffer zone area for access drives = 67,740 SF  
Total estimated maintenance easement area for overhead power lines = 112,800 SF  
Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF



The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

The subject parcel is approximately 40.6 acres in size.

(1 Acre = 43,560 SF) (40.6 acres x 43,560 = 1,768,536 acres)

315,350 SF / 1,768,536 SF = 0.1783 or approximately 18% of the subject parcel is physically developed.

**(3) Staff Findings.** In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner's "Fourth Assignment of Error". The "Fourth Assignment of Error" asserted that the County's approval of a physically developed exception under OAR 660-004-0025 was not supported by substantial evidence in the record where the county found that approximately 87 percent of the subject parcel was not physically developed. As provided above, staff's current analysis of the subject parcel's physical development approximates that 18% of the subject parcel is physically developed.

As provided in *Sandgren v. Clackamas County*, in order to approve a physically developed exception, facts must demonstrate the property is physically developed to such an extent that all resource uses are precluded. *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)). LUBA, in *Dooley et al.*, provided that in order to approve a physically developed exception, findings must demonstrate the property "is no longer available for resource use" (*Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), Page 18.; *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)). The overall standard demonstrating a physical development exception under OAR 660-004-0025 is demanding, and requires the applicant demonstrate resource uses are no longer an option. (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18). Additionally, as provided by LUBA in *Dooley et al.*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.

In the present case, even if the County accepts the applicant's estimation that 32.81% of the total area of the subject parcel is physically developed, in order to approve the request, the County is "required to determine that the property is "physically developed to the extent that it is no longer available" for forestry uses." (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18), ORS 197.732(2)(a).

**(4) PLANNING COMMISSION RECOMMENDATION.** A hearing was conducted before the Planning Commission on December 7, 2021. Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommended that the Wasco County Board of Commissioners deny the request based on the physically developed exception.

**C. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**OAR 660-004-0028:**

*Exception Requirements for Land Irrevocably Committed to Other Uses*

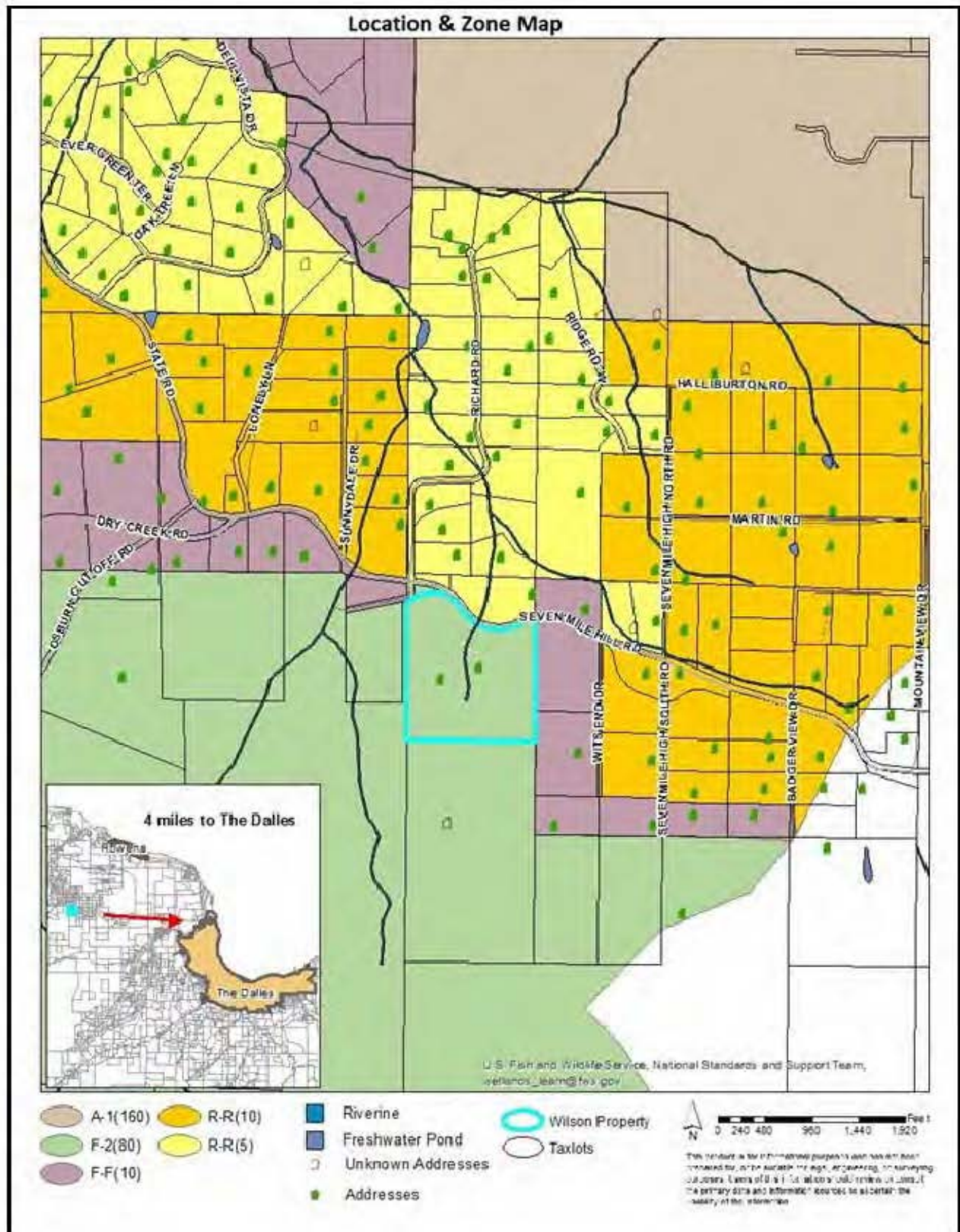
*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** Additional evidence was submitted by Mr. David Wilson on July 13, 2021. Mr. Wilson seeks a remand hearing for the purposes of obtaining a ‘committed exception’ for the subject 40.6-acre property located at 2 North 12 East Section 22 Tax Lot 4400 (Account # 884). For the purposes of this rule, the subject 40.6-acre parcel is designated the “exception area”. The subject parcel falls within the Wasco County Forest (F-2) Zone, and the applicable Statewide Planning goal that applies to the property is Goal 4: Forest Lands. (See below “Location & Zone Map”)



Application materials submitted in the original request signed May 4, 2018 (received by the Wasco County Planning Office on May 23, 2018), provide the following response to subsections OAR 660-004-0028(1)(a)-(c).

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses. (Original Application, Page 29).

A copy of the "Original Application" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Staff has provided renewed analysis throughout this report of the original record evidence as well as any additional evidence submitted for this remand hearing.

For the purposes of this review, the designated "exception area" is the subject parcel located at 2 North 12 East Section 22 Tax Lot 4400 (Account # 884).

In order to demonstrate that resource use within the designated "exception area" is "impracticable", OAR 660-004-0028(2), requires: (1) an analysis of the characteristics of the "exception area" (subject parcel); (2) an analysis of the characteristics of those lands adjacent to the "exception area"; (3) an analysis of the relationship between the "exception area" and those lands adjacent to it; and (4) an analysis of other relevant factors provided within OAR 660-004-0028(6). Those "other relevant factors" within OAR 660-004-0028(6), include analysis of "existing adjacent uses; existing public facilities; parcel size and ownership patterns in the area; neighborhood and regional characteristics; natural or man-made features separating the exception area from adjacent resource land; and other relevant factors, in order to reach [a] conclusion that the property is or is not irrevocably committed" (*Dooley v. Wasco County*, LUBA No. 2019-065, Page 7; OAR 660-004-0028(6)).

Essentially, the applicant must show "how" facts pertaining to the "exception area"; the adjacent lands; the relationship between the "exception area" and adjacent lands; and other relevant factors as provided for in OAR 660-004-0028(6), render resource use on the "exception area" impracticable.

On December 7, 2021, comments were received from Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker. Mr. Sargetakis provided specific comments regarding the focal point of analysis for an "irrevocably committed" exception request. Additionally, his comments cited other case law that lay out what facts alone are insufficient for approving an "irrevocably committed" exception. Mr. Sargetakis also cited law that requires the County demonstrate "how" the facts establish that existing uses on adjacent lands render resource use on the subject property impracticable.

Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker (December 7, 2021)

The "focal criteria" when analyzing an irrevocably committed exception is the relationship between the subject property and adjacent uses. OAR 660-004-0028(2); *see also, DLCD v. Curry County (Pigeon Point)*, 151 Or App 7, 11, 947 P2d 1123 (1997) (holding that the "fundamental test" for irrevocably committed exception is the relationship between the subject property and the surrounding area); *Converse*, 39 Or LUBA at 441.



The County must demonstrate *how* existing uses on adjacent lands render resource use on the subject property impracticable. *DLCD v. Wallowa County*, 37 Or LUBA 105, 111 (1999). Stated another way, a committed exception “must be based on facts illustrating how past development has cast a mold for future uses.” *1000 Friends of Oregon v. LCDC (Curry County)*, 301 Or 447, 501, 724 P2d 268 (1986). The mere presence of adjoining residential uses is not a sufficient basis for concluding that resource lands are irreversibly committed to non-resource uses. *Gordon v. Polk County*, 54 Or LUBA 351 (2007); *Waymire*, 39 Or LUBA at 452-53. Nor is the “occasional inconvenience” that a rural resident must be willing to accept sufficient to approve a Committed exception. *Friends of Linn County v. Linn County (Schwindt)*, 42 Or LUBA 235, 246 (2002).

While, as with the prior hearing on this matter, staff has once again chosen to rely on a dictionary definition for “impracticable,” there is no shortage of case law which the County should rely on instead for its determination. The standard for impracticability “is a demanding one.” *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508, 519 (1994). The test is not one of commercial viability. The question is whether the subject property is capable of generating a gross income. See, *1000 Friends of Oregon v. Benton County*, 32 Or App 413, 426 (1978).

Reliance upon longstanding adjacent rural uses is insufficient to demonstrate that resource use of the proposed exception area has become impracticable in the absence of recent or imminent changes affecting the subject property. *Wodarczak v. Yamhill County*, 34 Or LUBA 453, 460-461 (1998) (citing *Jackson County Citizens League*, 38 Or LUBA at 365-366).

A copy of the Mr. Sargetakis’ commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 18.

*Staff Response:* OAR 660-006-0028(1) and *DLCD v. Curry County (Pigeon Point)*, provide that the focal point of analysis of an “irrevocably committed” exception is the relationship between the “exception area” and adjacent lands. However, the court in *DLCD v. Curry County (Pigeon Point)*, also provided that an “irrevocably committed” exception analysis must also consider the activities and availability for resource use on the subject parcel. *Department of Land Conservation & Development v. Curry County*, 151 Or. App. 7, 11 (Or. Ct. App. 1997). Most importantly, a request for an “irrevocably committed” exception must provide facts that illustrate “how” uses on adjacent lands and the subject parcel render resource use on the “exception area” impracticable. *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994).

From the explicit language within the rule, and case law, staff has found a clear explanation of what information must be analyzed. It is also clear that circumstances on the subject parcel must be considered, but that the focal point of analysis is the relationship between the subject parcel and adjacent uses. What is not clear; however, is the explicit threshold of the “impracticable” standard. Case law provides that the standard is “a demanding one”, but provides little else to help guide staff in determining whether the facts have met the “impracticable” standard to approve an irrevocably committed use.

The plain language of the rule provides that “[i]t shall not be required that local governments demonstrate that every use allowed by the applicable goal is “impossible.” OAR 660-006-0028(3). The rule also provides that “[f]or exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable...” OAR 660-006-0028(3). To better illustrate the extreme difficulty of determining whether facts have sufficiently met the threshold for the “impracticable” standard, staff has provided a brief analysis and comparison of the “impossible” and “impracticable” standards.

Under OAR 660-004-0025 “Exception Requirements for Land Physically Developed”, a physically developed goal exception can be approved if the property is physically developed to such an extent that *all resource uses are precluded*. *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)). Thus, in order for staff to approve a physically developed exception, the facts must demonstrate that a subject parcel is so physically developed that resource use is no longer available, or that resource use is “impossible.” *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065).

Merriam-Webster provides definitions of “impossible”.

“Impossible” (adjective):

a: incapable of being or of occurring

b: felt to be incapable of being done, attained, or fulfilled: insuperably difficult

Legal Definition of “Impossible”: not possible: incapable of being done, attained, or fulfilled

“Impossible.” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/impossible>. Accessed 1 Mar. 2022.

The “impossible” standard is binary; meaning that either *all resource uses are precluded* or *not all resource uses are precluded*, there is no in between. Resource use on the parcel is either impossible or possible. The definition of “impossible” is straightforward, and the standard can be clearly determined by local governments through objective facts with little or no subjective interpretation as to whether the standard has been met. The threshold of facts required to demonstrate that resource uses are precluded is demanding because the facts must illustrate resource use is no longer available. If the facts demonstrate that the parcel is capable of producing even the smallest measurable Goal 3 or 4 defined resource, the threshold to meet the “impossible” standard is not met. However, as noted above, OAR 660-006-0028, does not require an “impossible” standard.

The “impracticable” standard is not necessarily binary, meaning that the standard is nuanced, and requires a level of objective and subjective analysis by local governments to determine whether the standard has been met. It appears that case law has removed the common definition of “impracticable” as a measuring tool in determining whether facts meet the “impracticable” definition standard. The Land Use Board of Appeals (LUBA) has instead provided that the “impracticable” standard “is a demanding one.” *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994). The common definition of “demanding” is provided below:

Merriam-Webster provides the definition of “Demanding” (adjective):

“Demanding”: requiring much time, effort, or attention

“Demanding.” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/demanding>. Accessed 1 Mar. 2022.

Merriam-Webster provides the definition of “Impracticable” (adjective):

“Impracticable”

2: not practicable : incapable of being performed or accomplished by the means employed or at command

“Impracticable.” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/impracticable>. Accessed 2 Mar. 2022.

Regarding irrevocably committed exception requests, “findings must do more than recite facts addressing the relevant factors, they must also explain why those facts lead to a conclusion” “that uses or activities on the subject parcel are impracticable.” *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994); OAR 660-006-0028(3). This decision making process is required in every land use decision, and is not necessarily unique to the findings and conclusions regarding OAR 660-006-0028. However, in order to make findings and conclusions for applicable criteria, staff must be able to understand or have some objective idea of what factual threshold is required in order to meet the applicable standard.

Staff was unable to locate pertinent case law that might provide objective and measurable thresholds upon which to use as a guide post to determine the level, amount, or quality of facts that are required in order to meet the “demanding” “impracticable” standard. Questions arise regarding: What percentage of generally unsuitable soils on subject and adjacent parcels must be shown in order to justify an irrevocably committed exception? What are the type of land use conflicts that are acceptable to use, and how many land use conflicts must be provided to justify an irrevocably committed exception? What sort of objective tool might be utilized to make a determination of when “occasional” inconveniences become “substantial” inconveniences, so that the inconveniences might be able to justify an irrevocably committed exception? How does one objectively determine what types of land use conflicts might rise to the level that could justify an irrevocably committed exception?

The quandary of what threshold of facts is required in order to justify a conclusion that resource is “impracticable” is further muddled by LUBA’s finding that the threshold to meet the “impossible” standard, is, like the “impracticable” standard, a demanding one. Recently, in examining the “Exception Requirements for Land Physically Developed” under OAR 660-004-0025, LUBA provided that the “impracticability is not the standard for a physically developed exception. Instead, the county is required to determine that the property is “physically developed to the extent that it is no longer available” for forestry uses.” *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), Page 18. The standard referred to by LUBA means the applicant must demonstrate that resource use is impossible due to physical development. However, LUBA also provided that “[t]he standard for approving a physically developed exception is *demanding*.” *Id.* at 18 (emphasis added). Moreover, LUBA, in *Sandgren v. Clackamas County*, provided that “standards for approving either a physically developed or an irrevocably committed exception to Goals 3 and 4 are *demanding*.” *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)) (emphasis added).

Logic certainly dictates that proving something to be impossible is much more demanding than proving something to be impracticable. It must certainly be more demanding to demonstrate resource use to be impossible than to be impracticable; however, staff was unable to find explicit text where LUBA elaborated upon its use of “demanding”, or provided tools to measure the “demanding” threshold. What is certain, is that the threshold of facts required to demonstrate how a resource use on a parcel is “impracticable”, must be less demanding than the threshold of facts required to demonstrate how a resource use on a parcel is “impossible.” However, for the time being, objectively how much less demanding, is unknown.

The examination of Mr. Sargetakis’ comments and other case law are only meant to illustrate the difficulties in the examination of pertinent facts and recommendations made regarding this rule. Below, staff has provided analysis of the submitted facts for all of the applicable subsections of OAR-660-0028.

The PLANNING COMMISSION RECOMMENDATION regarding this rule is provided on page 97 of this report.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2) Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** Information concerning the “characteristics of the exception area” is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021.

Characteristics and analysis of the subject parcel “exception area”, include the following: (1) Physical Development & Fire Buffer & Maintenance Area Estimates; (1a) Staff Analysis (Physical Development & Fire Buffer & Maintenance Area Estimates); (2) Undeveloped Areas & Soils; (2a) Staff Analysis (Undeveloped Areas & Soils); and (3) Staff Findings (Physically Developed & Undeveloped Areas).

**(1) Physical Development & Fire Buffer & Maintenance Area Estimates.** Original application materials provide the following description of the existing physical development of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>. (Original Application, Page 27).

A copy of the “Original Application” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Information submitted on remand provides the following estimates of existing structures and fire buffers:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

Applicant has again discussed the power line buffer with the power company (15' from centerline), and has applied those in the attached calculations, in addition to a 50' buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50' buffers along Seven Mile Hill Road and the driveway easement serving properties to

the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Power Lines

15' either side from center line

$10,024 \text{ linear feet} \times 30' = 300,730 \text{ ft}^2$

Structures

50' each side from dimensions below

Log Home  $80 \times 100 = 36,000 \text{ ft}^2$

Barn #1  $24 \times 35 = 16,740 \text{ ft}^2$

Barn #2  $30 \times 30 = 16,900 \text{ ft}^2$

Lean To  $16 \times 30 = 15,627 \text{ ft}^2$

Old Homestead Home  $55 \times 55 = 24,025 \text{ ft}^2$

Old Homestead Barn  $25 \times 55 = 16,875 \text{ ft}^2$

Total square footage developed area 426,887 ft<sup>2</sup>

40 acres = 1,742,700 ft<sup>2</sup>

$426,887 / 1,742,700 = .2452$  (24.52% of total area)

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>

50' buffer along driveway easement = 79,300 ft<sup>2</sup>

$571,187 / 1,742,700 = .3281$  (32.81% of total area)

(Remand Letter, Pp. 3-4).

A copy of the "Remand Letter" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

The applicant also submitted a sitemap illustrating approximate locations of existing physical development, infrastructure, and natural features. (See Below "Applicant Site Map").



**Applicant Site Map**

A copy of the "Applicant Site Map", "Aerial Photo" and all maps included in this Staff Report are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 15.



The applicant's site map was not to scale, did not illustrate the estimated distances of utility lines, or provide illustrations of fire fuel break or maintenance buffer zones. Additionally, specific land use criteria that the applicant used in support of the 50' buffer zone requirements that were calculated for the "driveway easements" or "7 Mile Hill Road" was not provided.

No additional information pertaining to the "Physical Development & Fire Buffer & Maintenance Area Estimates" has been provided since the December 7, 2021, Wasco County Planning Commission hearing.

**(1a) Staff Analysis (Physical Development & Fire Buffer & Maintenance Area Estimates).** The original staff reviewer conducted a site visit on June 21, 2018, and confirmed the applicant's description of existing physical development on the subject parcel. A driveway runs along the western property line and provides access to the single family dwelling and accessory structure situated on the west portion of the parcel. This driveway also provides physical access to the single family dwelling located on the neighboring south adjacent parcel, that is owned by the applicant (David Wilson).

A decommissioned farm house is situated at the center of the subject parcel and is served by an additional driveway that bisects the property. This area also contains two additional accessory structures (pump house and barn). The property is served by two wells. As provided in submitted well reports, the two wells are capable of serving four dwelling units as each well is permitted to serve two dwellings each. (See below "Physical Development Map").



[illegible]

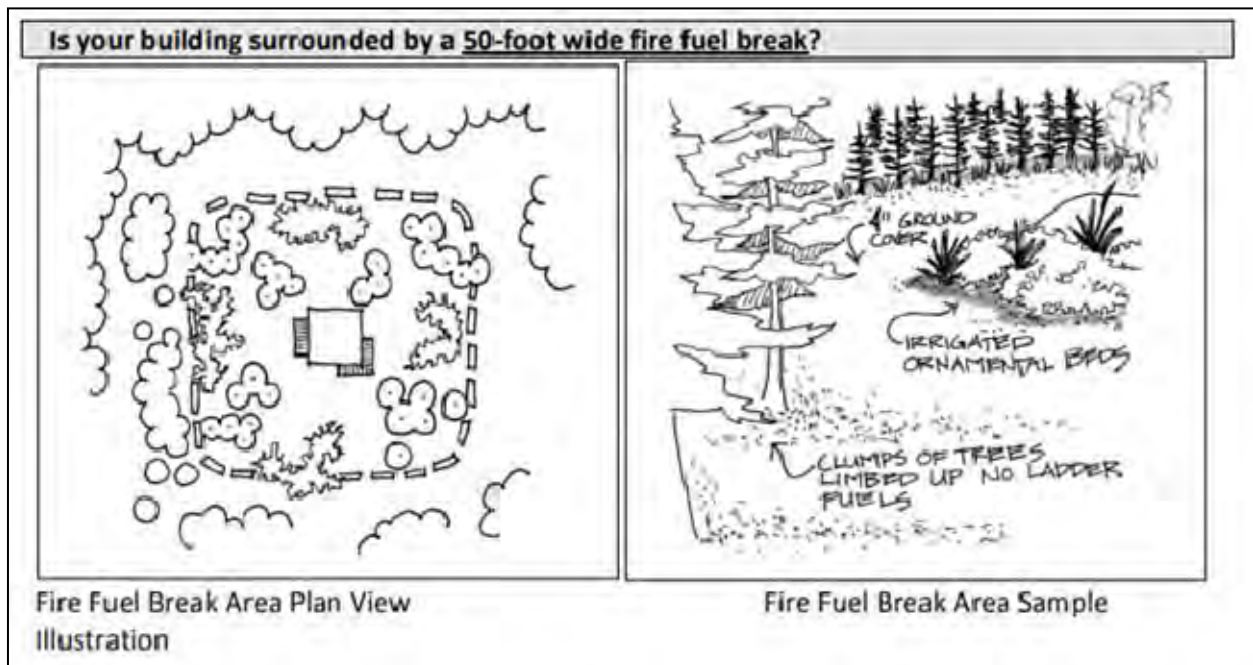
The original staff report provided that approximately 12.5% of the subject parcel was physically developed. It is unclear whether the findings quantified required fire fuel break and maintenance buffer zone areas into the overall percentage of land that is considered “physically developed”. The applicant submitted fire fuel break buffer zone area estimates; however, the methodology used for those calculations is unclear. Staff has provided fire safety criteria and buffer zone area calculation methodology below. Staff analysis did not address the unconfirmed 50’ fire and maintenance buffer areas that the applicant calculated for the “driveway easements” or “7 Mile Hill Road”.

Regarding fire fuel break buffer zones for existing structures, the Wasco County Land Use and Development Ordinance Chapter 10 Section 10.020 - Applicability of Fire Safety Standards, applies to “all rural zones (all zones outside an Urban Growth Boundary).” (Chapter 10, Page 1). All rural zones, including the Forest (F-2) Zone, are subject to fire safety standards; however, the applicability of those standards varies by zone and by use type.

Criteria outlining the creation, design, and maintenance of fuel break buffer zones is provided in Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break. Section 10.120 provides the following:

**Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break**

*Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.*



**MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:**

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,
- Trees kept free from dead, dry, or flammable material;

- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;
- Keep shrubs and ornamental beds 15 feet away from edge of buildings and drip line of tree canopy; and
- Use well irrigated or flame resistant vegetation (See OSU Extension Service publication called "Fire Resistant Plants for Oregon Home Landscapes")

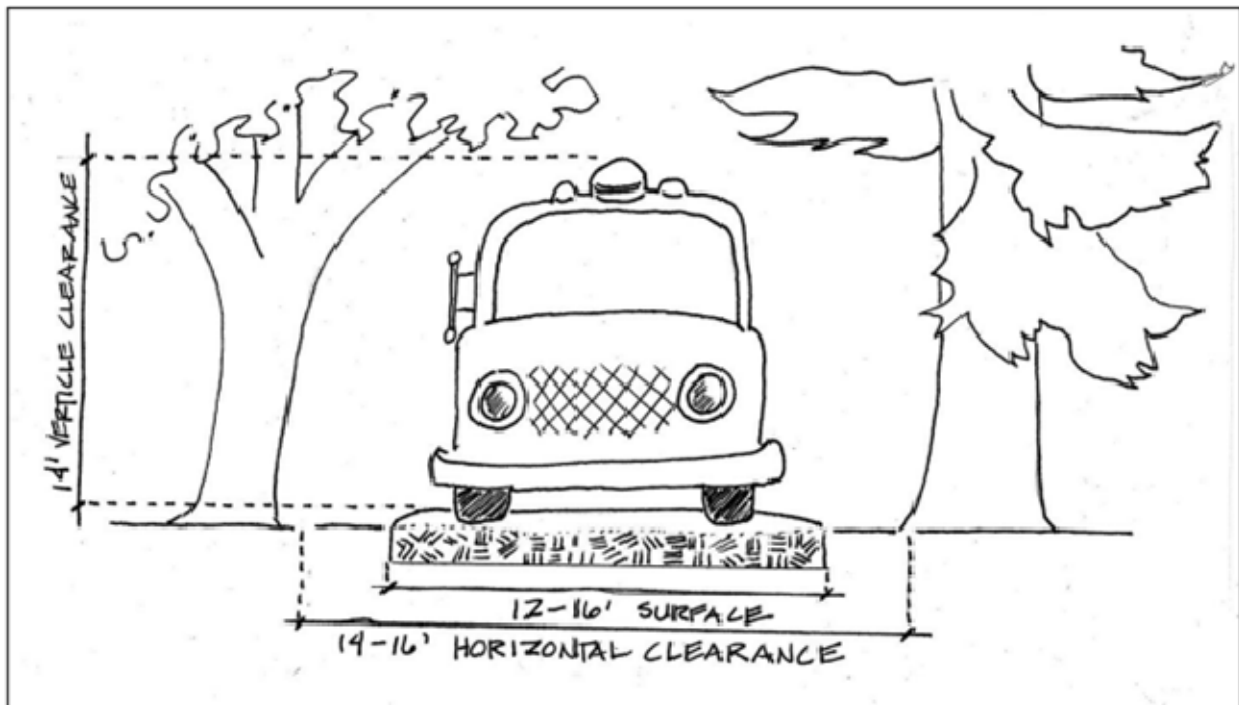
**A.** This standard is applicable to all dwellings, accessory buildings, and agricultural buildings in: - All Zones

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 9-10).

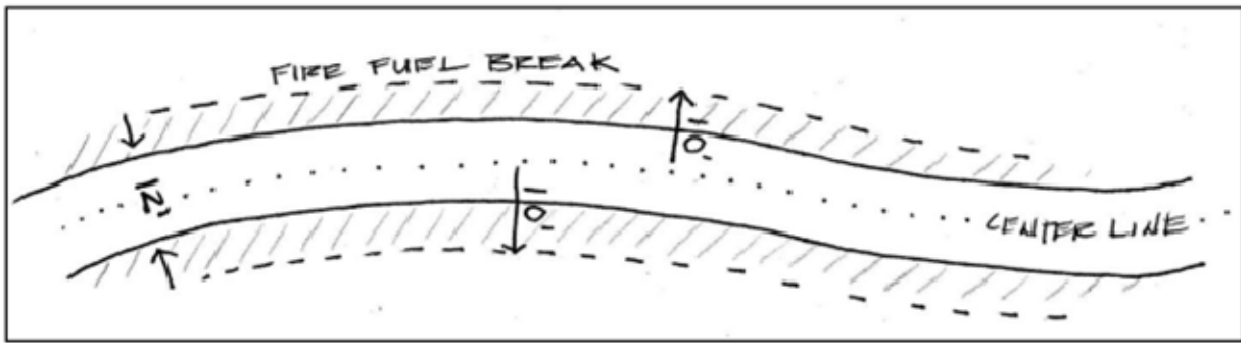
Regarding required fire fuel break buffer zone areas along "residential" private access driveways, the Wasco County Land Use and Development Ordinance (WC-LUDO) Chapter 10 Section 10.140 - Access Standards - Providing safe access to and escape from your home, subsections B & C, requires the following:

**Section 10.140 - Access Standards - Providing safe access to and escape from your home**

**C.** Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



*A fire fuel break extending 10 feet either side of the center line of the driveway is required.*

*C. This Standard is applicable to all residential driveways in: -All Zones*

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 18-19).

A copy of the WC-LUDO Chapter 10 Fire Safety Standards is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG.

One of the primary purposes for fire fuel break buffer zone areas is to “reduce threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” (WC-LUDO Chapter 10 Fire Safety Standards Section 10.010, Page 1). In Wasco County, fire fuel break buffer zone area requirements are explicitly linked to existing and proposed physical development that includes dwellings, accessory structures, agricultural structures, and private access driveways. Fire fuel break buffer zone areas are specifically designed to be kept free from dead, dry, or flammable material and must be rigorously maintained to ensure fuel sources are removed. Although the buffer zone criteria do not mandate the area be completely free of tree and other shrub like vegetation, demonstrating outright compliance or achieving compliance through a Fire Safety Mitigation Plan is required under the WC-LUDO Chapter 10 Fire Safety Standards. Thus, fire fuel break buffer zone areas required under Chapter 10 are considered an integral part of the unit of land’s developed area, and shall be included in the calculated percentage of physically developed areas on the subject parcel for this analysis.

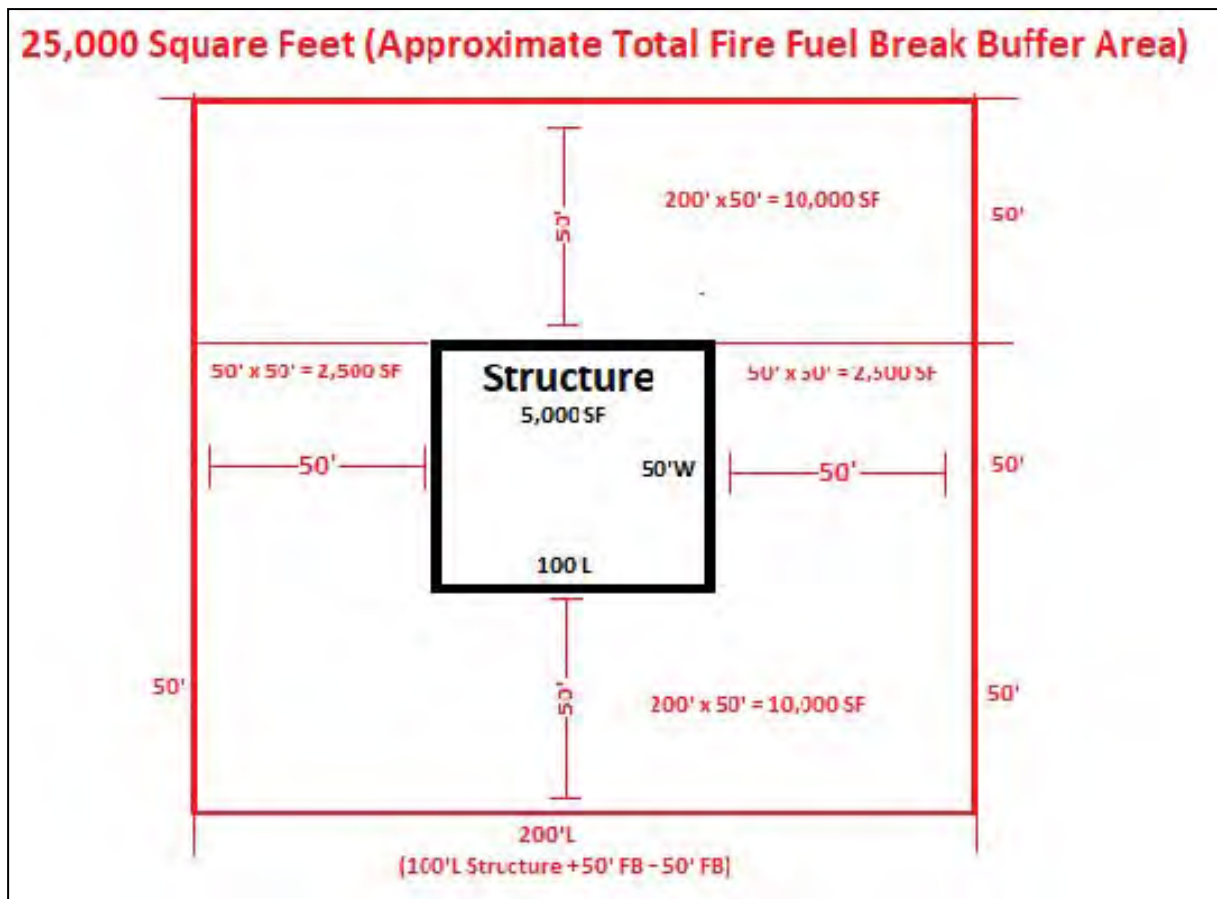
Additionally, private maintenance areas for overhead utility lines and public road rights of way are calculated in this analysis due to their nexus to Chapter 10 Fire Safety Standard’s purpose of “[reducing] threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” *Id.*

*Physical Development & Development Fire Buffers.* Staff analysis utilized information from the Wasco County Assessor’s Office, the application’s site map, and the Wasco County Geographical Information System Measurement Tool to approximate the parcel’s physical development and fire fuel break buffer zone areas. In determining the subject parcel’s physical developed areas, staff took into account that the square feet of private access driveway space cannot be calculated and used as part of the parcel’s physically developed area (See *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, Page 19, “Finally, we agree with petitioners that the county’s findings are inadequate where they fail to explain why the two driveways on the property should be considered as physically developed, when roads are uses allowed by Goal 4.”).



A copy of *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 7.

Fire fuel break buffer zone areas for physical development such as dwelling units, accessory structures, and agricultural structures were calculated (approximated) using the below method:



**Diagram: Fire Fuel Break Calculation Method**

A copy of the “Diagram: Fire Fuel Break Calculation Method” and all created diagrams are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 16.

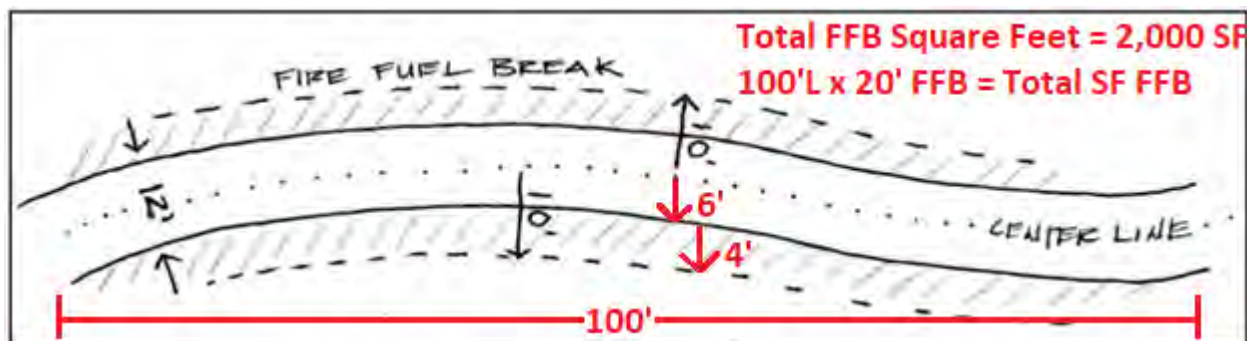
Physical development areas and fire fuel break buffer zone areas for dwelling units, accessory structures, and agricultural structures are provided below:

1. Dwelling unit and developed curtilage (80' x 100' = 8,000 SF) // Fire Break = 28,000 SF
2. Accessory/Agricultural Structure #1 (24' x 35' = 840 SF) // Fire Break = 15,900 SF
3. Accessory/Agricultural Structure #2 (30' x 30' = 900 SF) // Fire Break = 16,000 SF
4. Accessory/Agricultural Structure #3 (16' x 30' = 480 SF) // Fire Break = 14,600 SF
5. Dwelling unit (Old Homestead) (55'L x 55'W = 3,025 SF) // Fire Break = 21,000 SF
6. Agricultural Structure (Old Homestead Barn) (25' x 55' = 1,375 SF) // Fuel Break = 18,000 SF

**Access Drive Fire Buffers.** The following driveway lengths and widths are estimated from the original application materials, site map, Remand Letter, and Wasco County Geographical Information System

Measurement Tool. Although the square footage of existing driveways cannot be considered physical development in this analysis, the required fire fuel break buffer zone areas are considered.

Fire fuel break buffer zone areas for private access drives were calculated (approximated) using the below method:



**Diagram: Access Drive Fire Fuel Break Calculation Method**

Driveway #1: Approx. 20'W x 480'L moving southward from Sevenmile Hill Rd. to driveway split.

Driveway #2: Approx. 20'W x 681'L moving southeast from driveway split to dwelling unit.

Driveway #3: Approx. 20'W x 946'L moving southward from driveway split to south adjacent parcel.

Driveway #4: Approx. 20'W x 1,280' moving southward from Sevenmile Hill Rd. to south adjacent parcel.

The following fire fuel break buffer zone areas were calculated for the existing access drives on the subject parcel:

Driveway #1 Fire Fuel Break Buffer Zone Area: 9,600 SF = 480'L x 20'

Driveway #2 Fire Fuel Break Buffer Zone Area: 13,620 SF = 681'L x 20'

Driveway #3 Fire Fuel Break Buffer Zone Area: 18,920 SF = 946'L x 20'

Driveway #4 Fire Fuel Break Buffer Zone Area: 25,600 SF = 1,280'L x 20'

*Utility Line Maintenance Area.* Staff confirmed by phone with Wasco Electric Cooperative on November 15, 2021, that a 15 foot from center line maintenance easement is provided on each side of overhead power lines, and that the goal of the maintenance easement is to keep areas around power lines free from debris that might obstruct safe transmission of electric power. Staff utilized applicant's submitted sitemap and Wasco County GIS Measurement Tool to approximate and confirm applicant's estimated power line distances and maintenance zones. (See below "Power Line Distance Estimate" Map).





Power Line #1 Maintenance Area Estimate: 19,050 SF = 635'L x 30' (15' from center line)  
Power Line #2 Maintenance Area Estimate: 15,900 SF = 530'L x 30'  
Power Line #3 Maintenance Area Estimate: 5,550 SF = 185'L x 30'  
Power Line #4 Maintenance Area Estimate: 10,050 SF = 335'L x 30'  
Power Line #5 Maintenance Area Estimate: 16,800 SF = 560'L x 30'  
Power Line #6 Maintenance Area Estimate: 25,200 SF = 840'L x 30'  
Power Line #7 Maintenance Area Estimate: 7,050 SF = 235'L x 30'  
Power Line #8 Maintenance Area Estimate: 13,200 SF = 440' x 30'

*Public Roadway Maintenance Area.* Additional information regarding fire fuel break and maintenance areas that are dedicated for publicly maintained roads was requested from the Wasco County Public Works Department. The Wasco County Public Works Director Arthur Smith provided commentary on November 15, 2021:

WC-Public Works Department Director Arthur Smith Commentary (November 15, 2021):

We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection - people can't block a road, it must remain open for travel. However, the county is not obligated to care for or maintain public or private roads, just county roads.

Most county roads are only 22-24 feet in width, but have a 50-60 foot dedicated right-of-way which we manage. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard.

A copy of the Director Smith's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

The applicant provided the following calculation regarding Sevenmile Hill Road maintenance: "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>".

The Wasco County GIS Roads layer provides that Sevenmile Hill Road is a public dedicated and maintained road. Staff utilized Partition Plat 2017-003560 and Wasco County GIS Measurement Tool to approximate the length and width of Sevenmile Hill Road along the subject parcel's north boundary line. The estimated distance is 1,115 feet.

Partition Plat 2017-003560, page 2, provides that Sevenmile Hill Road is at least 60' wide. Considering Director Smith's comments concerning the 50-60' dedicated right-of-way, and the 4-6 foot maintenance area on each side of county roads, staff estimates the dedicated maintenance area for Sevenmile Hill Road that directly applies to the subject parcel is approximately 6,690 SF = (6' x 1,115').

A copy of "Partition Plat 2017-003560" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 6.

Total estimated actual physical development square footage = 14,620 SF  
Total estimated fire fuel break buffer zone area development square footage = 113,500 SF  
Total estimated fire fuel break buffer zone area for access drives = 67,740 SF  
Total estimated maintenance easement area for overhead power lines = 112,800 SF  
Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF

The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

The subject parcel is approximately 40.6 acres in size.

(1 Acre = 43,560 SF) (40.6 acres x 43,560 = 1,768,536 acres)

315,350 SF / 1,768,536 SF = 0.1783 or approximately 18% of the subject parcel is physically developed.

**(2) Undeveloped Areas & Soils.** Original application materials provide the following description of undeveloped areas of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. (Original Application, Page 28).

A copy of the "Original Application" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Soil Survey. The submitted Remand Letter provides the following information regarding a soil assessment that was conducted on the subject parcel:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form

authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. \*Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error. (Remand Letter, Page 1).

A copy of the "Remand Letter" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

Submitted soils data (Scanned Pdf file titled: "Remand Request Soil Data"), includes the following: (1) "Soil Assessment Submittal Form" and "Soil Assessment Release Form"; (2) "Soil Assessment Completeness Review"; and (3) "Wilson – Order 1 Soil Survey".

The "Soil Assessment Submittal Form" was signed by both the property owner, David Wilson (Signed January 15, 2021) and soil scientist, Gary Kitzrow (Signed January 10, 2021). The "Soil Assessment Submittal Form" provides the Department of Land Conservation and Development the authority to review the soil survey, and provides the following:

"Soil Assessment Submittal Form" (Submitted to DLCD January 23, 2021):

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews of field checks will accompany the soils assessments. (Soil Assessment Submittal Form, Page 1).

The "Soil Assessment Release Form" was signed by the property owner, David Wilson (Signed January 15, 2021), and submitted with the "Soil Assessment Submittal Form".

Copies of the "Soil Assessment Submittal Form" and "Soil Assessment Release Form" are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 8.

The "Soil Assessment Completeness Review" was issued and approved on March 29, 2021, by Hilary Foote Department of the Oregon Land Conservation and Development (DLCD) Farm Forest Specialist.

Soil Assessment Completeness Review (March 29, 2021):

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030. (Soil Assessment Completeness Form, Page 1).

A copy of the "Soil Assessment Completeness Review" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 9.

Staff contacted Hilary Foote requesting additional clarification concerning the purpose of the “Soil Assessment Completeness Review”. Ms. Foote confirmed that DLCD’s Soil Assessment’s review is only to ensure the applicant’s submitted Soil Survey is complete and consistent, and that the local jurisdiction makes its own determination as to the survey’s accuracy and acceptability. Additionally, Ms. Foote noted that the report indicates the property is zoned “EFU, not Forest”; however, this discrepancy appears to be a scrivener’s error.

A copy of the referenced communication with Hilary Foote is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

Staff has reviewed the submitted soil report titled: “Wilson – Order 1 Soil Survey”, that was conducted by Soils Scientist Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist. The survey was submitted to DLCD on January 23, 2021. There is no indication that the information provided within the soil report is incomplete or inaccurate. Additionally, the credentials of Mr. Kitzrow meet the minimum standards required per OAR 660-033-0045(1). Staff deems the facts, findings, and conclusions within the “Wilson – Order 1 Soil Survey”, to be complete, consistent, and accurate.

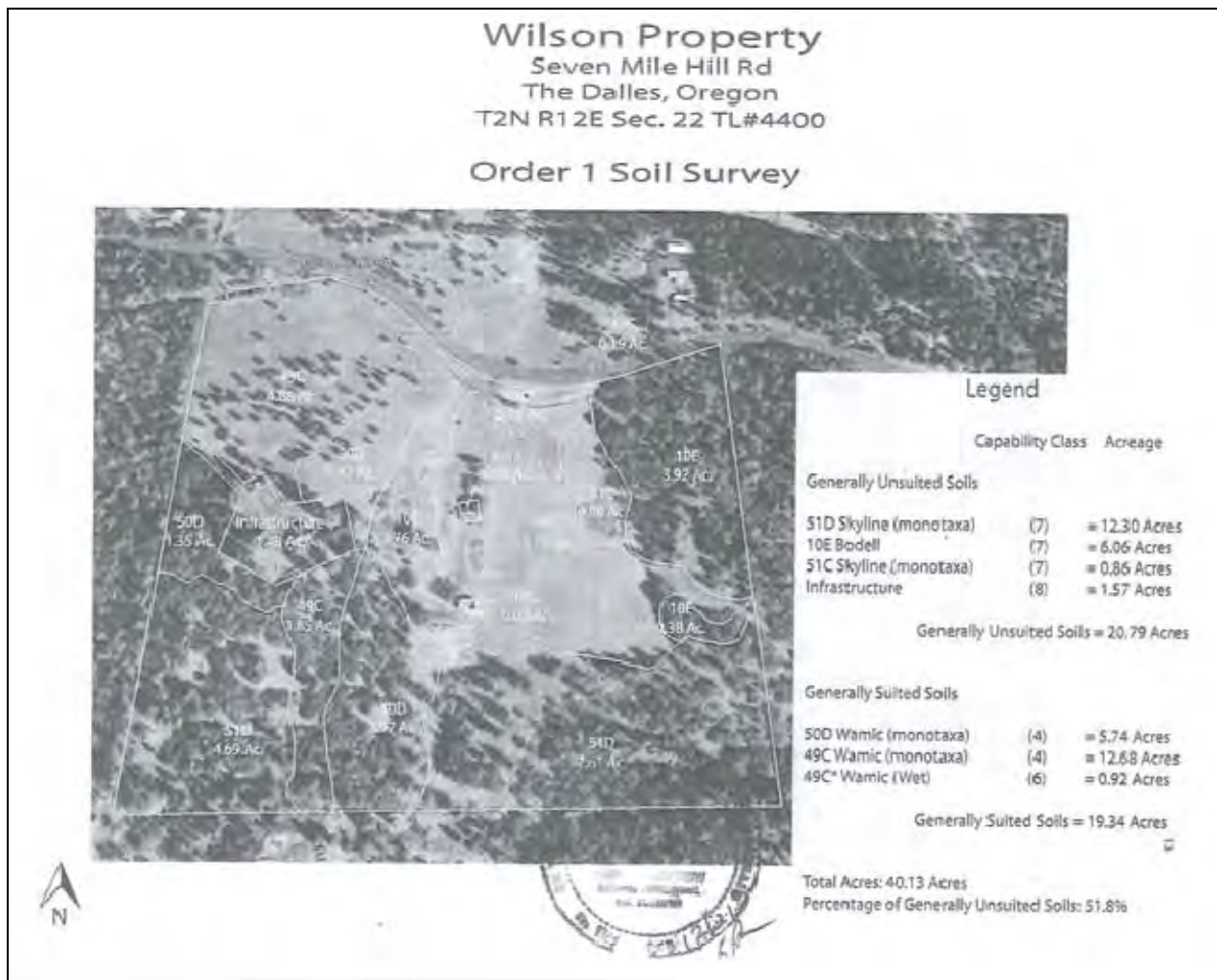
The “Wilson – Order 1 Soil Survey” provides that a backhoe was used to excavate and test 23 specific areas on the subject parcel. (See below “Site Condition Map”). (See also Page 10 of “Wilson – Order 1 Soil Survey”).

A copy of “Wilson – Order 1 Soil Survey” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 11.

Wilson  
T2N R12E Sec. 23C TLN 4400  
Site Code: 100-100



The “Wilson – Order 1 Soil Survey” also provides a map illustrating the results of the soil survey. (See below “Order 1 Soil Survey” Map). (See also Page 13 of “Wilson – Order 1 Soil Survey”).



See also the “Enlarged Soil Capability Class Legend” Diagram below.

Legend		
	Capability Class	Acreage
Generally Unsited Soils		
51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres
Generally Unsited Soils = 20.79 Acres		
Generally Suited Soils		
50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres
Generally Suited Soils = 19.34 Acres		
Total Acres: 40.13 Acres		
Percentage of Generally Unsited Soils: 51.8%		

**Diagram: Expanded Soil Capability Class Legend Diagram**

Identified soil types include the following: 51D Skyline (monotaxa); 10E Bodell; 51C Skyline (monotaxa); 50D Wamic (monotaxa); 49C Wamic (monotaxa); and 49C (Wet).

The “Wilson – Order 1 Soil Survey” subsection (2)(e), provides additional descriptions and correlations between the existing soils and vegetation growth on the subject parcel.

“Wilson – Order 1 Soil Survey” Subsection (2)(e) (submitted January 23, 2021):

There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related. Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present. (Wilson – Order 1 Soil Survey, Page 2).



Additionally, the “Wilson – Order 1 Soil Survey” subsection (2)(f), provides notes concerning the underrepresentation of the existing USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the subject parcel.

“Wilson – Order 1 Soil Survey” Subsection (2)(f) (submitted January 23, 2021):

No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed. (Wilson – Order 1 Soil Survey, Page 2).

The survey’s summary and conclusion are provided in subsection (5).

“Wilson – Order 1 Soil Survey” Subsection (5) (submitted January 23, 2021):

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% (20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

(Wilson – Order 1 Soil Survey, Page 3).

A copy of the “Wilson – Order 1 Soil Survey” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 11.

**(2a) Staff Analysis (Undeveloped Areas & Soils).** *Vegetation Analysis.* A previous site visit and Wasco County GIS data (2018 Aerial OSIP Imagery), indicate and confirms that grass hay is grown on the parcel. The pasture area is located on the northwest, central, and east portion of the parcel.

The vegetation of the subject parcel is split between open grassland in the north, center, and east portions. Oregon White Oak trees are interspersed with Ponderosa Pine trees. There are very few Douglas Fir trees around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

*Slope Analysis.* The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the dwelling unit at

about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or for forestry uses.

*Wetland Analysis.* Staff utilized information from the Wasco County GIS (National Wetlands Inventory, National Hydrography Dataset, and Statewide Wetlands Inventory) to identify one seasonal "Riverine" wetland (stream) that runs in a north-south direction through the center of the subject parcel. Additionally, a pond "Waterbody - Large Scale" and the north-south stream "Flowline - Large Scale" are identified at the center of the subject parcel (approximately 41' +/- from the Agricultural Structure (Old Homestead Barn)). The approximate length of the identified waterbody is estimated to be 1,259 feet long. (See below "Wetland Map").



Staff has provided the applicable WC-LUDO Forest (F-2) Zone criterion below for wetland buffer areas:

**Section 3.127 - Property Development Standards**

**3. Waterways**

- a. *Resource Buffers: All bottoms of foundations of permanent structures, or similar permanent fixtures shall be setback from the high water line or mark, along all streams, lakes, rivers, or wetlands. (Added 4/12)*

- (2) *A minimum distance of fifty (50) feet when measured horizontally at a right angle for all water bodies designated as non-fish bearing by any federal, state or local inventory.*

(\*\*\*)

- (5) *The following uses are not required to meet the waterway setbacks; however, they must be sited, designed and constructed to minimize intrusion into the riparian area to the greatest extent possible:*

- (a) Fences;*
- (b) Streets, roads, and paths;*
- (c) Drainage facilities, utilities, and irrigation pumps;*
- (d) Water-related and water-dependent uses such as docks and bridges;*
- (e) Forest practices regulated by the Oregon Forest Practices Act;*
- (f) Agricultural activities and farming practices, not including the construction of buildings, structures or impervious surfaces; and*
- (g) Replacement of existing structures with structures in the same location that do not disturb additional riparian surface area.*

Based on the identified wetland type (non-fish bearing stream), a wetland development buffer of 50 feet on either side of the waterbody is required; however, forest practices regulated by the Oregon Forest Practices Act are exempted to the buffer standards to the degree that they “minimize intrusion into the riparian area to the greatest extent possible.” (WC-LUDO Chapter 3 Basic Provisions Section 3.127, Pp. 10-11).

*Soils Analysis.* The United States Department of Agriculture (USDA), Soil Conservation Service (STS), in cooperation with the Oregon Agricultural Experiment Station, published the “Soil Survey of Wasco County, Oregon, Northern Part”, in 1982. The survey’s soil map data has been digitized, and was used in determining and analyzing the subject parcel’s soil classifications in the original Staff Report. The USDA “Soil Survey of Wasco County, Oregon, Northern Part” is classified as an Order 3 survey.

A copy of the “Soil Survey of Wasco County, Oregon, Northern Part” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 12.

The “Wilson – Order 1 Soil Survey” submitted for this remand hearing is an Order 1 survey.

The Natural Resources Conservation Service Soils webpage provides a description of soil survey orders.

The Natural Resources Conservation Service Soils webpage: Orders of Soil Surveys:

The orders are intended to convey the level of detail used in making a survey, the scale used to delineate map units, and how general the map units are. They also indicate the general levels of quality control that are applied during surveys. These levels affect the kind and precision of subsequent interpretations and predictions.

Order 1 (or first order) surveys are made if [sic] very detailed information about soils, generally in small areas, is needed for very intensive land uses. These land uses commonly require reviews and permits from regulatory agencies, engineers, and other professionals. Order 1 surveys are also conducted for specialized information, such as for critical habitat or cultural resources.

Order 3 (or third order) surveys are made where land uses do not require precise knowledge of small areas or detailed soil information. The survey areas are commonly dominated by a single land use and have few subordinate uses. The soil information can be used in planning for range, forest, and recreational areas and in community planning.

(See [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2\\_054254#orders](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054254#orders))

The “Soil Assessment Completeness Review”, issued and approved on March 29, 2021, by Hilary Foote Department of Land Conservation and Development (DLCD) Farm Forest Specialist provides the following regarding survey order:

Soil Assessment Completeness Review (March 29, 2021):

The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted. (Soil Assessment Completeness Form, Page 2).

As noted earlier, the “Wilson – Order 1 Soil Survey” provides the following analysis regarding the 1982 USDA Order 3 survey:

“Wilson – Order 1 Soil Survey” Subsection (2)(f) (submitted January 23, 2021):

No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. (Wilson – Order 1 Soil Survey, Page 2).

Staff notes that the submitted “Wilson – Order 1 Soil Survey”, was a parcel specific survey. The “Wilson – Order 1 Soil Survey” contains detailed soil testing analysis, and used a backhoe to excavate 23 study areas. “Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing detailed map with precision of subsequent interpretations and predictions.” (“Wilson – Order 1 Soil Survey”, Page 1).

The “Wilson – Order 1 Soil Survey”, provides that Skyline, Wamic, Bodell, and Infrastructure are the soil series confirmed on the subject parcel. Specifically identified soil mapping units are provided in the diagram below:

Legend		
	Capability Class	Acreage
Generally Unsited Soils		
51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres
Generally Unsited Soils = 20.79 Acres		
Generally Sited Soils		
50D Wamic (monotaxa)	(4)	= 5.74 Acres
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49C* Wamic (Wet)	(6)	= 0.92 Acres
Generally Sited Soils = 19.34 Acres		
Total Acres: 40.13 Acres		
Percentage of Generally Unsited Soils: 51.8%		

**Diagram: Expanded Soil Capability Class Legend Diagram**

(See “Wilson – Order 1 Soil Survey”, Page 13)

In order to provide detailed analysis of the soil mapping units identified on the subject parcel, staff utilized the “Soil Survey Single Phase Interpretation Sheets in Oregon” for the 1982 “Soil Survey of Wasco County, Oregon, Northern Part”, published by the United States Department of Agriculture (USDA), Soil Conservation Service (STS). The “Soil Survey Single Phase Interpretation Sheets in Oregon” or “Green Sheets”, provides detailed data concerning field crops, woodland suitability, windbreaks, wildlife habitat suitability, and potential native plant communities that are supported by the soil mapping unit. The categories and ratings for the classified soil mapping units are relevant to how well the subject parcel may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

The subject parcel’s predicted crops and pasture yield capability was examined by staff in order to determine the soil quality for field crops. Four “Soil Capability Classes” were identified in the “Wilson –



Order 1 Soil Survey". The "Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon" published by the Soil Conservation Service (Natural Resources Conservation Service), June 1982, provides the following description of "Capability and Predicted Yields - Crops and Pasture Soil Capability Classes":

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter-e, w, s, or c--to the class numeral, for example, lie. The letter e shows- that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief-limitation is climate that is too hot, too cold, or too dry for production of many crops.



In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

(Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 16-17).

A copy of the “Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 13.

Staff notes that the “Wilson – Order 1 Soil Survey” discovered that 20.79 acres of the subject parcel’s soils fall within the Class 7 and 8 (Class VII & VIII) soil Capability Classes. 19.34 acres of the subject parcel’s soils fall within Class 4 and Class 6 (Class IV & VI) soil Capability Classes. Given the percentage of Class 7 and 8 soils, the “Wilson – Order 1 Soil Survey” found that a slight majority of the subject parcel’s soils (51.8%) have severe limitations that make them generally unsuitable for cultivation, and limit their use for pasture, woodland, and wildlife. However, while the Soil Capability Classification can be used to broadly understand the behavior of the soils when used for other purposes, “this classification is not a substitute for interpretations designed to show *suitability and limitations of groups of soil for range, for forest trees*, [emphasis added] or for engineering.” (Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 16).

To understand the specific resource suitability of the subject parcel’s soil, staff further examined the “Green Sheets”, which provide the following interpretation guidance for the soil mapping unit’s “Woodland Suitability”:

This section deals with the potential productivity and management problems in the use of the soils for woodland production. The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

The mean site index is given for the listed species. It is based on field sampling. The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed. Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre.

The second element is a letter expressing selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities

are in the order listed above. In the columns below management problems, the ratings used are slight, moderate, and severe.

(Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 18-19).

The previous Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" only identified Wamic and Wamic-Skyline Complex as the dominant soils on the subject parcel. Specifically identified were, 49C Wamic Loam (29.8 acres); 50D Wamic Loam (10.5 acres) (total = 40.3 acres). 51D Wamic-Skyline Complex (0.5 Acres) was also identified. (Wilson – Order 1 Soil Survey, Page 3).

Regarding Wamic soils, the "Wilson – Order 1 Soil Survey" provides that the subject parcel contains 19.34 acres of the Wamic series soil type. Specifically identified the 50D Wamic (Monotaxa) (5.74 acres) mapping unit, and the 49C Wamic (Monotaxa) (12.68 acres) mapping unit, and 49C Wamic (Wet) (0.92 acres) mapping unit are identified.

Details regarding the Wamic soil mapping units identified in the "Soil Survey Single Phase Interpretation Sheets in Oregon" (Commonly referred to as the "Green Sheets") are provided below:

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both" Subclass e indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types, four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section provides a soil's potential for producing various kinds of wildlife habitat. Under "Potential for Habitat Elements":
    - "Grain Seed" is rated "Fair"; and "Grass & Legume" and "Wild Herb" subgroups are rated a "Good".
    - "Hardwood Trees", "Conifer Plants", and "Shrubs" subgroups are rated as "Fair".
    - "Wetland Plants" and "Shallow Water" subgroups are rated as "Poor"; "Open Land Wildlife" and "Woodland Wildlife" subgroups are rated as "Fair"; "Wetland Wildlife" is rated "Poor", and "Rangeland Wildlife" contains no classification.
- Potential Native Plant Community (Rangeland or Forest Understory Vegetation)
  - Ponderosa Pine and Oregon White Oak tree species are listed.

- Non-tree species: Idaho Fescue; Bluebunch Wheatgrass; Sandberg Bluegrass; Arrowleaf/Balsamroot; and Antelope Bitterbrush.

The “Wilson – Order 1 Soil Survey” provides that the subject parcel also contains approximately 20.79 acres of the Skyline, Bodell, and Infrastructure series soil type. Specifically, the 51D Skyline (Monotaxa) (12.30 acres) mapping unit; the 10E Bodell (6.06 acres) mapping unit, the 51C Skyline (Monotaxa) (0.86 acres) mapping unit, and Infrastructure (1.57 acres) mapping unit are identified.

Specific details regarding the 10E Bodell Cobbly Loam soil mapping unit is identified in the “Green Sheets”:

- Capability and yields per acre of crops and pasture (high level management)
  - This Bodell soil mapping unit is listed as 7e (Class 7 which has “very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.” Subclass e indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). This soil type contains no recommended field crop/pasture.
- Woodland Suitability
  - This Bodell soil mapping unit contains no woodland suitability soil classification and has no common trees listed (Specifically listed as “None”).
- Windbreaks
  - This Bodell soil mapping unit has no species listed for windbreaks (Specifically listed as “None”).
- Wildlife Habitat Suitability
  - This section provides a soil’s potential for producing various kinds of wildlife habitat. Under “Potential for Habitat Elements”:
    - “Grain Seed”, “Grass & Legume” and “Wild Herb” the class is rated a “Poor” for all three subgroups.
    - “Hardwood Trees”, “Conifer Plants”, and “Shrubs” contain no classification or species provided for all three subgroups.
    - “Wetland Plants”, “Shallow Water”, “Open Land Wildlife”, “Woodland Wildlife”, “Wetland Wildlife”, and “Rangeland Wildlife” the class is rated a “Poor” for all six subgroups.
- Potential Native Plant Community (Rangeland or Forest Understory Vegetation)
  - No trees are listed.
  - Non-tree species: Idaho Fescue; Bluebunch Wheatgrass; Letterman Needlegrass; Sandberg Bluegrass; Oregon Bluegrass; Arrowleaf/Balsamroot; Buckwheat; and Bighead Clover.

A copy of the pertinent sheets used in the “Soil Survey Single Phase Interpretation Sheets in Oregon” for the 1982 “Soil Survey of Wasco County, Oregon, Northern Part”, published by the United States Department of Agriculture (USDA), Soil Conservation Service (STS), is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 14.

No specific details are provided in the “Green Sheets” for soil mapping units 51D or 51C Skyline. Due to the lack of pertinent information within the “Green Sheets” pertaining to the Skyline mapping units, staff requested additional information from Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist. Mr. Kitzrow provided commentary on November 26, 2021:

Gary Kitzrow, Soil Scientist (November 26, 2021):

Skyline units on my report are MONOTAXA units meaning one soil per delineation. Wamic soils are NOT found within those mapping units except as an inclusion. Order I Soil Surveys (such as the current one) separates out soil "Complexes" into their component parts. Order I Soil Surveys are Site Specific Soil Surveys with a high degree of confidence in the final delineations correlated. I have mapped over 1 million acres of soils in the USA and in 2 foreign countries. I use the same USDA-protocols in all jurisdictions I have published Soil Survey Reports in (8) states. The goal of Order I Soil Surveys is to make every soil mapping unit a monotaxa element.

The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a Non-Commercial Forest Soil. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

A copy of Mr. Kitzrow's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 10.

### **(3) Staff Findings (Physically Developed & Undeveloped Areas).**

*Physically Developed.* The standard of proof for evidence submitted in support of this Remand request is "Clear and Objective". The burden of proof falls on the applicant to submit clear and objective evidence that demonstrates the proposal can meet the requirements under the law. In this instance, the submitted Remand materials failed to produce a site map to scale; failed to provide illustrated measurements of infrastructure and existing development; failed to provide fire fuel break buffer zone calculation methodology; and failed to provide source material for the proposed 50' fire fuel break buffer zone areas used in the applicant's estimated "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>" and "50' buffer along driveway easement= 79,300 ft<sup>2</sup>" calculations.

Staff conducted research and analysis of the existing physical development, and was able to provide the following approximations regarding the subject parcel's physically developed areas:

Total estimated actual physical development square footage = 14,620 SF

Total estimated fire fuel break buffer zone area development square footage = 113,500 SF

Total estimated fire fuel break buffer zone area for access drives = 67,740 SF

Total estimated maintenance easement area for overhead power lines = 112,800 SF

Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF

The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

The subject is parcel is 40.13 acres in size.

(1 Acre = 43,560 SF) (40.13 acres x 43,560 = 1,748,062 acres)

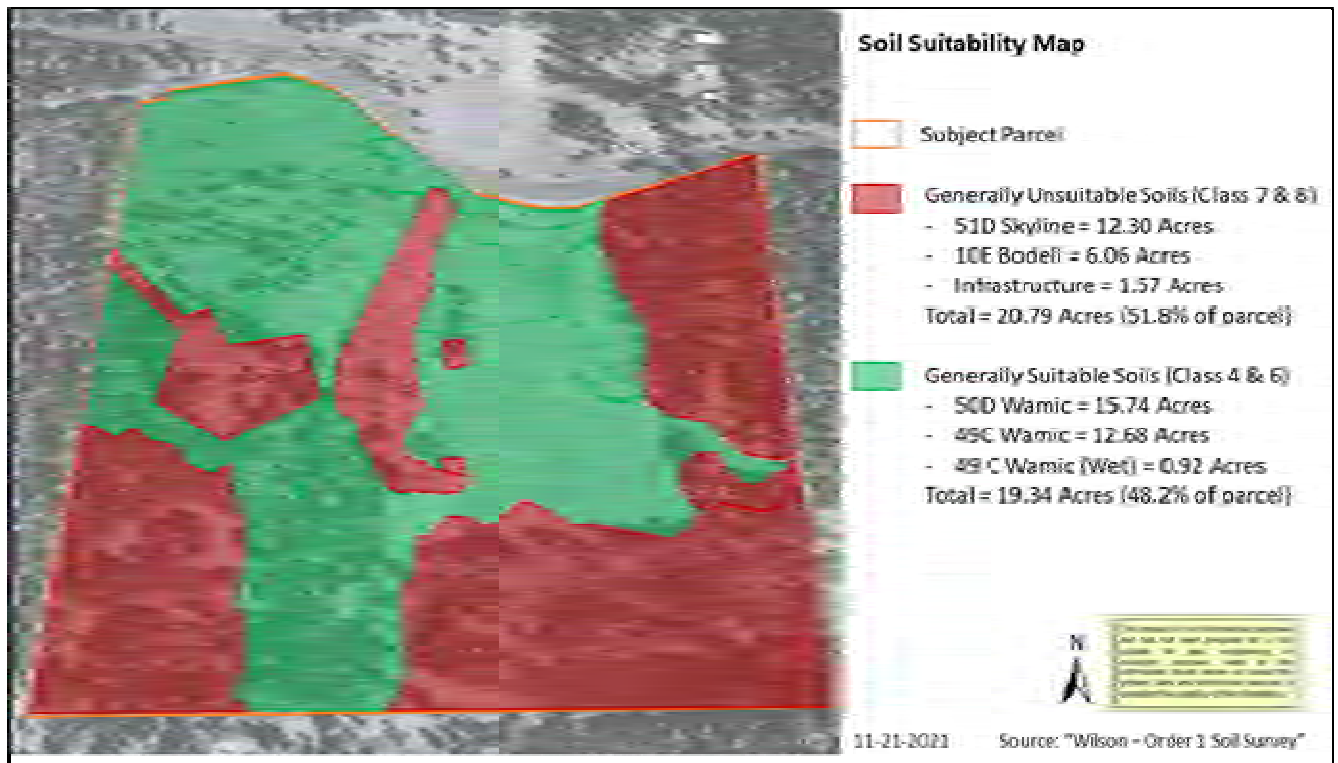
315,350 SF / 1,748,062 SF = 0.1803 or 18% of the subject parcel is physically developed.

Staff's approximations do not necessarily reflect absolute accuracy, and should not be considered to unconditionally negate the applicant's submitted calculations for physical development. However, unlike the application, staff provided source material for applicable fire fuel break buffer zone criteria and applicable utility line and road maintenance easements. Furthermore, staff provided the sources and GIS tools that were used to approximate the private access drive and utility line distances. Finally, staff provided calculation methodology for estimated fire fuel break buffer zone areas.

*Undeveloped Areas.* Neither the subject parcel's slopes or existing wetland buffers significantly hinder or preclude forestry or agricultural uses. The primary point of analysis for the undeveloped area of the subject parcel is centered around the property' soil quality and its suitability for forestry and agricultural uses.

The applicant submitted the "Wilson – Order 1 Soil Survey", which provides that 20.79 acres of the subject parcel contains "Generally Unsuitable Soils". Using the soil survey and the "Green Sheets", staff conducted analysis of the soil mapping units identified within the "Wilson – Order 1 Soil Survey". The soil mapping units 50D Wamic, 49C Wamic, and 10E Bodell were explicitly found within the "Soil Survey Single Phase Interpretation Sheets in Oregon" ("Green Sheets"). The soil mapping units 51D Skyline and 51C Skyline are not provided within the "Green Sheets"; however, Mr. Kitrow's comments provided analysis of those mapping units.

The "Wilson – Order 1 Soil Survey's" "Findings and Conclusions" and remarks made within the 23 individual "Soil Profile Documentation Sheets", provide clear and objective evidence that the areas of the subject parcel containing "Generally Unsuitable Soils" are not favorable for field crops and pasture, large or small scale commercial woodlands, or wildlife habitat. (See below "Soil Suitability Map" for reference).



Soil data evidence was a key issue of contention within the Land Use Board of Appeals opinion in *Dooley et al v. Wasco County* (LUBA Opinion No. 2019-065). Using the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”, the appellants provided in their “Second Assignment of Error”, that the county had failed to support its findings to allow the exception to Goal 4: Forest Lands “where the undisputed evidence [had shown that] the subject property contains merchantable tree species in its southern portion and contains soil types that are capable of supporting Ponderosa Pines (20-49 cubic feet per year).” (LUBA Opinion No. 2019-065, Page 14). The appellants successfully argued that the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”, demonstrated that the soil types on the property support Ponderosa Pines, and that the county's findings were “inadequate to explain why the remaining open portion of the subject property could not be planted and [used] for forestry purposes.” (LUBA Opinion No. 2019-065, Page 14).

The “Wilson – Order 1 Soil Survey” demonstrates that a majority of the property contains “Generally Unsuitable Soils”, and that those soils are primarily located in the south and east portions of the subject parcel where the majority of scattered tree growth exists. Considering these facts, staff recommends the Wasco County Board of Commissioners consider the findings and conclusions within the submitted “Wilson – Order 1 Soil Survey” as well as staff’s analysis of that survey in making its decision regarding this request.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2) Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(b) The characteristics of the adjacent lands;*

**FINDING:** Information concerning the “characteristics of the adjacent lands” is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021. Additional references are provided throughout this subsection.

Characteristics and analysis of the adjacent lands includes the following: (1) Adjacent Lands Soil Analysis; (2) General Land Use History, Zoning, and Use; and (3) Staff Findings.

**(1) Adjacent Lands Soils Analysis.** Original application materials provide the following regarding soils analysis on adjacent lands:

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

(Original Application, Page 19).

The soil mapping units for adjacent and neighboring parcels are provided by the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part". This Order 3 survey was used to obtain the subject parcel's soil data in the original application request and adjacent property soil types, (See below "Adjacent Property Soil Mapping Units" map).





Regarding the subject parcel, the USDA Order 3 survey's soil data is refuted by the "Wilson – Order 1 Soil Survey's" findings and conclusions. Although the scope of the "Wilson – Order 1 Soil Survey" was limited to the subject parcel, the survey's author Mr. Gary Kitzrow, provided comment regarding the under-representation of the number and diversity of Soil Mapping Units on the Wasco county USDA Soil Legend. Specifically, Mr. Kitzrow provided the following:

"Wilson – Order 1 Soil Survey" Subsection (2)(f) (submitted January 23, 2021):

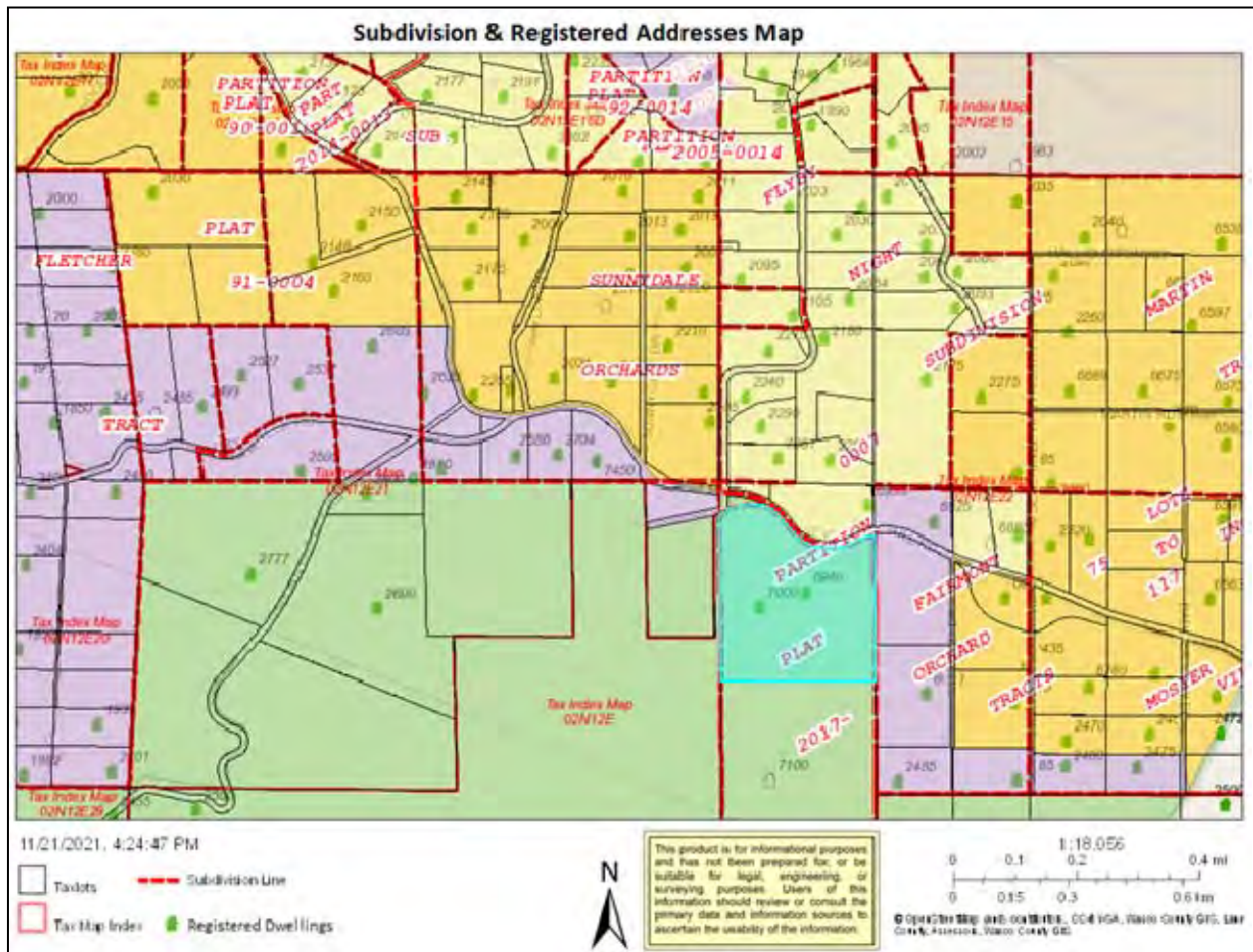
By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. (Wilson – Order 1 Soil Survey, Page 2).

It is clear from Mr. Kitzrow's commentary that he believes the Order 3 Soil Survey over represents the Wamic soil series on adjacent lands. Although Mr. Kitzrow's commentary cannot override the USDA Order 3 Soil Survey findings of mapped soil units on adjacent parcels, the Order 1 Soil Survey findings and Mr. Kitzrow's expert commentary were given consideration when examining soil capability on adjacent lands.

**(2) General Land Use History, Zoning, and Use.** Information concerning the surrounding area's land use history, zoning, and current use is provided by the land use file records, the Wasco County Assessor's Office, and Wasco County GIS data (2018 Aerial OSIP Imagery, Zoning Layer, Subdivision Layer).

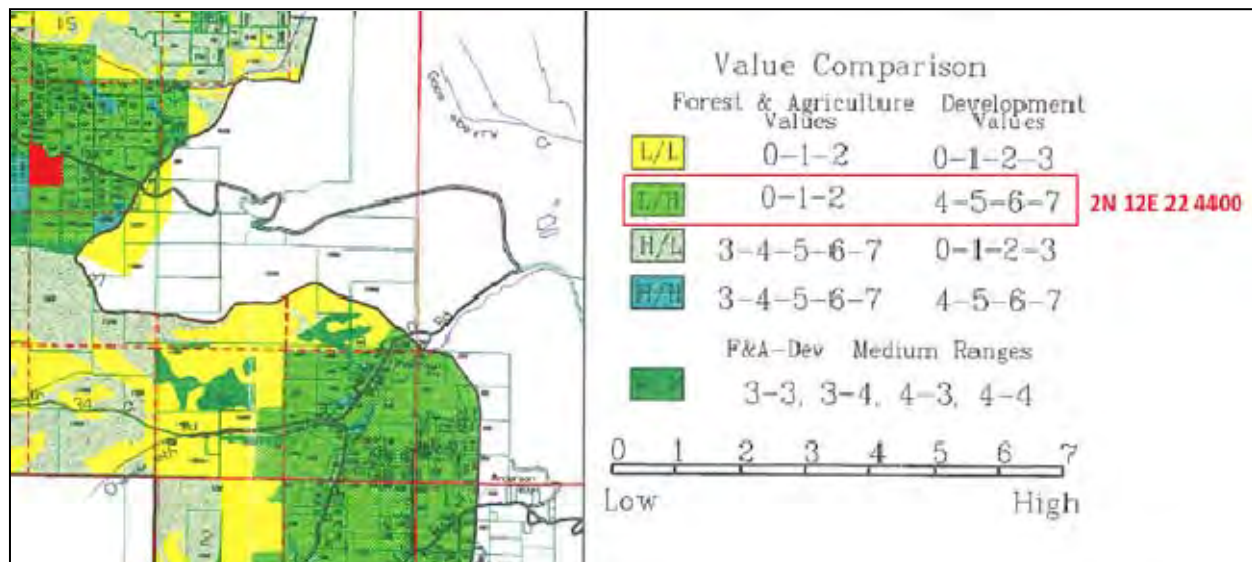
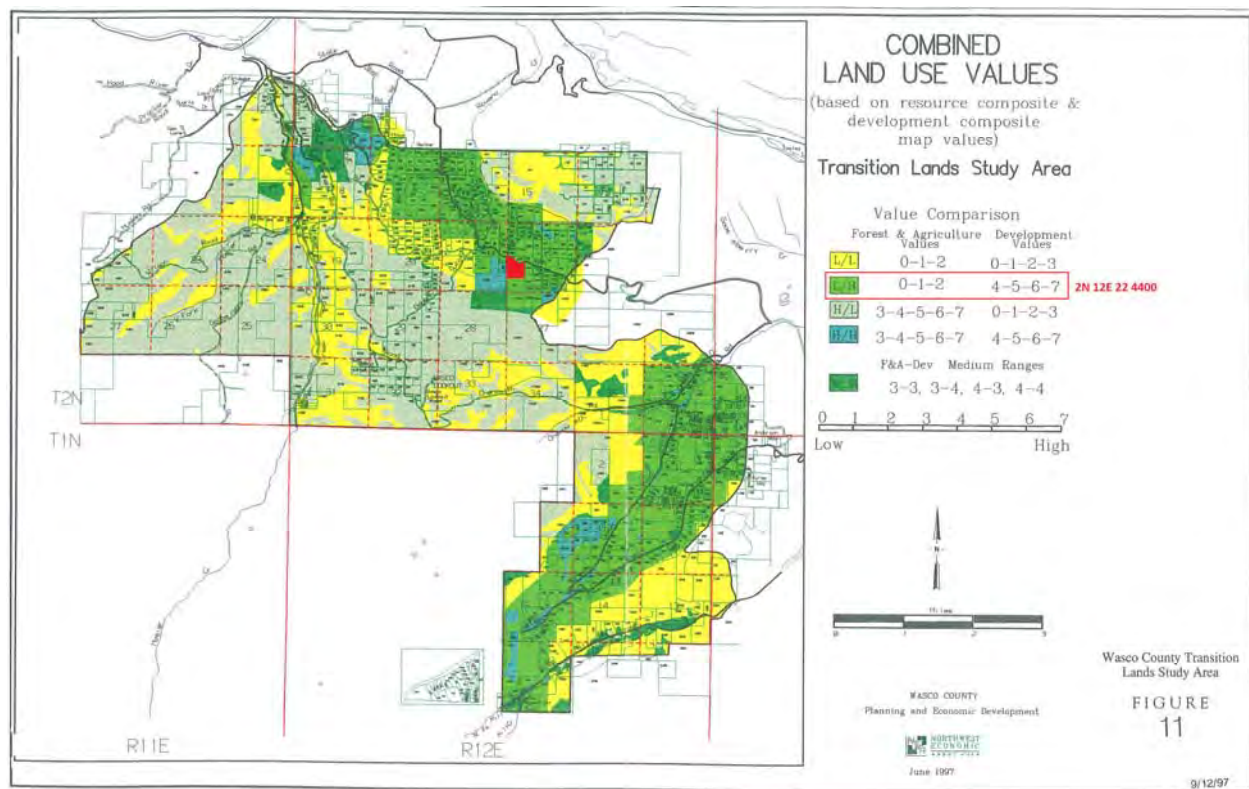
The lands to the north, east, and west of the subject parcel "exception area" have been primarily divided into smaller units of land relative to rural development. A large majority of these parcels were created long before the area was subject to statewide or county-wide zoning regulations. Of the four subdivisions in the area, three were platted in the early part of the twentieth century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). Three of these subdivisions primarily contain lots that are approximately 5 acres in size. The county has recognized the area's existing parcel sizes by zoning the area for rural residential development (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zones), and for small-scale agriculture or forestry uses in conjunction with a rural residence (Forest-Farm (F-F 10) Zone (Non-Resource)). Lands to the south, southwest, and west were historically created by deed or land sales contract prior to state or county-wide zoning laws, and many were divided into smaller units of land in the 1980s by partition. Additional details are provided below.

As a result of the parcel creation history, parcel size, and parcel use, and in keeping with the zoning pattern, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas within the Forest-Farm (F-F 10) Zone (Non-Resource). (See below "Subdivision & Registered Addresses Map").

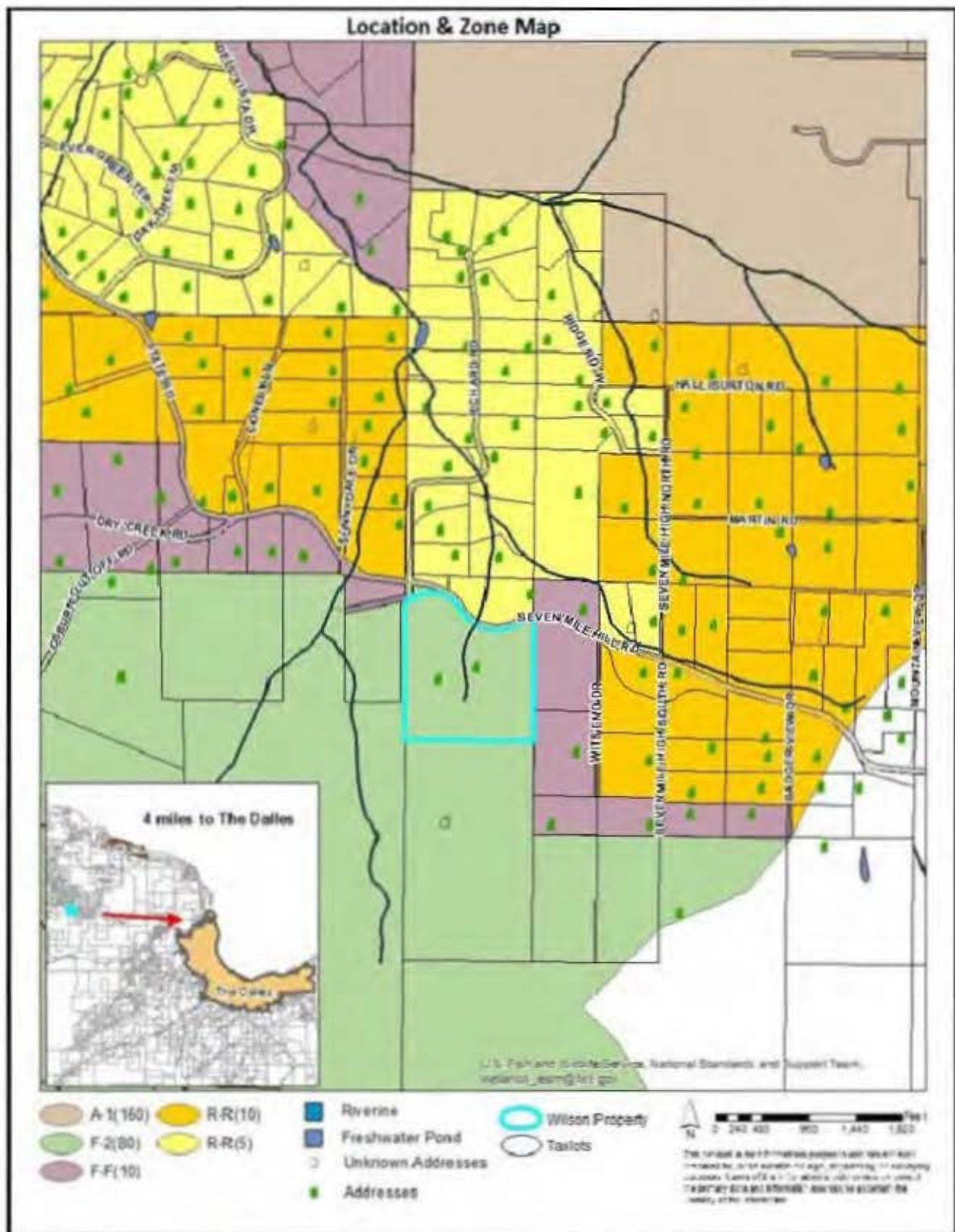


Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, and included recommendations outlining the sub-areas within the study area that were suitable for residential development. Figure 11 within the report is a map that provides combined values for properties within the study area. Figure 11 rates the subject parcel at “L/H,” meaning low for Resource Values and high for Development Values (with the exception of the northern part of the 439 acre parcel located at 2N 12E 0 2900, which was rated H/H, or having high scores for both Development Values and Resource Values). (See below “TLSA Figure 11”). Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.





The “exception area” subject parcel is surrounded on two sides (north and east) by residential development and land zoned for rural residential development under the three non-resource rural residential zoning designations, R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource). The parcel immediately to the south is zoned for forestry uses and is used for residential and small scale agricultural uses. Lands further south, and immediately west of the subject parcel are generally used for commercial forestry. (See below “Location & Zone Map”).



All of the land on the immediate north and south side of Sevenmile Hill Road are zoned residential and primarily used for residential purposes. The subject parcel is the only parcel on the immediate north or south side of Sevenmile Hill Road that is within the Forest (F-2) Zone. All other parcels along Sevenmile Hill Road and its transition into State Road are within the R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource), with 5 or 10 acre minimum parcel sizes.

*Lands East of the Subject Parcel.* Lands located east, north east, and south east of the proposed “exception area” consist of three parcels within the Forest-Farm (F-F 10) Zone (Non-Resource) (T2N R12E, Section 22, Lots 4700, 4300, and 4200). Two of these tax lots abut the eastern boundary of the subject parcel, and the third (tax lot 4700) is located on the immediate north side of Sevenmile Hill Road. Tax lots 4700 and 4200 contain dwelling units and are used for residential purposes. Tax lot 4300 was recently approved for a dwelling unit on October 12, 2021 (See File No. 921-21-000131-PLNG).

The three abutting rural residential lots further to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the southwest quarter of Section 22, Township 2 North, Range 12 East. The subdivision was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the subject parcel, R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource). The National Scenic Area (NSA) Boundary is located approximately 0.6 miles east of the subject parcel’s east property line. Zoning designations within this area of the NSA are predominantly “A-1” Large Scale Agriculture Zone (GMA & SMA). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from Forest-Farm (F-F 10) Zone (Non-Resource) to Rural Residential (R-R (10)) Zone (County Ordinance 99-111, amending Ordinance 97-102). Further, according to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this ‘transition’ area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. The appeal was stayed for mediation pursuant to the parties’ stipulation, and the matter was later dismissed from LUBA. (*Thomas v. Wasco County* (unpublished), LUBA appeal No. 99-178)

*Lands North of the Subject Parcel.* Immediately northwest of the subject parcel, but still on the south side of Sevenmile Hill Road, is a vacant 0.7 acre parcel, that is zoned Forest (F-2) Zone. The small parcel is owned by Wasco County and is located between the old Sevenmile Hill Road and the current Sevenmile Hill Road. Immediately north 0.7 acre vacant parcel, on the north side of Sevenmile Hill Road are two lots that are within the R-R (5) Rural Residential zone, and were also part of the Fairmont Orchard Tracts Subdivision discussed above. One of these lots is 0.7 acres, is vacant, and owned by Wasco County, and the other lot is 7.9 acres and contains a single family dwelling with associated accessory structures.

The Fly-By Night Subdivision lies north of the Fairmont Orchard Tracts Subdivision on the north side of Sevenmile Hill Road. Three parcels were reconfigured through a partition in 2017. All of the lots north of Sevenmile Hill Road for approximately 0.8 miles are within the R-R (5) Rural Residential zone. North of

the Fly-By Night Subdivision, lands are within the Exclusive Farm Use (A-1) Zone or within the National Scenic Area.

Lands lying to the northwest of the subject parcel are within the Sunnydale Orchards Subdivision. All of the lots within the subdivision that are located north of Sevenmile Hill Road are within the Rural Residential (R-R (10) zone, and all of the lots located on the south side of the road are within Forest-Farm (F-F 10) Zone (Non-Resource). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards, there are other subdivisions with lots within the Forest-Farm (F-F 10) Zone (Non-Resource) and R-R (5) Rural Residential zone.

All of the area north of the proposed “exception area” is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards Subdivision and Flyby Night Subdivision.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest lot being 11.4 acres. Lots within the subdivision are mostly less than ten acres. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area located on the north side of Sevenmile Hill Road is the most heavily developed area surrounding the subject parcel. As can be seen in the maps above (See “Location & Zone Map” and “Subdivision & Registered Dwellings Map”), virtually all units of land located north of Sevenmile Hill Road have been improved with a dwelling unit.

*Lands West of the Subject Parcel.* There are two properties immediately adjacent to the proposed exception area to the west. The northwest parcel is 16.3 acres, with the north 1/3 within the Forest-Farm (F-F 10) Zone (Non-Resource) and the southern 2/3 within the Forest (F-2) Zone. This property is not developed. The adjacent property to the southwest (Located at 2N 12E 0 2900) is within the Forest (F-2) Zone, is 439 acres, is in commercial forestry use, is undeveloped, and is owned by Kenneth Thomas. Mr. Thomas also owns an approximate 40 acre undeveloped parcel (Located at 2N 12E 21 1200). These larger Forest (F-2) Zoned lands run west for almost a mile, across Osborn Cut-Off Road, before they reach the Fletcher Tract Subdivision where properties fall within the Forest-Farm (F-F 10) Zone (Non-Resource) and are much smaller in size (5-15 acres). Three of the west parcels are developed with single family dwellings along Osborn Cut-Off Road.

The Fletcher Tract Subdivision was recorded on June 6, 1908 and contains a total of 32 lots, almost all five acres each. All of the lots within the Fletcher Tract are within the Forest-Farm (F-F 10) Zone (Non-Resource). The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. According to 2018 Aerial OSIP Imagery, this south portion of the platted road south of Dry Creek Road has never been developed, although there are some private access roads leading to the developed parcels. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but some have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract. Beyond the subdivision to the west and south are large parcels within the Forest (F-2) Zone. According to Planning Department records, the Fletcher Tract has been zoned for non-resource use since the implementation of zoning in the county.



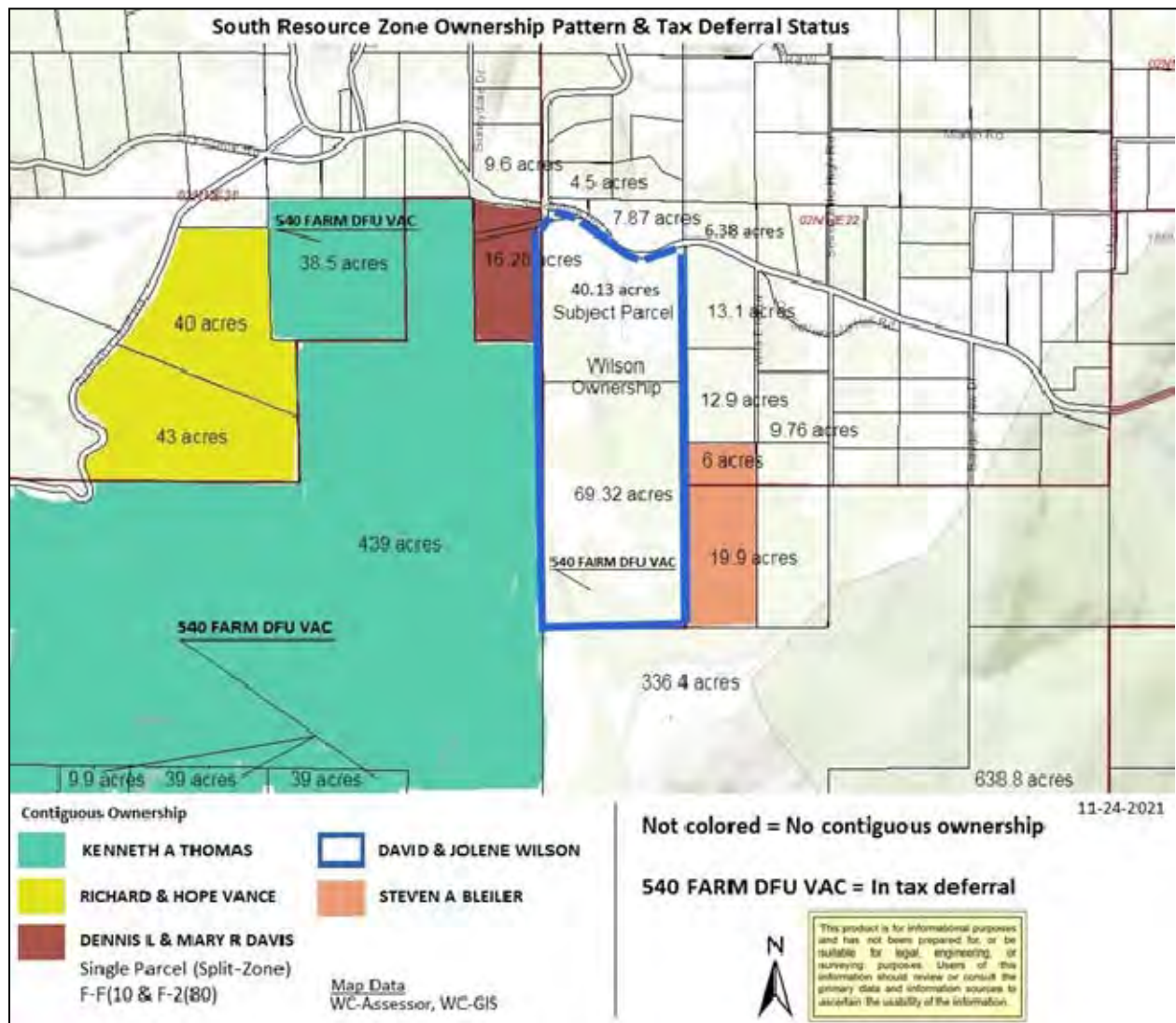
Several of the lots in the Fletcher Tract are in common ownership forming larger tracts. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates statewide or countywide zoning in the area, each 5-acre parcel could be developed for residential use.

*Lands South of the Subject Parcel.* The south adjacent 69 acre parcel is within the Forest (F-2) Zone, and is also owned by the applicant David Wilson. The parcel is used for farm and residential purposes, and no forestry uses occur there. A record Quick Claim deed (recorded 1948-65409), describes the south adjacent parcel, the subject parcel, three separate parcels (now within the Forest (F-2) Zone) and four lots of the Fairmont Orchard Tracts (now within the Forest-Farm (F-F 10) Zone (Non-Resource) and Rural Residential (R-R (10) zone). Land use history provides that the 1948 tract was separated through conveyances throughout the twentieth century to form the existing nine separate units of land situated to the south, southeast, and east of the subject parcel (currently zoned for forest and residential use).

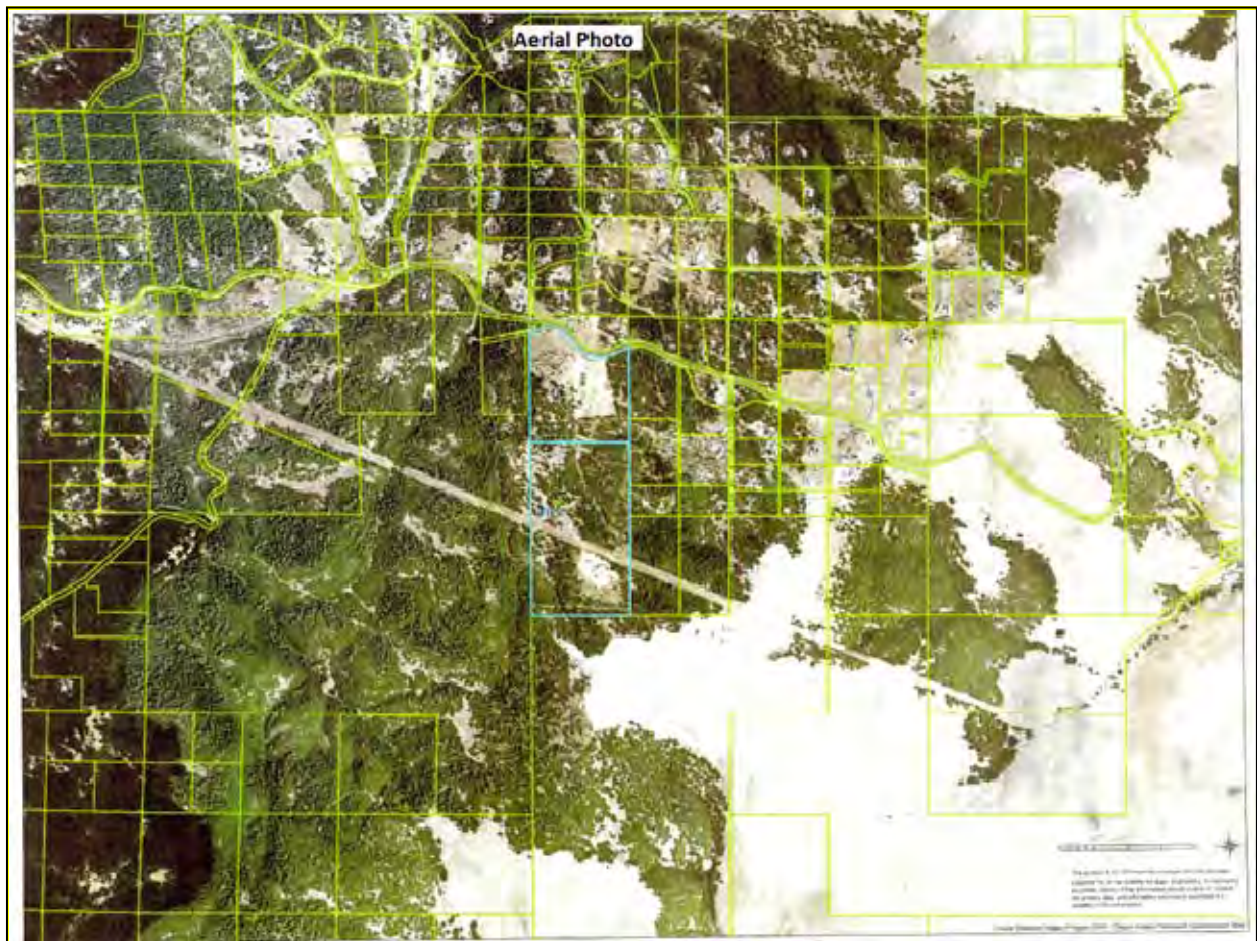
The lands to the south and southwest (all within the Forest (F-2) Zone) were created by deed prior to state and county-wide land use laws. However, it appears that the existing 439 acre adjacent southwest parcel (2N 12E 0 2900) owned by Kenneth Thomas, the 40.35 acre parcel (2N 12E 21 2700) and the 43.01 acre parcel (2N 12E 21 2800) owned by Richard & Hope Vance, and the 4.87 acre parcel (2N 12E 21 2600) owned by Steven D & Melissa A Biehn, were reduced in size through a series of two partitions occurring in 1984 and 1985 (MIP-84-118 & MIP-85-103). Further west, the 30.45 acre (2N 12E 21 2900) and the 34.31 acre (2N 12E 21 3000) acre parcels were also reduced in size through a partition (MIP-86-103). Additionally, three of those tax lots (2N 12E 21 2600 at 4.87 acres), (2N 12E 21 2700 at 40.35 acres), and (2N 12E 21 3000 at 34.21 acres) contain residential development and are not in forest-farm tax deferral status. Also of note, the south property line for tax lots 2N 12E 21 3000 and 2N 12E 21 2700 appears to be the BPA line.

A copy of the pertinent deeds and minor partitions, is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 17.

The south adjacent parcel, the southwest adjacent parcel, and a parcel located further west (all in Forest (F-2) Zone) are in tax deferral status. There are three tracts of land wholly in resource use, and one split zoned (Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone) (See "South Resource Zone Ownership Pattern and Tax Deferral Status" map).

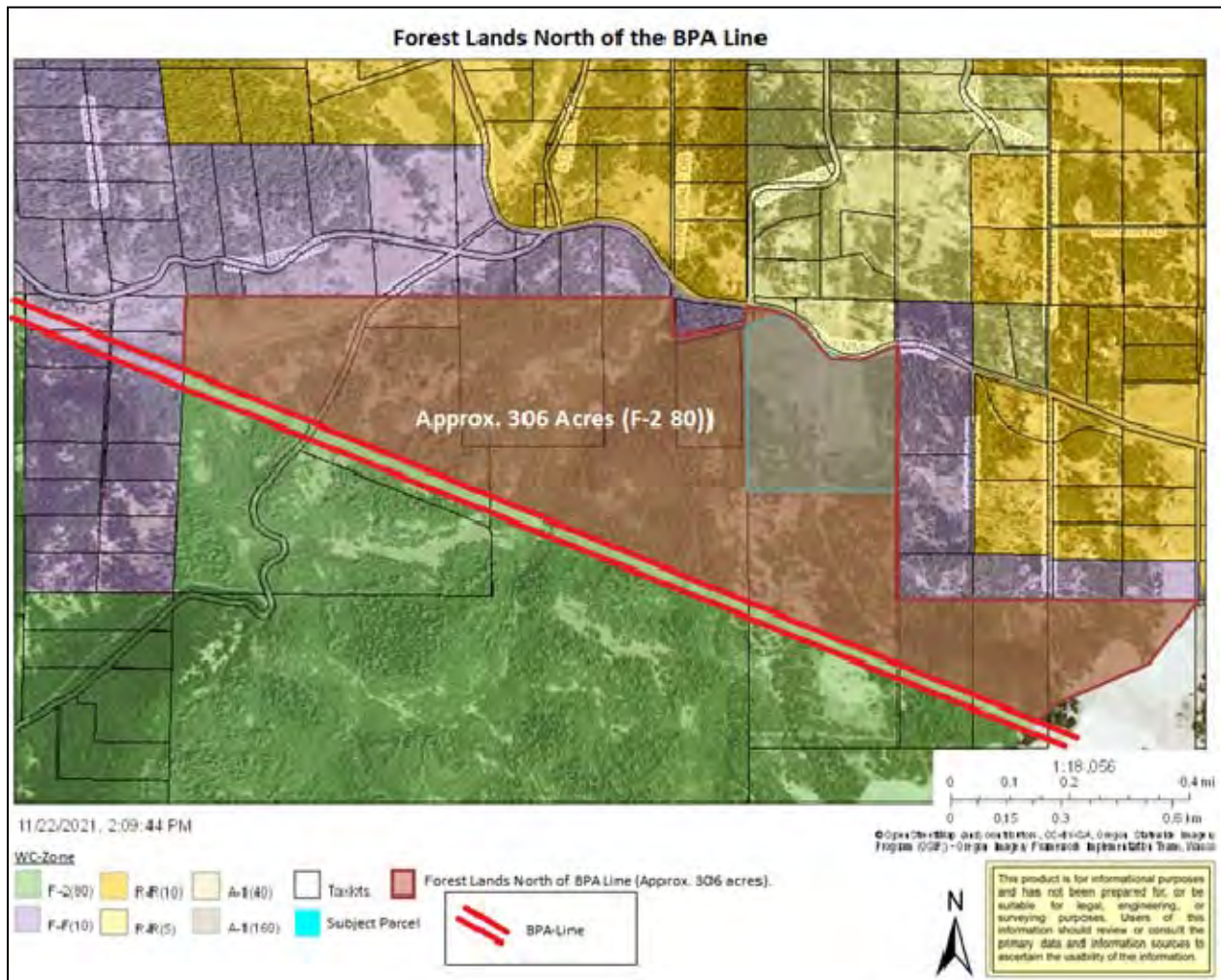


The south adjacent property along with all other properties to the west are bisected by a Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line”. The BPA line runs in a southeast to northwest direction. The transmission line’s maintenance easement is approximately 150’+/- wide, and is clearly demarcated on the below map that was submitted with the applicant’s Remand materials. (See below “Aerial Photo” map).



Staff analysis provides that an area of approximately 306 acres of Forest (F-2) Zoned land is situated north of the BPA line (including the subject parcel). (See below “Forest Lands North of the BPA Line” map).



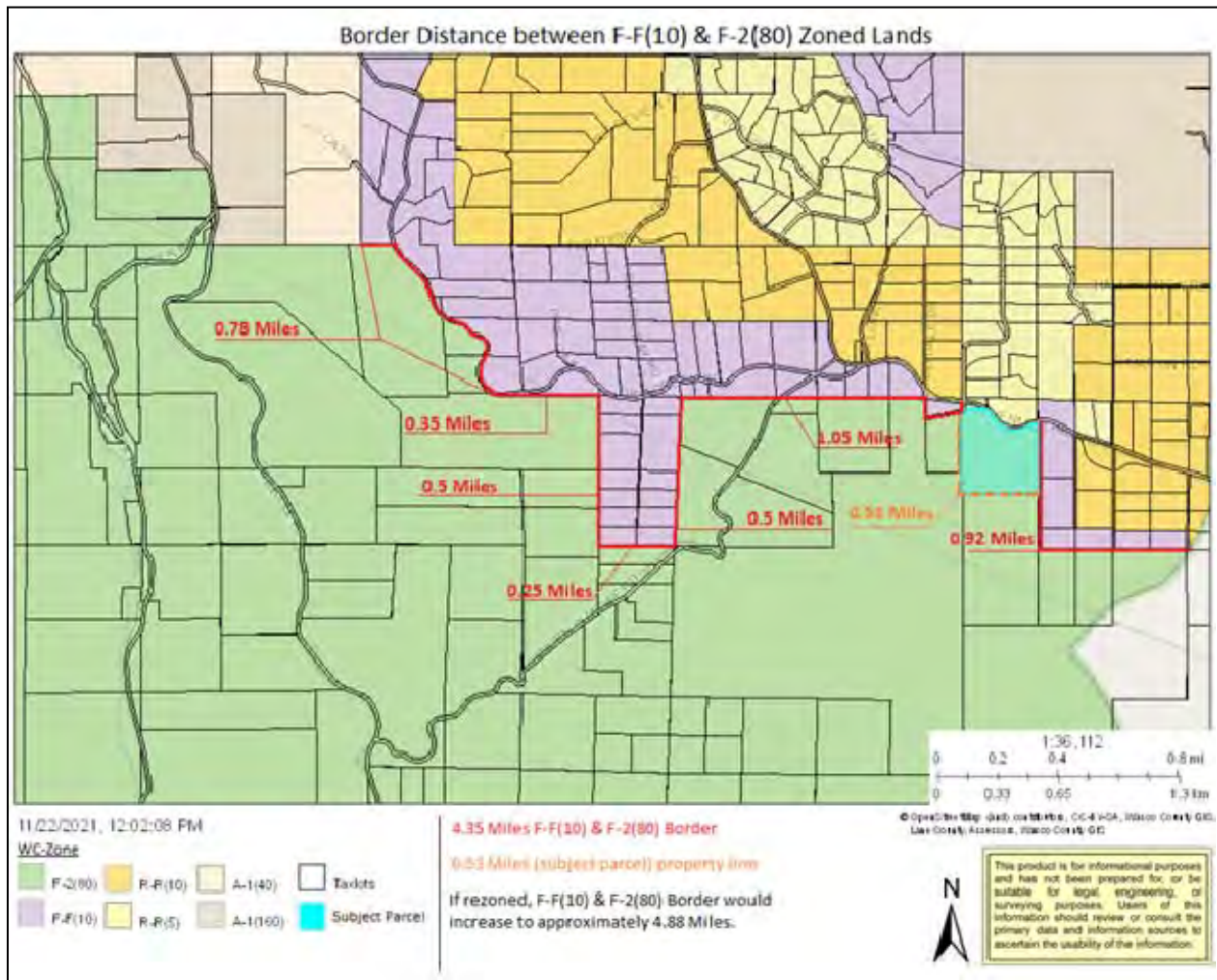


Continuing further south and southwest, lands are squarely within the Forest (F-2) Zone for approximately five miles (crossing Chenoweth Creek Road). This region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses. Deed research indicates these parcels were created prior to modern state and county land use law.

To the far southeast, near areas surrounding Wells Road, approximately 1.5 - 4.5 miles southwest of The Dalles, lands fall within the Forest-Farm (F-F 10) Zone (Non-Resource) and residential zones ((R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). This area's zoning pattern mimics the zoning pattern of the subject area of analysis with Forest-Farm (F-F 10) Zoned lands situated between resource and residential zoned lands.

Public access to the south and southwest parcels that are within the Forest (F-2) Zone, is provided by Sevenmile Hill Road (provides access to the 439 acre parcel owned by Kenneth Thomas), Osburn Cut-off Road, and Dry Creek Road.

The property border line distance between those lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and those lands within the Forest (F-2) Zone are illustrated in the below "Border Distance between F-F(10) & F-2(80) Zoned Lands" map.

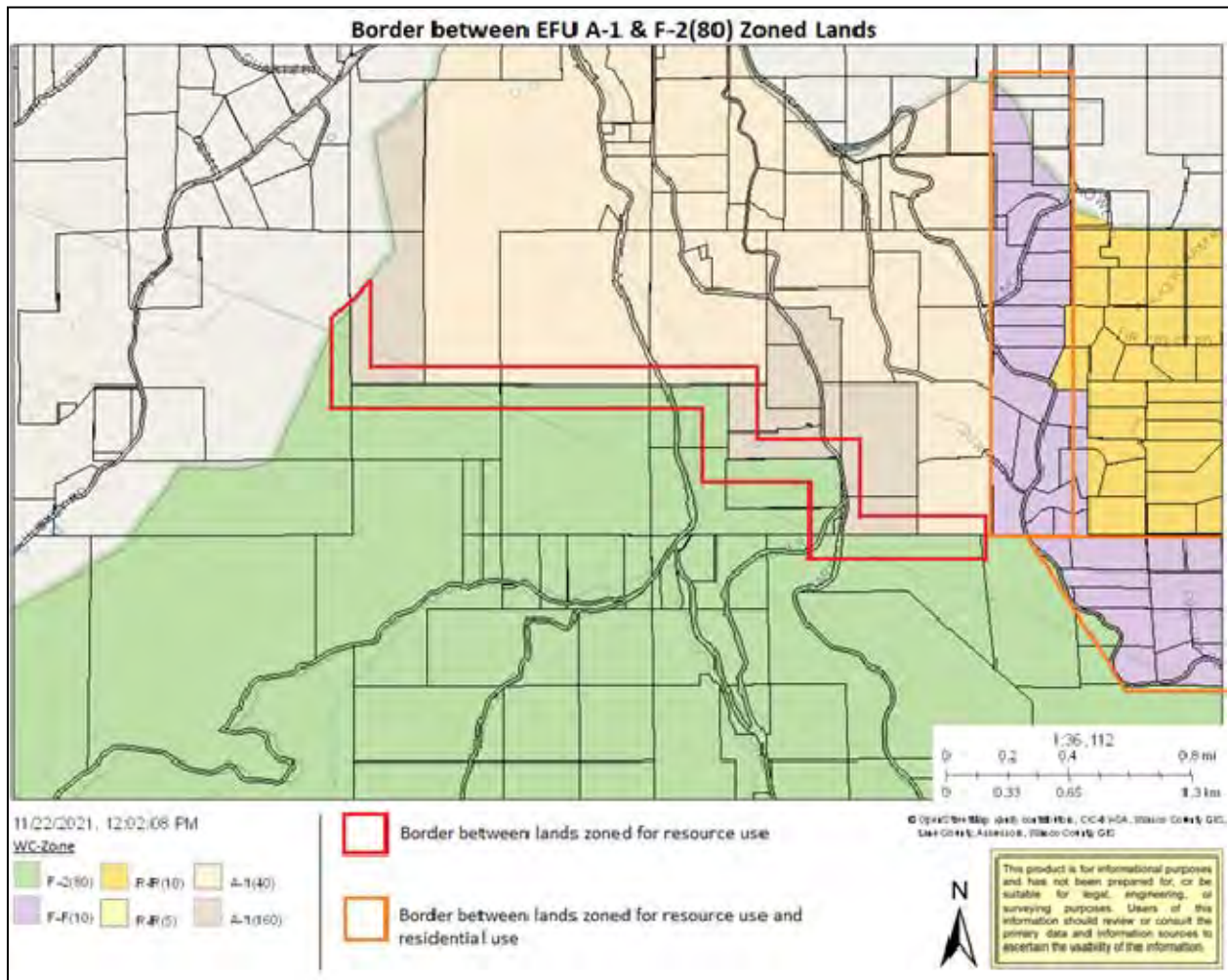


The approximate total border distance between lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone is approximately 4.35 miles in length. If rezoned to Forest-Farm (F-F 10) Zone (Non-Resource), the subject parcel's south and west property lines (approximately 0.53 miles) would be integrated into the Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone border line, which would increase the total length of the Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone border to approximately 4.88 miles.

The zoning map explicitly demonstrates that lands within the Forest-Farm (F-F 10) Zone (Non-Resource) are a clear demarcation between properties that are within resource zones (Forest (F-2) Zone and resource zones (Exclusive Farm Use (A-1) Zone and Forest (F-2) Zone) and those within residential zones (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). Furthermore, the zoning map provides that the Forest-Farm (F-F 10) Zone (Non-Resource) does not separate resource zoned lands. (See below maps "Border between F-2(80) & Residential Lands" and "Border between EFU A-1 & F-2(80) Zoned Lands").







**(3) Staff Findings.** Analysis of the characteristics of adjacent lands provides following:

- (1) The subject parcel's soils that were mapped by the "Wilson – Order 1 Soil Survey" and those soils mapped on adjacent parcels via the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" greatly differ in both soil series/classification and soil mapping units represented.
- (2) The final report for the TLSA included recommendations outlining the sub-areas within the study area that were suitable for residential development. The subject parcel was rated at "L/H," meaning low for Resource Values and high for Development Values.
- (3) The land use history demonstrates that the properties located to the north, northwest, and east of the subject parcel were developed for residential and small acreage forest-farm purposes. The existing land use designation and zoning pattern of these lands ensures that they are currently used for residential and (non-resource) forest-farm purposes. A majority of the north, northwest, and east adjacent parcels contain active registered addresses, and are generally smaller in size than those lands located to the south, southwest, and west. Lands to the south, southwest, and west are zoned exclusively for and actively within forestry use.



(4) From the land use history provided in Section II.D of this report (See *Settlement Agreement and 2013 ZNC/CPA/EXC decision*), and from a geographical standpoint, the BPA Line has a history of being considered a logical man-made boundary for separating forestry uses from built and committed residential areas. Similar to the fire fuel break buffer zone areas and power line and road maintenance easements, the BPA Line easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill area and forestry uses further to the south, southwest, and west. Moreover, there is a history of public examination and consideration that the BPA Line right-of-way/easement area physically separates, and therefore, mitigates the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

(5) The existing zoning maps clearly illustrate that lands within the Forest-Farm (F-F 10) Zone (Non-Resource), are situated between lands within resource zones (Forest (F-2) Zone and Exclusive Farm Use (A-1) Zone) and lands within residential zones (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). It is also clear that within the Sevenmile Hill area, the subject 40.6 acre parcel owned by David Wilson (2N 12E 22 4400), the small 0.45 acre parcel owed by Wasco County (2N 12E 22 4500), and approximately 0.32 acres of private access road (Old Sevenmile Hill Road) are the only lands within the Forest (F-2) Zone that directly abut residentially zoned property.

Considering these facts, staff to the Wasco County Board of Commissioners consideration of staff's analysis of the characteristics of adjacent lands in making its decision regarding this request.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

(c) *The relationship between the exception area and the lands adjacent to it;*

**FINDING:** The following conclusions and recommendations concerning the relationship between the "exception area" (subject parcel) and the lands adjacent to it are provided from the above facts, analysis, and findings for OAR 660-004-0028(2)(a) and OAR 660-004-0028(2)(b).

"Relationship" is defined as the state of being related or interrelated.

"Relationship." Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/relationship>. Accessed 28 Feb. 2022.

**Staff Findings.**

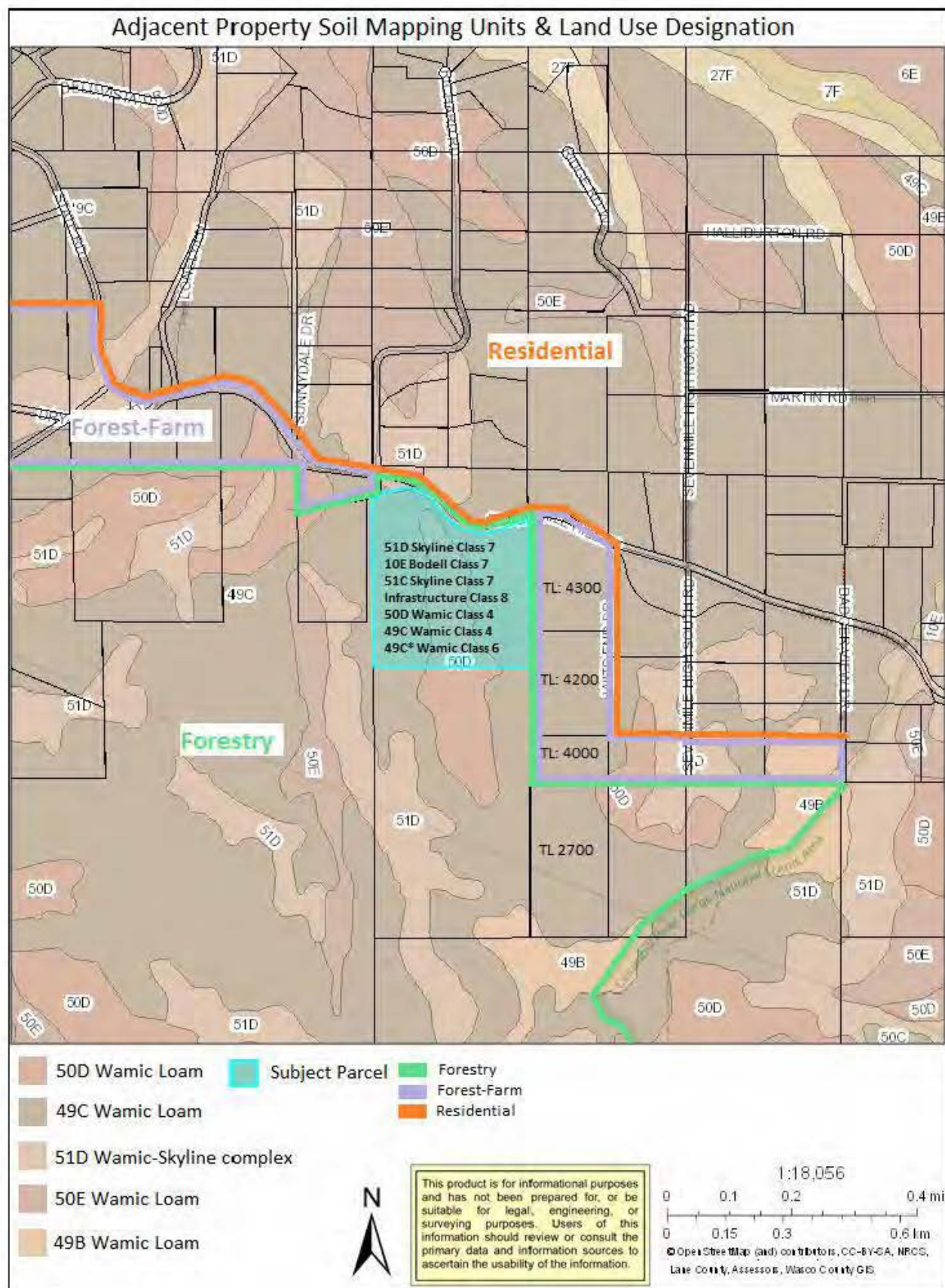
*Soils Analysis.* The subject parcel's soils that were mapped by the "Wilson – Order 1 Soil Survey" and those soils mapped on adjacent parcels via the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" differ greatly in both soil classification and soil mapping units represented.

It is clear from the "Wilson – Order 1 Soil Survey" that the subject 40.6 acre parcel ("exception area") contains a majority (20.79 acres / 51.8%) of soil mapping units that are considered "Generally Unsuitable" for large and small scale agricultural and forestry uses. Additionally, the subject parcel,

which is designated “Forestry”, contains a wider variety of soil mapping units than is provided for in the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”.

The below “Adjacent Property Soil Mapping Units & Land Use Designation” map illustrates that the Order 3 USDA soil mapping units represented on all of the surrounding lands in the subject area, which are designated “Forestry”, “Forest-Farm”, and “Residential”, contain one or more of the Wamic series soil mapping units (51D Wamic-Skyline Complex; 50D Wamic; 49B Wamic; 49C Wamic; 50E Wamic). The Wamic mapping units appear to be represented “on virtually every landform in this area,” (Wilson – Order 1 Soil Survey, Page 2), regardless of the parcel’s land use designation or zone.

For example, the below “Adjacent Property Soil Mapping Units & Designation” map illustrates four tax lots (Tax Lots 4300, 4200, 4000, and 2700) that all contain the same predominant soil mapping unit (49C Wamic); however, tax lots 4300, 4200, and 4000 are designated “Forest-Farm” and are within the Forest-Farm (F-F 10) Zone (Non-Resource), while Tax Lot 2700, is designated “Forestry” and within the Forest (F-2) Zone.

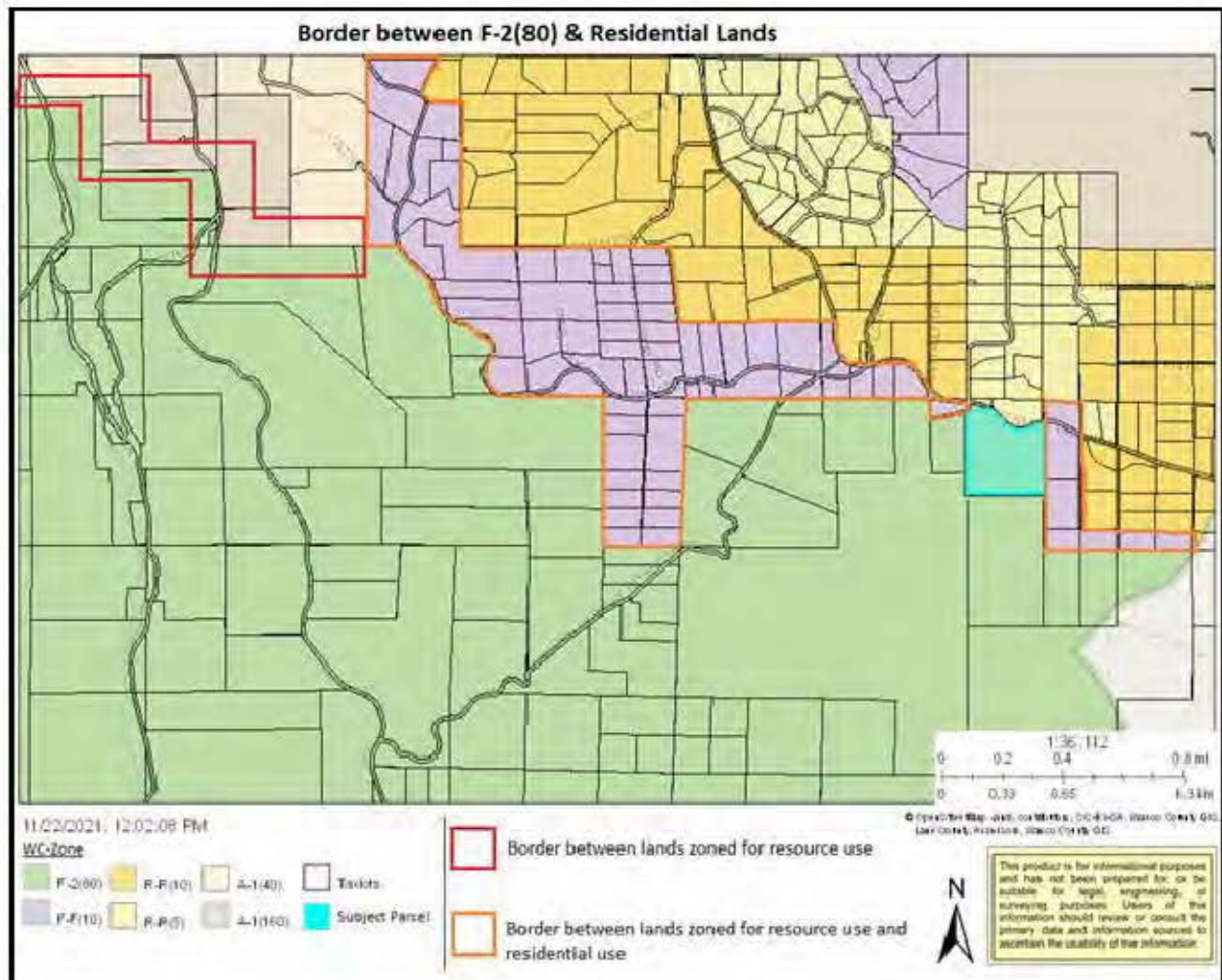


Based on the findings and conclusions of the “Wilson – Order 1 Soil Survey”, staff finds that the relationship between the subject parcel’s soil mapping units and those mapped on adjacent lands is greatly diminished. Mr. Kitrow’s findings and commentary in the “Wilson – Order 1 Soil Survey” concerning the pervasiveness of the Wamic soil series, and that “there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain” (Wilson – Order 1 Soil Survey, Page 2), tends to raise a noble question concerning the accuracy of the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”, which was published in 1982. Among other considerations, accurate mapping of soil classification and soil quality is a vital element in a local government’s designation of lands for agricultural and forestry uses. Staff understands that at least with regards to designated agriculture lands and the ability to make a profit from agricultural uses, that “[t]he factfinder may consider “profitability,” which includes consideration of the monetary benefits or advantages that are or may be obtained from the farm use of the property and the costs or expenses associated with those benefits, to the extent such consideration is consistent with the remainder of the definition of “agricultural land” in Goal 3. *Wetherell v. Douglas County*, 342 Or. 666, 682 (Or. 2007).

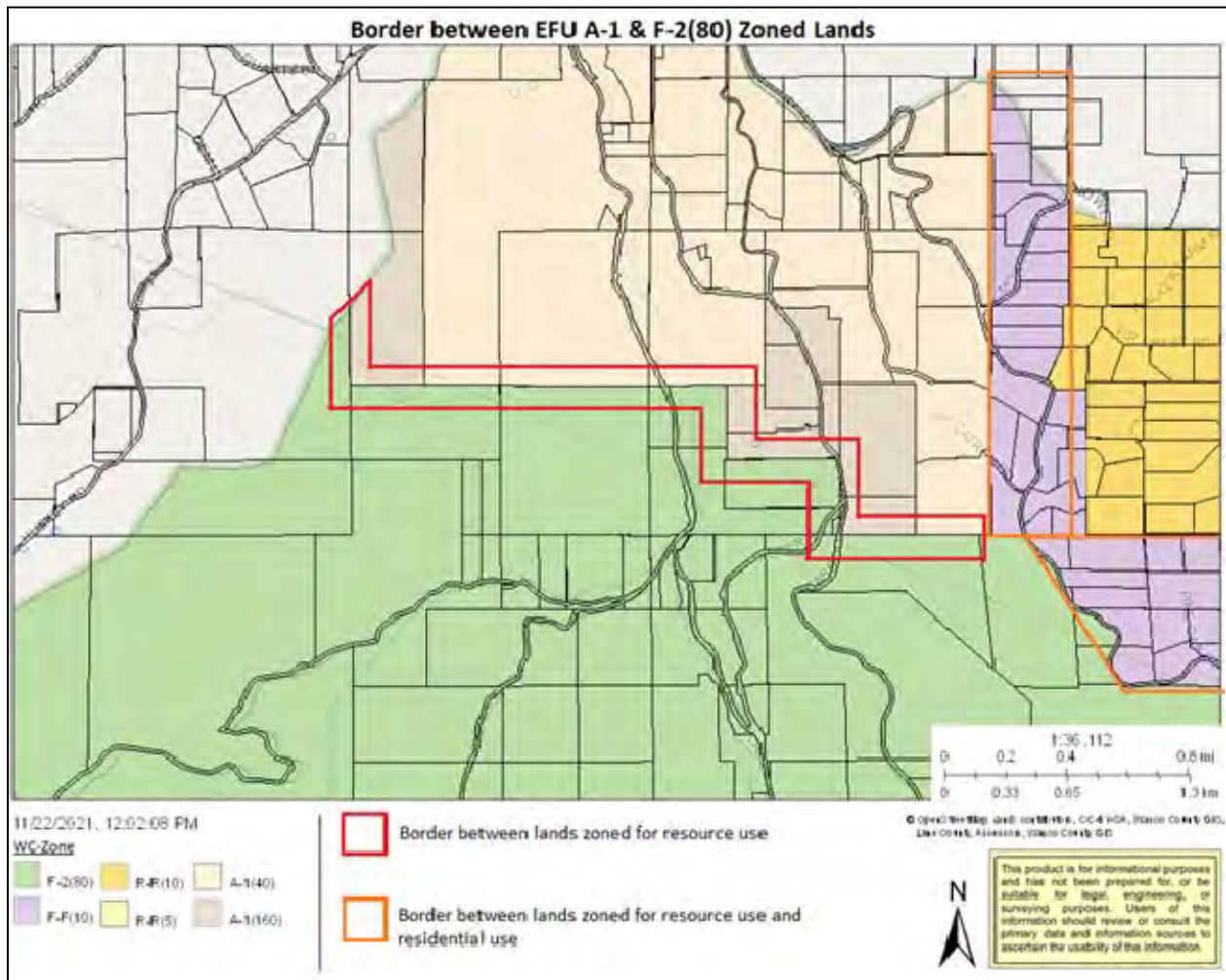
*Land Use & Zoning.* The land use history demonstrates that the properties located to the north, northwest, and east of the subject parcel were developed for residential and small acreage forest-farm purposes. The existing land use designation and zoning pattern ensures that these lands are currently used for residential and (non-resource) forest-farm purposes. A majority of these parcels contain active registered addresses, and are generally smaller in size than those lands located to the south, southwest, and west.

Units of land located to the south, southwest, and west of the subject parcel are larger and more in-line with the size of the subject parcel. These lands are mostly undeveloped for residential use, and within the “Forestry” land use designation. Land use history demonstrates that south properties have historically been in forestry use, and have never been used for residential purposes. However, three tax lots located west along Osburn Cutoff Road, (2N 12E 21 2600 at 4.87 acres), (2N 12E 21 2700 at 40.35 acres), and (2N 12E 21 3000 at 34.21 acres), are within the “Forestry” land use designation, contain residential development and are not within forest-farm tax deferral status.

In the Sevenmile Hill area of Wasco County, those properties directly abutting *all* of the designated resource lands (Agriculture and Forestry) and that separate resource lands from “Residential” designated lands, are within the Forest-Farm (F-F 10) Zone (Non-Resource). The subject parcel and two other small properties are the only lands within the Forest (F-2) Zone that directly abut residentially zoned property. In this case, a forest zoned property abutting residentially zoned property is completely out of line with the land use designation and zoning pattern, and not at all in relation to every other unit of land within the Sevenmile Hill area of Wasco County that is within a resource zone. See the below maps for details (“Border between F-2(80) & Residential Zoned Lands” map and “Border between EFU A-1 & F-2(80) Zoned Lands” map).







Based on these findings, staff concludes that the current and historic use combined with the size and scope of its existing residential development more aligns with the majority of the residentially zoned parcels located to the north, northwest, and east as opposed to the non-residentially developed parcels to the south.

Considering the facts provided throughout this report, staff concludes that outside of being designated “Forestry” and within the Forest (F-2) Zone, the subject parcel’s overall relationship with those adjacent south, southwest, and west lands designated “Forest” are significantly diminished. Alternatively, staff concludes that the subject parcel’s relationship with those non resource lands to the north, northwest, and east are increased due to their similar use and development patterns. Staff recommends the Wasco County Board of Commissioners consider staff’s analysis of the relationship between the exception area and the lands adjacent to it in making its decision regarding this request.

**OAR 660-004-0028:**

***Exception Requirements for Land Irrevocably Committed to Other Uses***

- (2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*



(d) *The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed within the findings for OAR 660-004-0028(6).

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(3) *“Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”*

**FINDING:** The following analysis of whether the subject parcel “exception area” is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable is provided from the above facts, analysis, and findings for OAR 660-004-0028(2)(a), OAR 660-004-0028(2)(b), and OAR-660-004-0028(2)(c).

The impracticability analysis includes the following: (1) Applicable criteria standards and explanation; and (2) Staff Findings.

**(1) Applicable Criteria Standards and Explanations.**

This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

*ORS 215.203(2)(a) provides:*

*“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the*

*rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)*

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) provides:

*(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;*

The "forest products" definition can be found in ORS 532.010(4), which provides that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. The subject parcel is not in farm use as its defined by state law. The south adjacent parcel is actively engaged in farm use, contains an approved agricultural structure, and is within farm/forest tax deferral (Current Property Class: 549 FARM DFU MH). Additional commentary concerning the south adjacent parcel's use was provided by Melanie Brown Wasco County Chief Appraiser for the Wasco County Assessor's Office:

Melanie Brown Wasco County Chief Appraiser (November 24, 2021):

The account you are requesting information about should be in the name of David W Wilson. His property is in applied for Farm Use. He has to support a qualifying income and it can't be a hobby farm. We send out Income Questionnaires every 3 years, which we will be sending them out next month for the 2022-23 tax year. He did meet the income requirement 3 years ago. According to what he does as a farming practice, he raises livestock and sells enough of them to qualify.

A copy of the Melanie Brown's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

OAR 660-006-0025(1) describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

OAR 660-006-0025(1)

*These general types of uses are:*

- (a) Uses related to and in support of forest operations;*
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;*
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.*
- (d) Dwellings authorized by ORS 215.705 to 215.755; and*

*(e) Other dwellings under prescribed conditions*

In regards to subsection (c), no aggregate sites have been identified on this property, nor is there any characteristic of the subject parcel's location that makes it significant for communication towers. In regards to subsections (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwelling units under current rules in the Forest (F-2) Zone. This leaves uses provided for in subsections (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. The applicable standard for "impracticable" is discussed above on pages 30-32 of this report.

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the "exception area". The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

**(2) Staff Findings.**

In the above findings, staff has provided analysis of the subject parcel's physically developed & undeveloped areas, analysis of adjacent lands, and analysis of the relationship between the subject parcel "exception area" and adjacent lands.

Soils Analysis. In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner's "Third Assignment of Error" which argued that Wasco County's findings were "inadequate to explain why the county found that the uses listed within OAR 660-004-0028(3) were impracticable. In part, the petitioners (appellants) asserted that the undisputed evidence concluded that soil types on the property support Ponderosa Pine harvest, and that the county's findings were "inadequate to explain why the remaining open portion of the subject property could not be planted and [used] for forestry purposes." (LUBA Opinion No. 2019-065, Page 14).

The submitted "Wilson – Order 1 Soil Survey", which is systematically described and analyzed throughout this report, clearly refutes both the soil classifications and soil mapping units that are mapped for the subject parcel in the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part". The "Wilson – Order 1 Soil Survey's" "Findings and Conclusions" and remarks made within the 23 individual "Soil Profile Documentation Sheets", provide clear and objective evidence that the areas of the subject parcel containing "Generally Unsuitable Soils" (51.8%) are not favorable for field crops and pasture, large or small scale commercial woodlands, or wildlife habitat. (See below "Soil Suitability Map" for reference).

Furthermore, the fact that the "Wilson – Order 1 Soil Survey" found a wider diversity of soil classes and soil mapping units than are mapped in the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part", brings into question the relationship based on soil taxonomy between the subject parcel and its neighboring parcels. Among other considerations, accurate mapping of soil classification and soil

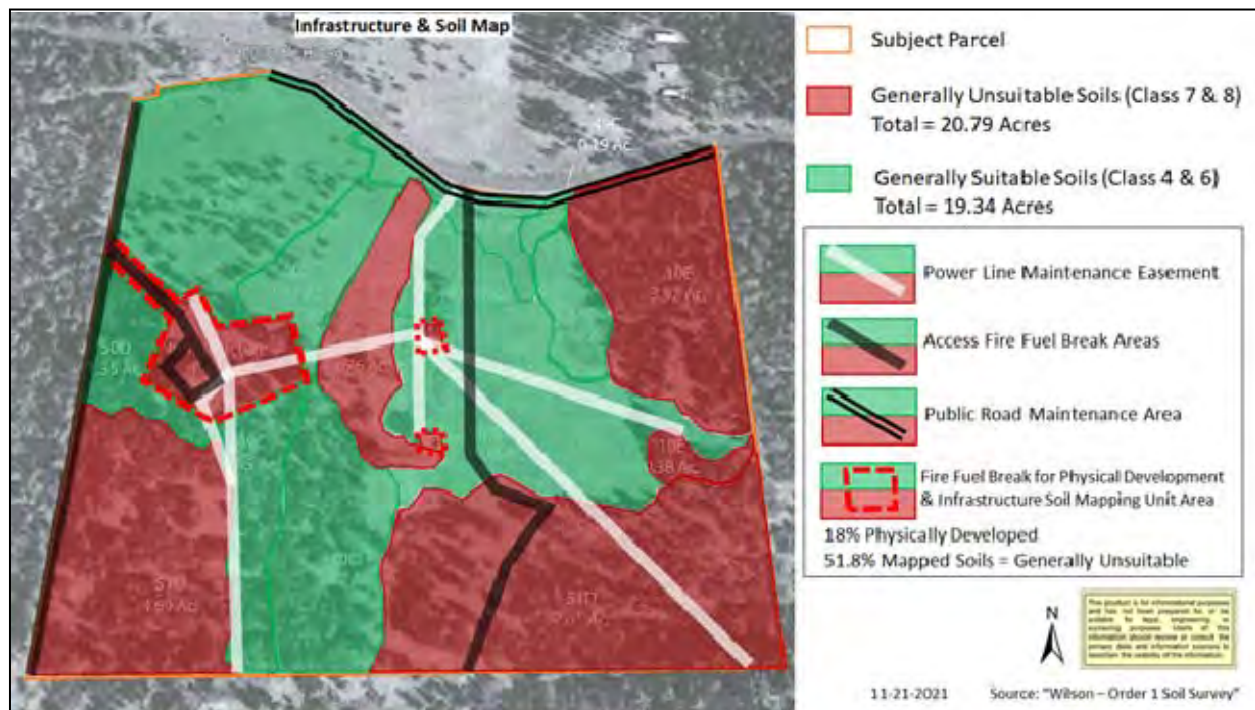
quality is a vital element in a local government's designation of lands for agricultural and forestry uses. Additional details concerning the "Wilson – Order 1 Soil Survey" can be found throughout this report.

The new soil mapping provides that the "Generally Suitable" soils that can undisputedly support Ponderosa Pine, Winter Wheat, and Grass Hay equal 19.34 acres (48.2%) of the parcel. Excluding existing physical development, fire buffer fuel break areas, power line maintenance areas, and public road maintenance areas, the above map illustrates a dispersed area of the parcel that is fit "regarding soil capability" for resource use. Further, the "generally suitable" soils are primarily located on the subject parcel's north side where residential land use designation and zoning dominate the neighboring area.

Additional analysis provides that the "exception area" is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides (north, northwest, and east adjacent parcels), will require added expense related to fire protection, fencing and general control of the area if the subject parcel was actively used for forestry or farmed for profit. Also, residential density surrounding the subject parcel significantly limits the use of pest control techniques to regulate insects and invasive vegetation. Additional nuisance type conflicts with residences are likely to arise because of the noise associated with forestry and farm for profit operations. There are also inherent safety risks associated with forestry and farm operations that must be considered if the subject parcel were to be actively used for small-large scale forestry or farm for profit operations, which it currently is not.

Approximately 18% of the parcel is physically developed. The size and scope of the subject parcel's residential development mimics a majority of the residentially zoned parcels located to the north, northwest, and east. The subject parcel contains substantial physical development compared with most parcels located to the southwest, and west, that are actively in forest use.

If the subject parcel's diminished soil capacity (20.79 acres / 51.8%) is taken into consideration and added to its physical development (approximately 18%) locations, the on-site accommodation for forestry use and farm use (Defined in 215.203(2)(a) "farm use" means the current employment of land for the primary purpose of obtaining a profit in money), is further reduced. (See below "Infrastructure & Soil Map" for reference).



Finally, the land use designation and zoning pattern for the Sevenmile Hill area clearly illustrates that lands within the Forest-Farm (F-F 10) Zone (Non-Resource) are situated between lands designated for forestry resource use and lands designated for residential use. The subject parcel is one of only three exceptions to the aforementioned pattern. (See the below "Border between F-2(80) & Residential Zoned Lands" map).





the primary purpose of obtaining a profit from agricultural uses. Additionally, the subject parcel is not within the farm/forest tax deferral (Current Property Class: 401 TRACT RES IMPR). The area can support small-scale, “peripheral” farm activities taking place on some lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and residential zoned properties where the residential use represents the primary and most highly valued use.

Based on the above facts, analysis, and findings for OAR 660-004-0028(2)(a), OAR 660-004-0028(2)(b), and OAR-660-004-0028(2)(c), staff finds that a strong argument exists that resource use on the subject parcel is impracticable.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (4) *A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.*

**FINDING:** All applicable factors of subsection (6) are addressed below. Staff’s conclusion that resource use within the subject parcel “exception area” is impracticable is supported by analysis and findings of fact concerning all of the record evidence pertaining to this Remand request, as described throughout this report. A conclusion that the subject parcel “exception area” is irrevocably committed is based on staff’s analysis and findings of fact concerning all of the record evidence pertaining to this Remand request, as described throughout this report.

OAR 660-004-0028

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (5) *Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the “exception area”. This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

OAR 660-004-0028

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (6) *Findings of fact for a committed exception shall address the following factors:*

- (a) *Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the above findings for OAR 660-004-0028(2)(b). Existing adjacent uses to the north, northwest, and east are residential, and zoned as such. The south adjacent parcel is zoned for forestry use, but is not actively used for forestry. Lands to the south, southwest, and west of the subject parcel are zoned for, and used for commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the subject parcel “exception area”. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** The findings for OAR 660-004-0028(2)(b), and the attached supporting documents provide that most of the lands to the north, northwest, and east within the Sevenmile Hill area contain development patterns that were established prior to the adoption of Statewide land use planning goals. Many of the small parcels that characterize the area were created between 1900 and 1920 by subdivision and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s) have non-resource residences located on them now, as does the subject parcel in the proposed “exception area.” Lands to the south, southwest, and west were historically created by deed prior to state and county-wide land use laws, and many were later partitioned into smaller units of land in the early 1980s.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** A tract of land is defined as “one or more contiguous lots or parcels in the same ownership.” (WC-LUDO Definitions, Page 48). In this case, a tract of land consisting of the subject 40.6 acre parcel is owned by David and Jolene Wilson and the south adjacent 69.3 acre parcel is also owned by David Wilson. The south adjacent parcel is bisected by the BPA Line, contains one residence, and multiple

associated accessory buildings. Neither the subject parcel or south adjacent parcel is currently engaged in forestry uses.

As noted throughout this report, the subject parcel's infrastructure, soil quality, and current use, either eliminate or significantly reduce the property's ability to be used for farm use. The facts provide that the land is not employed "for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops..." and is not used for any other defined farm use. (WC-LUDO Definitions, Page 18). The subject parcel contains small areas that are used for grass hay fields, but is not within farm/forest tax deferral status (Current Property Class: 401 TRACT RES IMPR). No evidence has been submitted contradicting the applicant's assertion that the subject parcel has not and is not used for farm use. Mowing natural grasses, maintenance of rural property, and maintaining small grass hay fields are not necessarily farm uses.

Further commentary from Soil Scientist Gary Kitzrow provides:

Gary Kitzrow, Soil Scientist (November 26, 2021):

Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

The south adjacent parcel; however, is actively engaged in farm use, contains an approved agricultural structure, and is within farm/forest tax deferral (Current Property Class: 549 FARM DFU MH). Additional commentary concerning the south adjacent parcel's use was provided by Melanie Brown Wasco County Chief Appraiser for the Wasco County Assessor's Office:

Melanie Brown Wasco County Chief Appraiser (November 24, 2021):

The account you are requesting information about should be in the name of David W Wilson. His property is in applied for Farm Use. He has to support a qualifying income and it can't be a hobby farm. We send out Income Questionnaires every 3 years, which we will be sending them out next month for the 2022-23 tax year. He did meet the income requirement 3 years ago. According to what he does as a farming practice, he raises livestock and sells enough of them to qualify.

A copy of the Melanie Brown's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

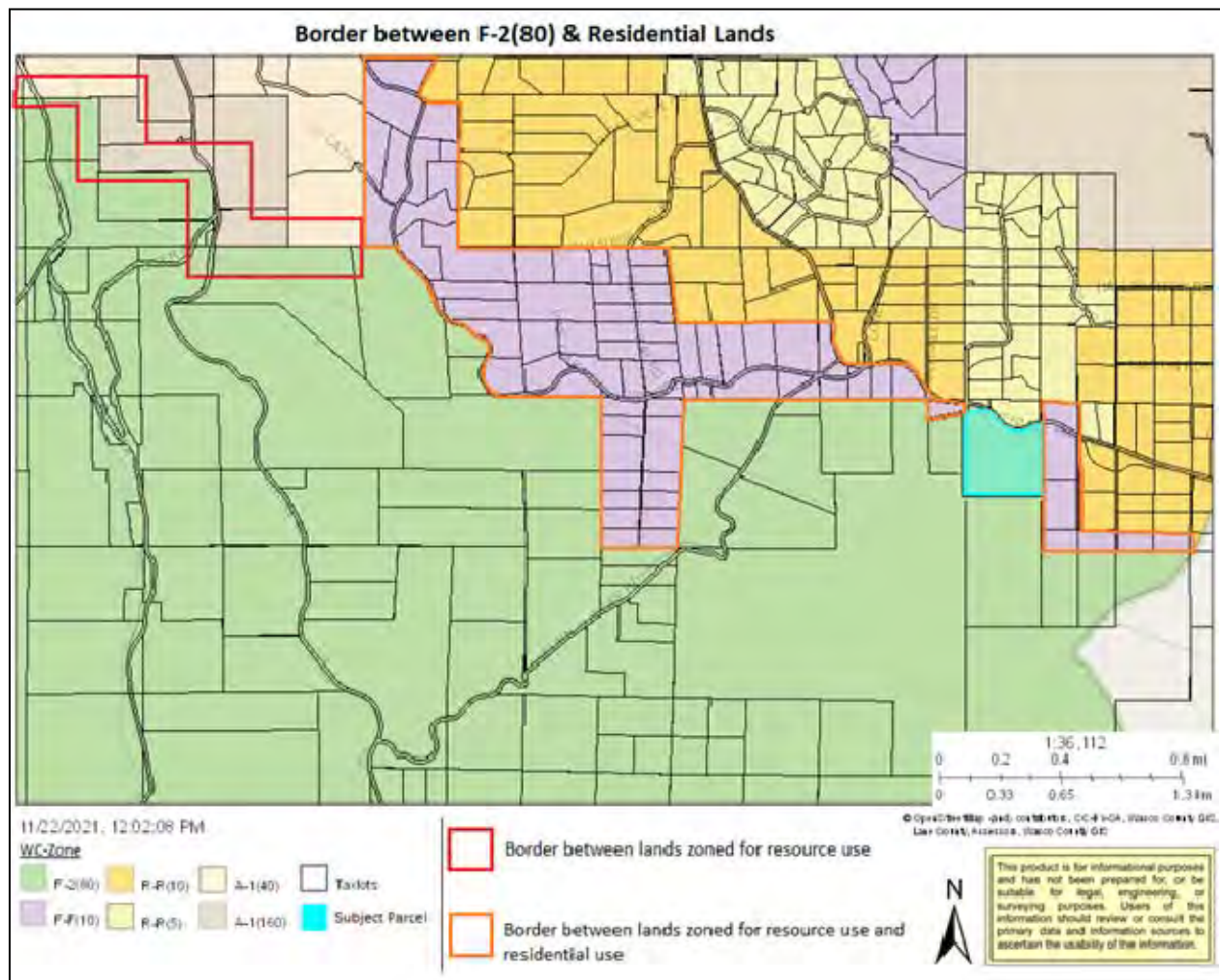
This subsection provides that "contiguous ownerships shall be considered together in relation to the *land's actual use*" (Emphasis added); however, the facts indicate that the subject parcel and its south adjacent neighbor are not in the same use. Although both parcels may be defined as a tract due to common ownership, the parcels are used for completely different purposes, and are not considered together in relation to their actual uses when those uses are polar opposites of each other, especially when the south adjacent parcel's income qualifies the property for tax benefits.

In relation to south neighboring forestry operations, the subject parcel at 40.6 acres is a small parcel. According to this subsection, the nature of the subject parcel's small size, alone, is not enough to constitute an irrevocable commitment. However, also according to this subsection, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In this case, the subject parcel contains one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn located in the center of the parcel. Finally, subsection (6)(c)(B), encourages consideration of whether a property stands alone

among larger farm or forest operations, or is buffered from them. With regards to the subject parcel, there is no buffer to the south or southwest, as the property to the immediate south is an active farm, and properties to the southwest are in commercial forestry. The next parcel south of that is a 336 acre parcel that appears to be used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north, northwest, and west are residential. The facts provide that the subject parcel does not necessarily stand alone amongst larger farm or forest operations, but nor is it buffered from them. In point of fact, like all of the lands in the Sevenmile Hill area that are designated for forestry use and are already buffered from lands designated for residential use by property within the Forest-Farm (F-F 10) Zone (Non-Resource), an approved goal exception will create a Forest-Farm buffer zone between the adjacent south forestry parcel and the residential lands to the north.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided throughout this report, the “neighborhood characteristics” can best be described as commercial timberland to the south, southwest, and west, and rural residential development to the north, northwest, and east. The “regional characteristics” include the Sevenmile Hill area that is located approximately six miles west of The Dalles. The Sevenmile Hill area’s zoning and land use pattern mimics the subject parcel’s immediate neighborhood where farm and forestry resource use is in the south, southwest, and west, and residential use in the north, northwest, and east, being hemmed in by Columbia River Gorge National Scenic Area. See the below maps for details (“Border between F-2(80) & Residential Zoned Lands” map).



- (e) *Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is one man-made feature separating the proposed exception area from existing commercial timberlands to the south. The BPA Line and right-of-way/easement, which forms an approximate 150-foot wide cleared area between the residence on the subject parcel and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property's existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 439 acre adjacent property to the southwest of the subject parcel is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

- (f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** As provided above for the OAR 660-004-0025:

In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner's "Fourth Assignment of Error", which argued that staff's findings were not supported by substantial evidence in the record, where the county found that approximately 87 percent of the subject parcel was not physically developed, but still approved a physically developed exception. As noted above, staff conducted thorough analysis of the subject parcel's physical development, and concluded that approximately 18% of the subject parcel is physically developed.

As provided in *Sandgren v. Clackamas County*, in order to approve a physically developed exception, facts must demonstrate the property is physically developed to such an extent that all resource uses are precluded. *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)). LUBA, in *Dooley et al.*, provided that in order to approve a physically developed exception, findings must demonstrate the property "is no longer available for resource use" (*Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), Page 18.; *Sandgren v. Clackamas County*, 29 Or LUBA 454, (1995)). The overall standard demonstrating a physical development exception under OAR 660-004-0025 is demanding, and requires the applicant demonstrate resource uses are no longer an option. (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18). Additionally, as provided by LUBA in *Dooley et al.*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.

In the present case, even if the County accepts the applicant's estimation that 32.81% of the total area of the subject parcel is physically developed, in order to approve the request, the County is "required to determine that the property is "physically developed to the extent that it is no longer available" for forestry uses." (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18), ORS 197.732(2)(a).

Physical development of the subject parcel "exception area" has been taken into consideration and analyzed throughout this report under OAR 660-004-0028(2)(a); however, based on the above facts, analysis, and findings, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025.



*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- b. OAR 660-004-0028(7): *The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

**PLANNING COMMISSION RECCOMENDATION:** Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that "In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission." Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

## **ATTACHMENT D – EXHIBIT 1**

“1997 TLSA full report”

“1998 TLSA memo”

“TLSA Study Area Ground Water Evaluation – Wasco County, Oregon”

## **MEMORANDUM**

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### **Background**

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### **Purpose of the TLSA Study**

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### **Summary of TLSA Steering Committee Recommendations:**

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

**EXHIBIT 2**

**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR) Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus. on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

#### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**





# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in **Average Daily Traffic (ADT)**, along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below .

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

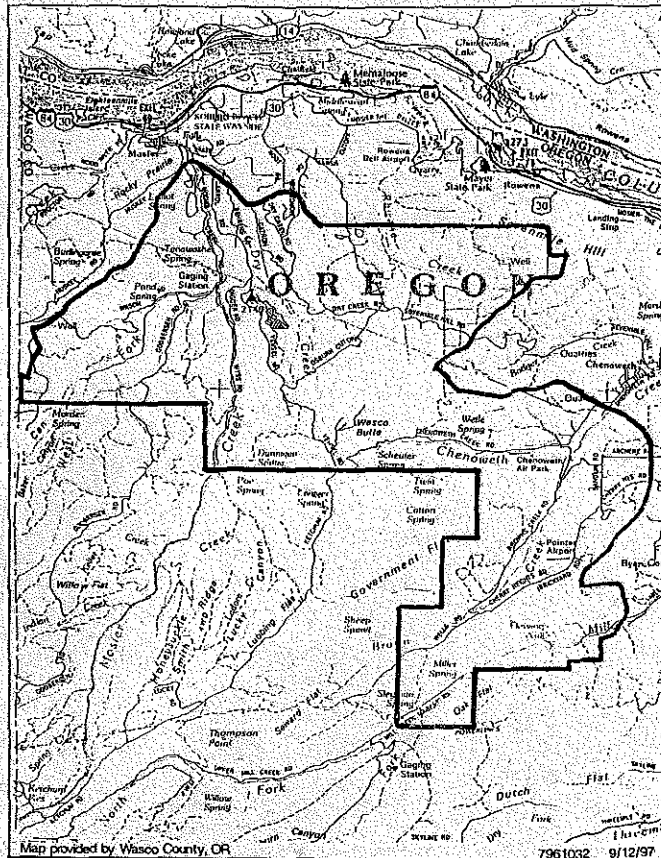
- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
**Wasco County**

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
2705 East 2<sup>nd</sup> Street  
The Dalles, Oregon 97058

**Prepared by**

Cindy Hahn  
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*SRI/SHAPIRO/AGCO, Inc. Project #7961032*

**In cooperation with**

Suzanne Rock  
**Northwest Economic Associates**

**September 12, 1997**



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- Appendix 1. Background Materials and Standards Related to Action Items Identified in Section 2.0 (Policy Recommendations and Action Items)
- Appendix 2. Record of Community Involvement
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- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites

## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

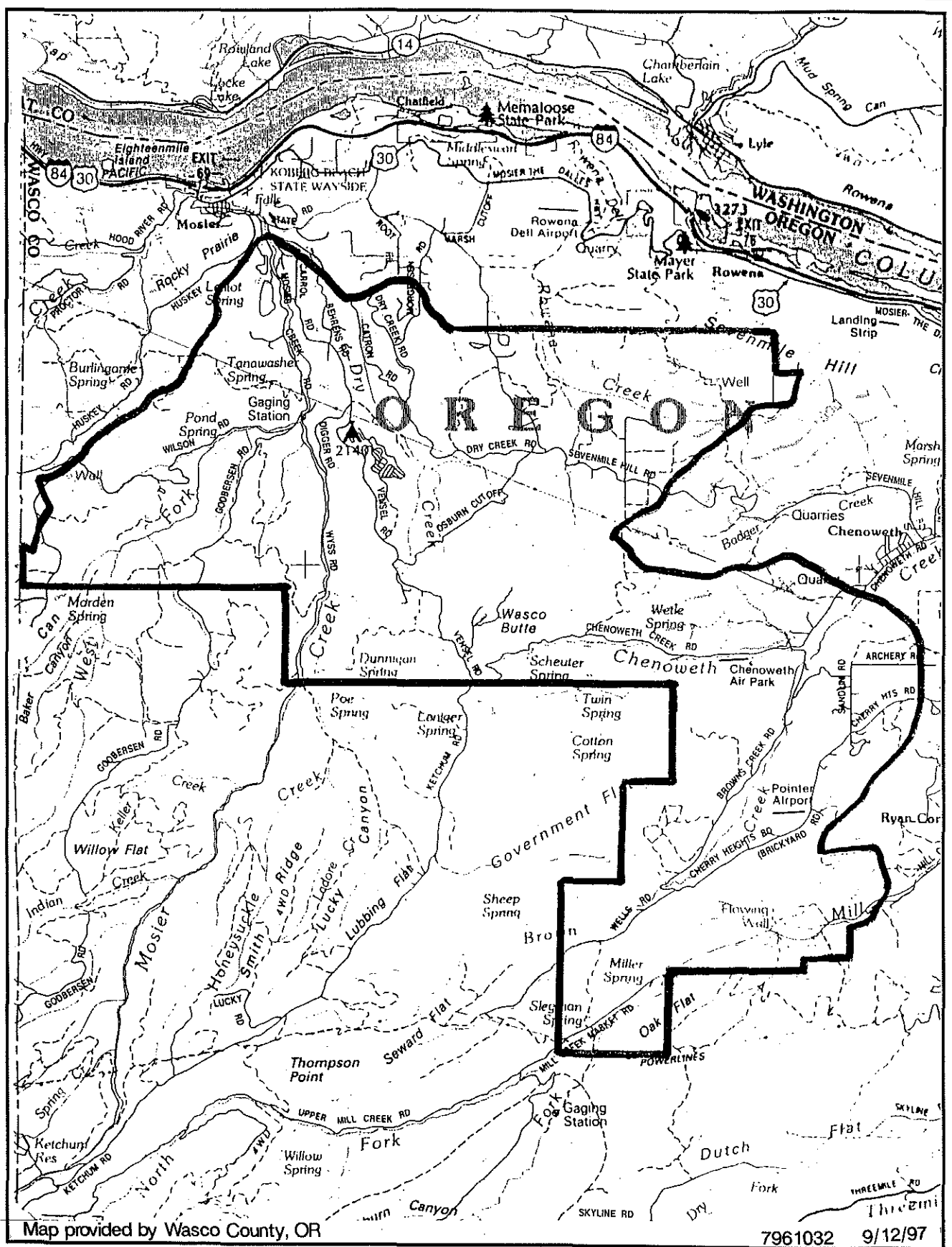
### **1.2 Purpose**

#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



Location of the Wasco County Transition Lands Study Area, Oregon.

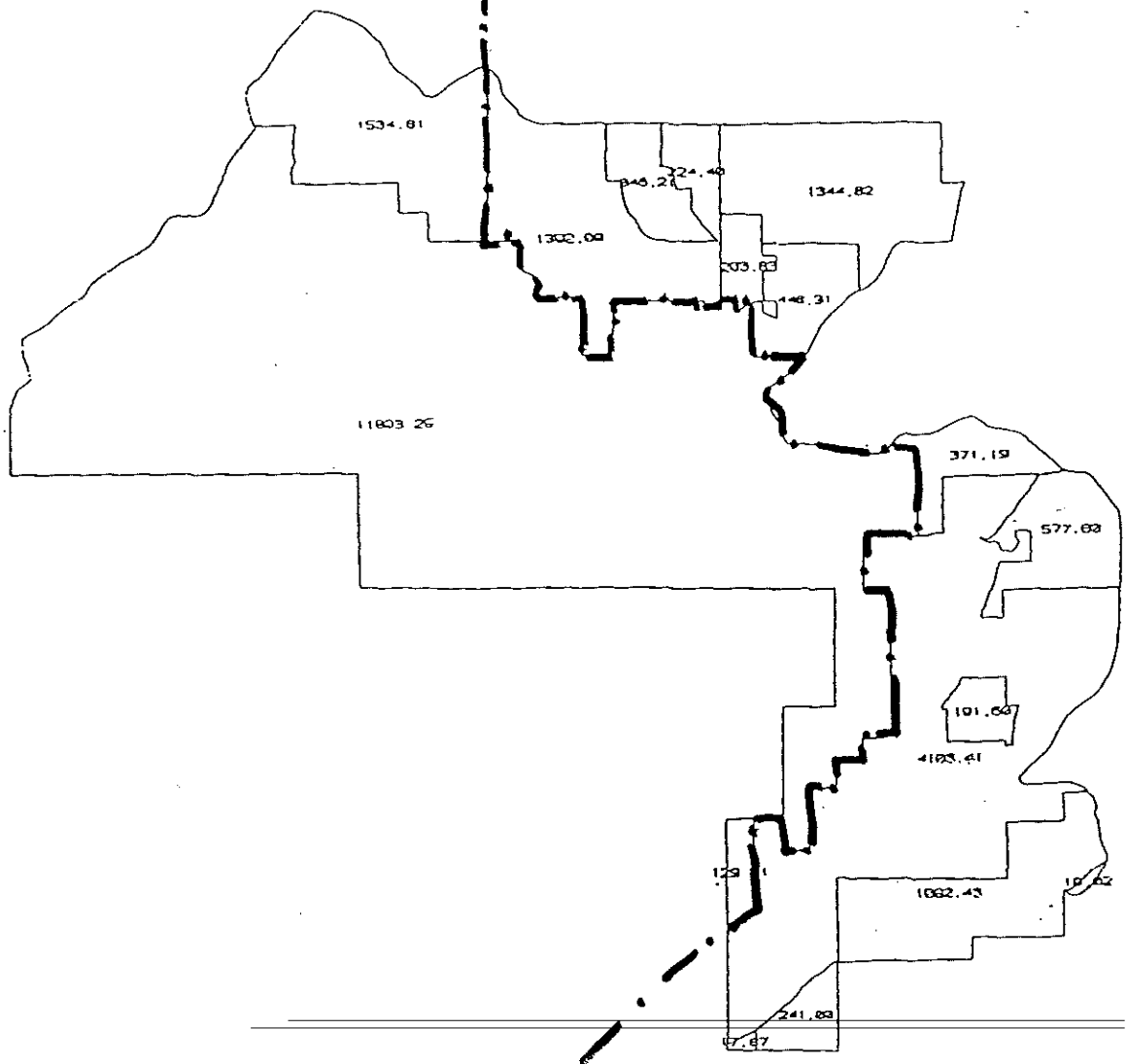
FIGURE  
1

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F.2 & ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. & RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## **2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS**

*What plan does the Steering Committee recommend?  
What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLSA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

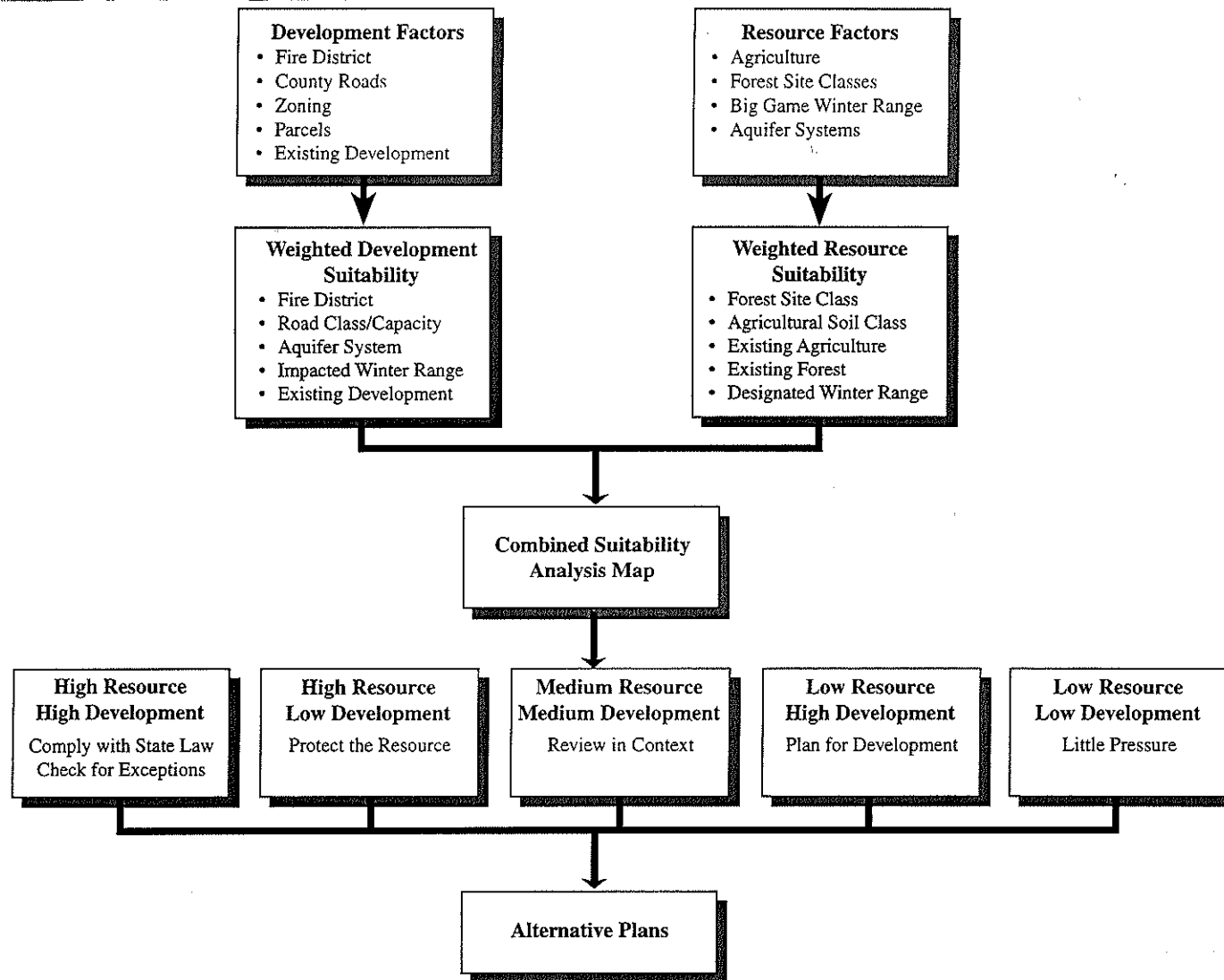
The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems



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Wasco County Transition Lands Study Area  
Simplified Flow Diagram

FIGURE  
4



# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
High Value (Class 1-2) = 2 pt.  
Class 3 - 6 = 2 pt.  
Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
Class 6 = 1 pt.  
Class 5 = 2 pt.  
Class 4 = 3 pt.  
Existing Forest Use  
≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a



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## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 3: Big Game Winter Range Availability

### 4: Fire Districts/Response Time

SOURCE MAPS

Big Game Winter Range	Big Game Winter Range boundary from Comprehensive Plan
Impacted Winter Range	Impacted winter range inventory from ODFW
Low Elevation Winter Range	Low elevation winter range inventory from ODFW
Rivers and Streams	Surface water features coverage

Fire Hazard	Extreme and High fire hazard
Fire Districts	Wasco County Rural Fire District (RFD) boundaries Mosier RFD Oregon Department of Forestry
Response Time	Fire response time (in minutes) by section and Wasco Co. RFD

ANALYSIS MAPS

Big Game Winter Range	1 pt.
-----------------------	-------

Fire District Coverage	1 pt.
------------------------	-------

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
--

Development Values Weighted Compositions
--

Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)
--

CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5b

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads  
Road Capacity

Roads in TLSA  
Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning  
Developed  
Parcels  
Aquifer Units

Zoning  
Existing Developed (house)

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.  
†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

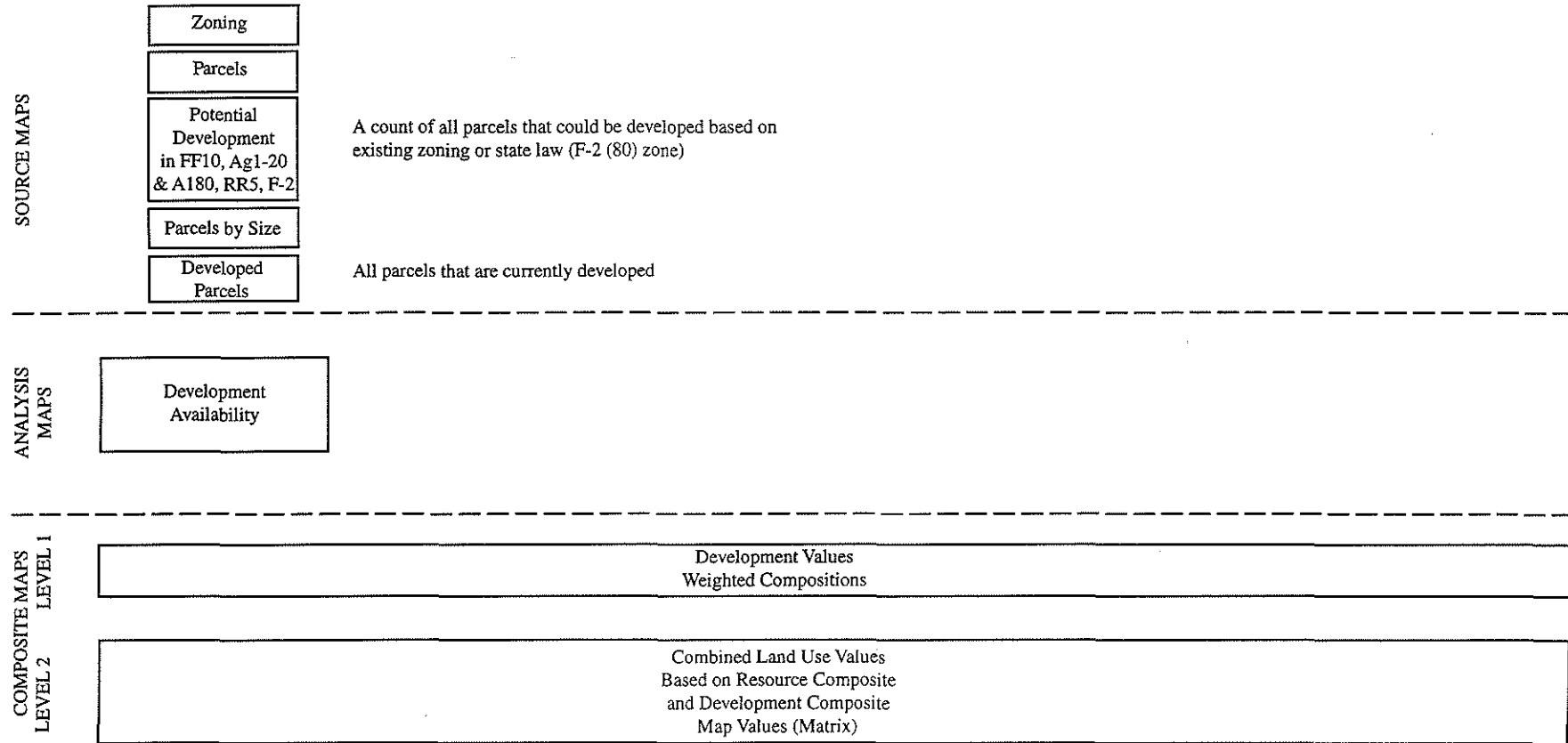
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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

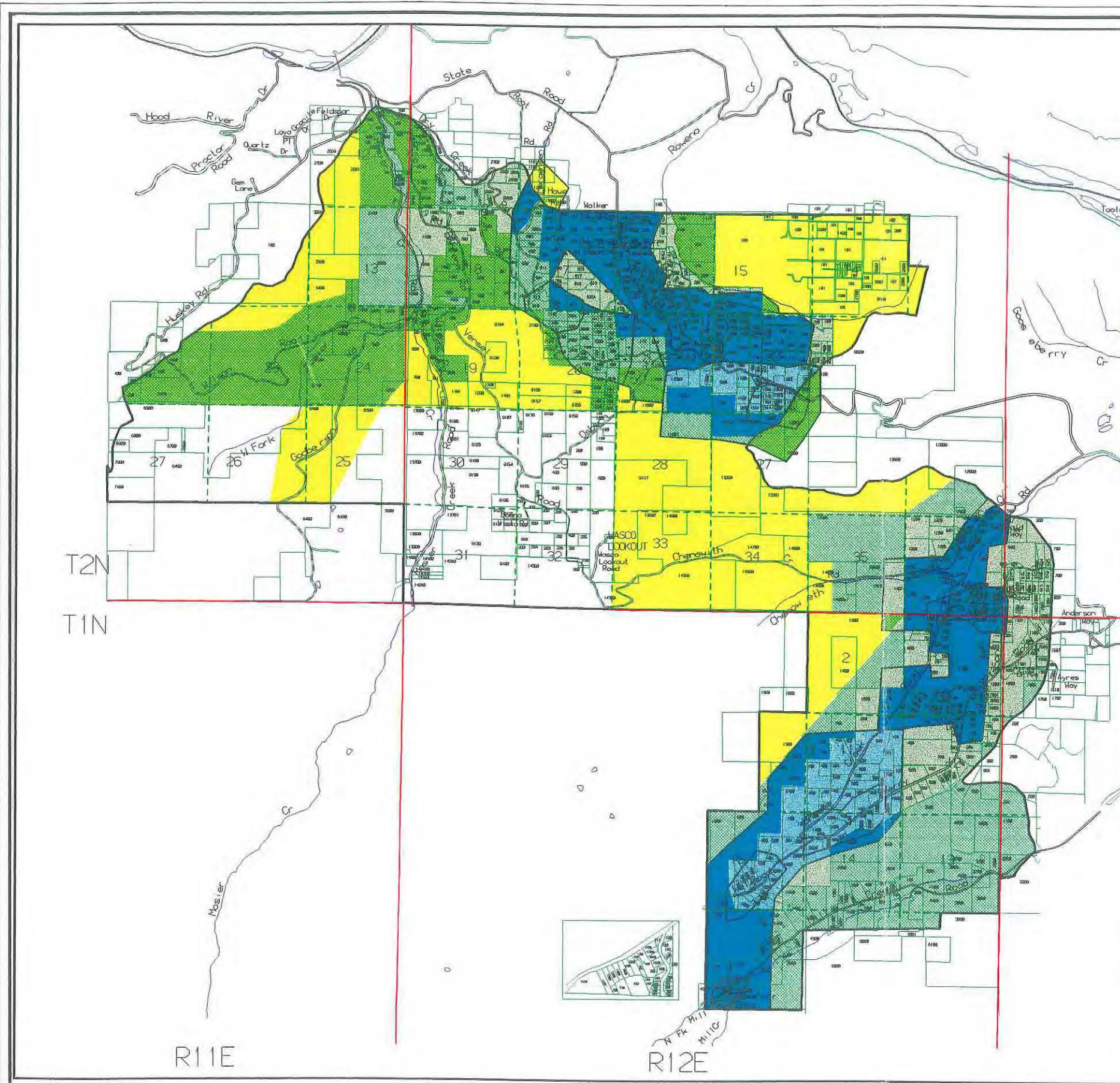
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

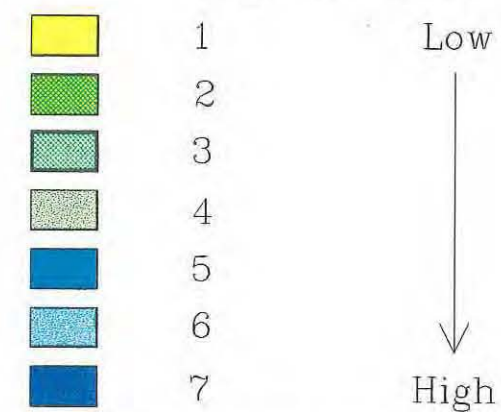




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



SRI/SHAPRO, Inc.  
Portland, Oregon

WASCO COUNTY  
Planning and Economic Development



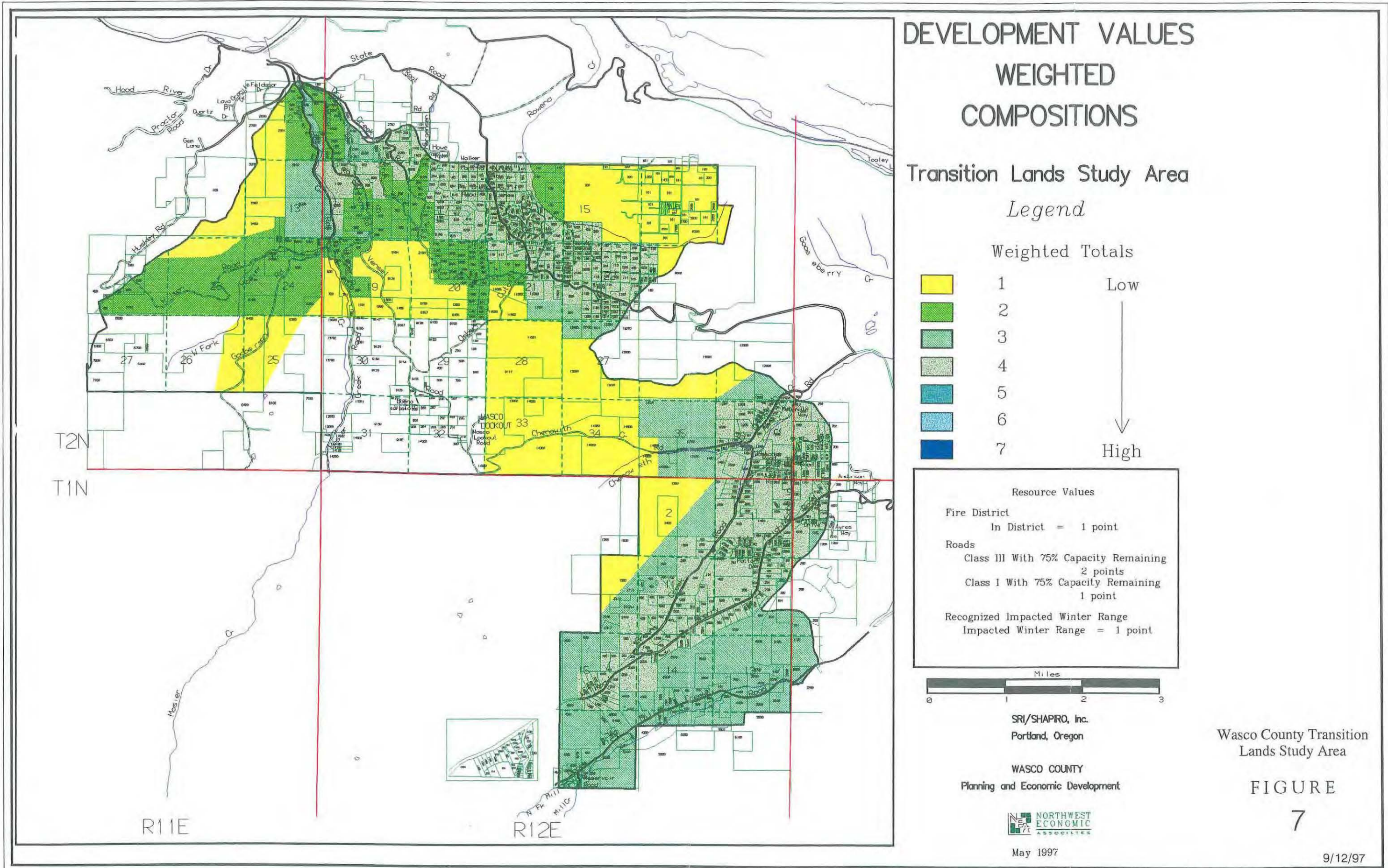
May 1997

Wasco County Transition  
Lands Study Area

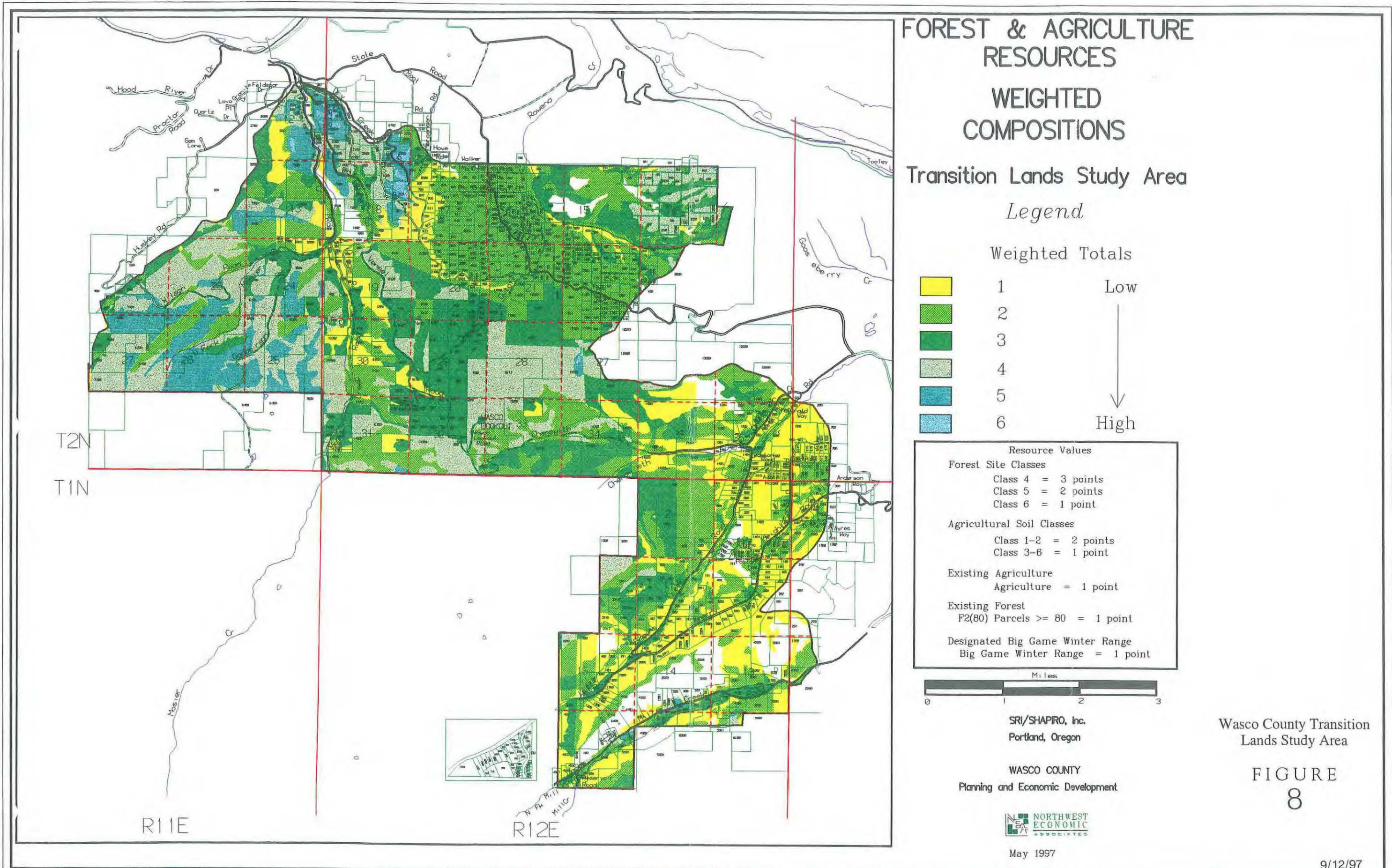
FIGURE  
6

9/12/97











# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill	Mill Creek-Cherry Heights
FF-10 = 125	FF-10 = 256
RR-5 = 52	RR-5 = 50
Ag = 8	Ag = 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

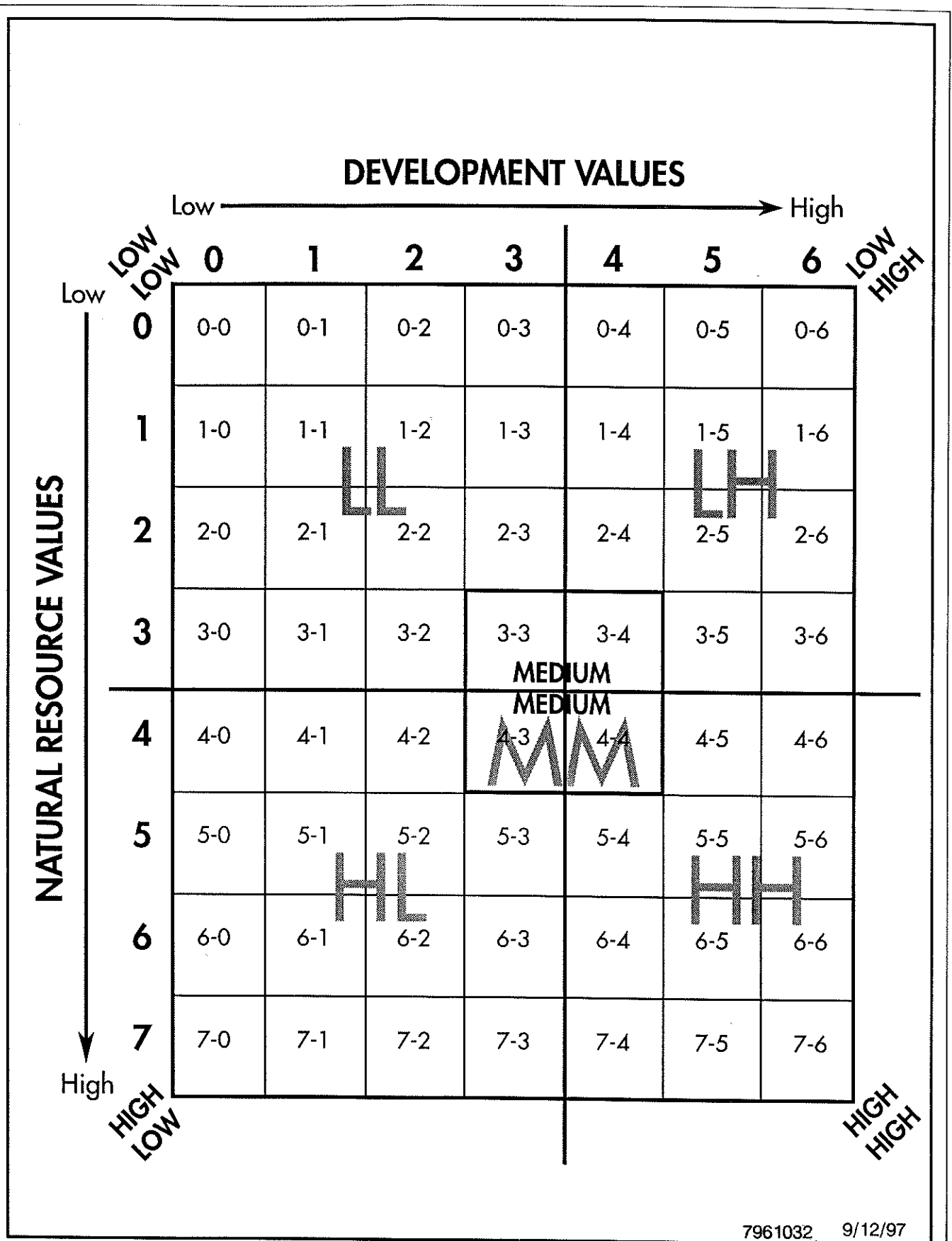
Tables from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

 SRI/SHAPIRO/AGCO  
INCORPORATED



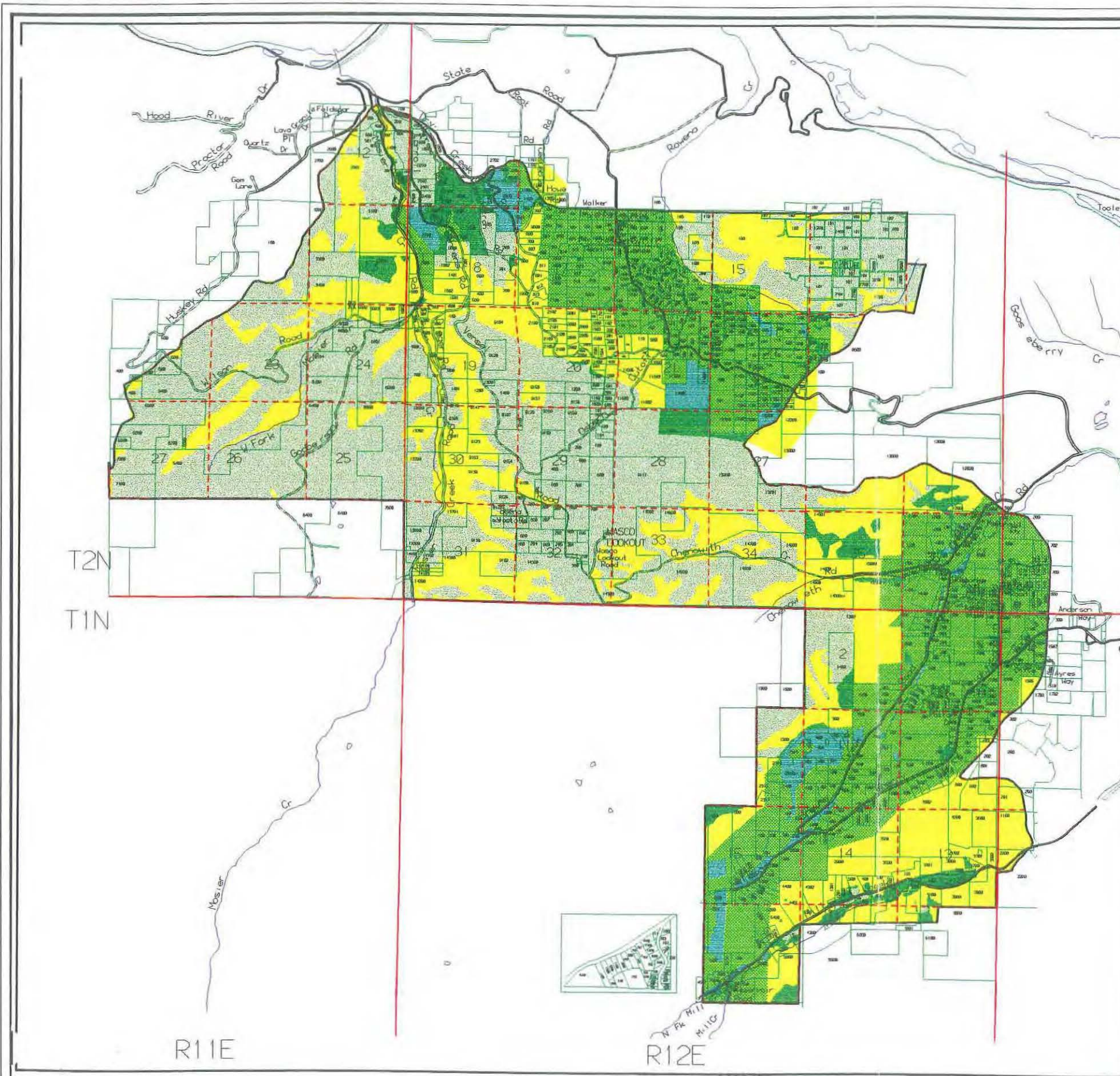
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Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

**FIGURE  
10**

 **SRI/SHAPIRO/AGCO**  
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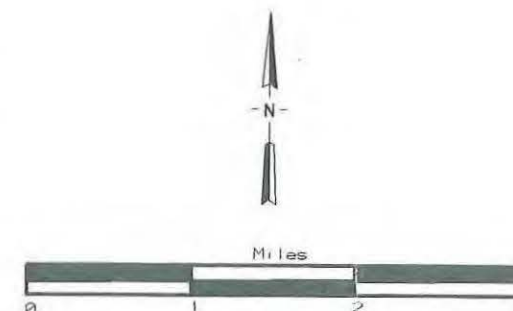


# COMBINED LAND USE VALUES (based on resource composite & development composite map values) Transition Lands Study Area

Value Comparison

	Forest & Agriculture Values	Development Values
L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7
F&A-Dev Medium Ranges	3-3, 3-4, 4-3, 4-4	

0 1 2 3 4 5 6 7  
Low High



WASCO COUNTY  
Planning and Economic Development



June 1997

Wasco County Transition  
Lands Study Area

FIGURE  
11

9/12/97



- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

#### 5.1.1 Seven Mile Hill Area

In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

Hand-drawn map of the Fort Belknap Reservation. The map shows several land parcels and surrounding areas. Key features include:

- RR 10** (EX FF 10) in the upper left.
- EX RR 5** in the upper center.
- RR 5** EX in the center.
- RR 10** (EX FF 11) in the center, with a dashed line labeled "diesel water line" passing through it.
- RR 10** (EX FF 10) in the lower center.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.
- EFU** (Excluded Forest Use) labels in various locations: upper right, center right, lower right, and bottom center.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.
- RR 10** (EX FF 10) in the lower right, with a shaded area labeled "Yellow Water Land" and "9000 ft. water" nearby.

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

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ALTERNATIVE FOR  
MODERATE  
DEVELOPMENT

Legend

IDENTIFIED AREAS FOR FUTURE  
INCREASED DENSITY w/ FUTURE WATER  
MONITORING DATA SUPPORT

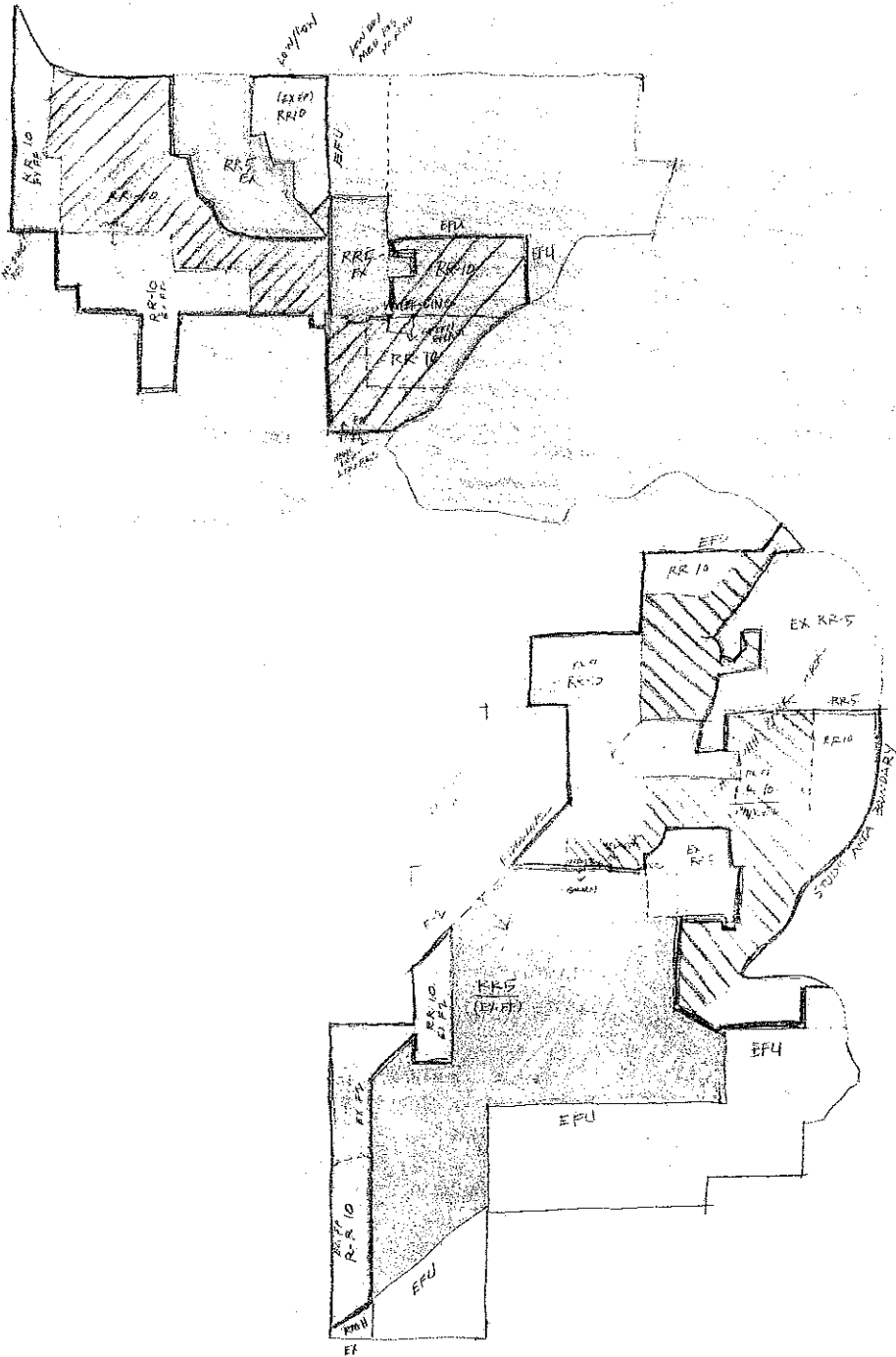
MODERATE DEVELOPMENT

PROS:

- Accommodates limited increased densities in areas of low or lower resource value
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



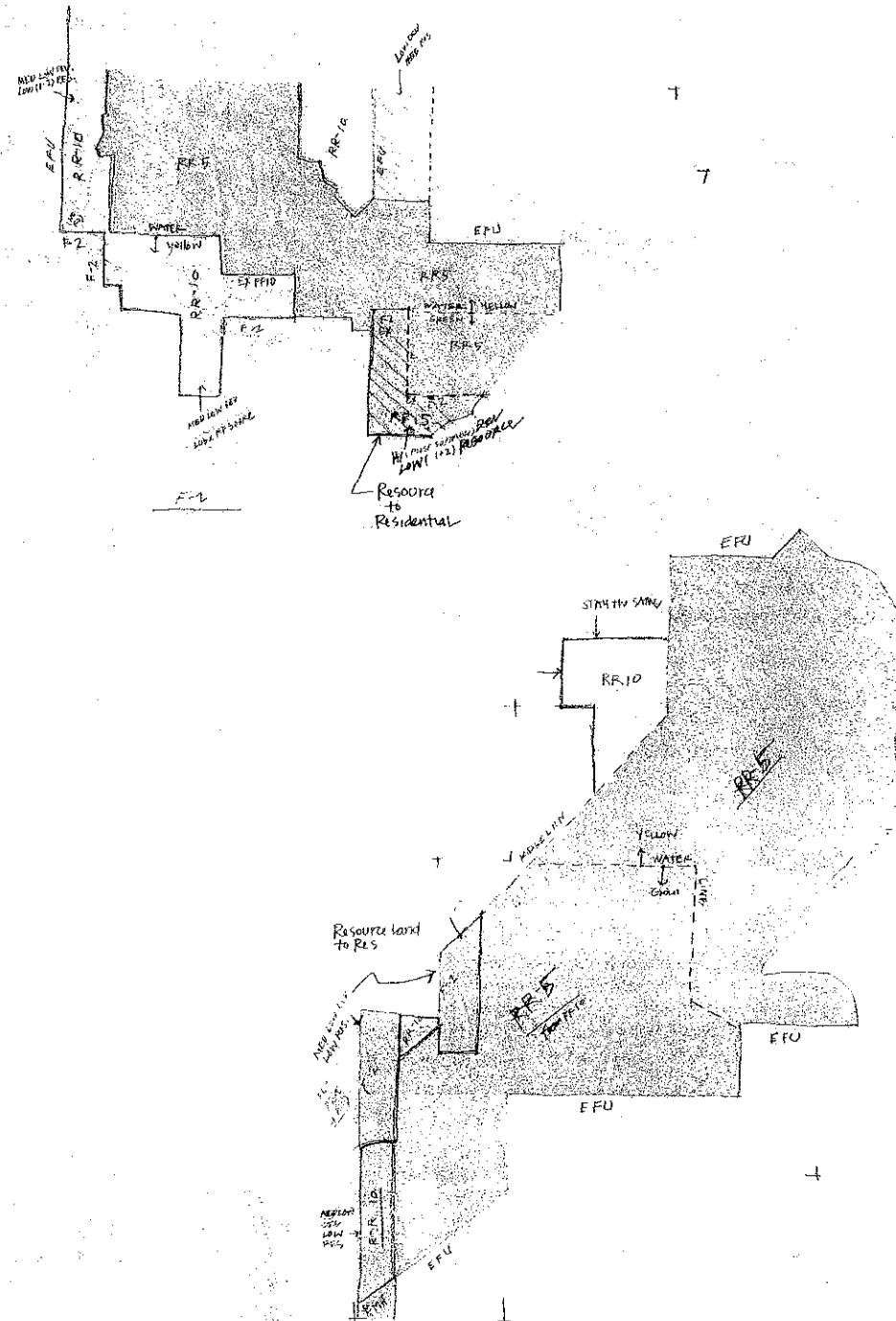
Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

FIGURE  
13

# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

### PROS:

- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
- Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
- Not limited by possible ground water shortages - water can be purchased or hauled if needed.
- Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
- Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
- Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
- Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

### CONS:

- Impacts other wildlife habitat- quantifiable data not available.
- Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
- Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
- Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
- Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
- Impacts on rural character.
- Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the



Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

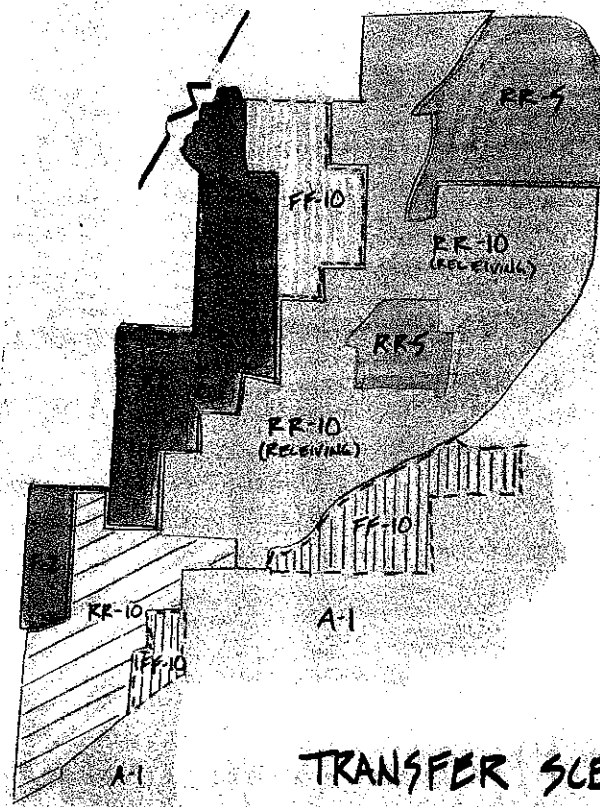
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



TRANSFER SCENARIO

Map from Wasco County, OR, 1997

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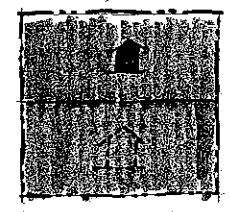
Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

FIGURE  
15



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INCORPORATED

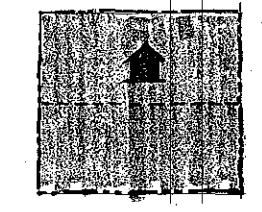
VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE (45,000<sup>00</sup>)  
205,000<sup>00</sup>



VALUE WITHOUT  
DEVELOPMENT  
RIGHT

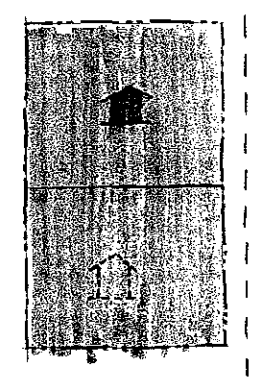


10AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

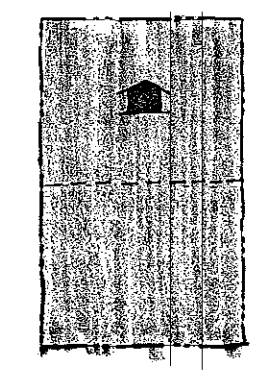
VALUE WITH  
DEVEL. RT. ON 10 AC.



10AL WITH HOUSE (160,000<sup>00</sup>)  
10AL HOME SITE (50,000<sup>00</sup>)  
210,000<sup>00</sup>



VALUE WITHOUT  
DEVEL. RT.



20AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSIER  
7 MILE HILL)

(160,000<sup>00</sup>)  
(70,000<sup>00</sup>)  
(230,000<sup>00</sup>)

(170,000<sup>00</sup>)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16

### **6.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### **6.1.3 Intent and Impacts of the TDR Alternative**

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

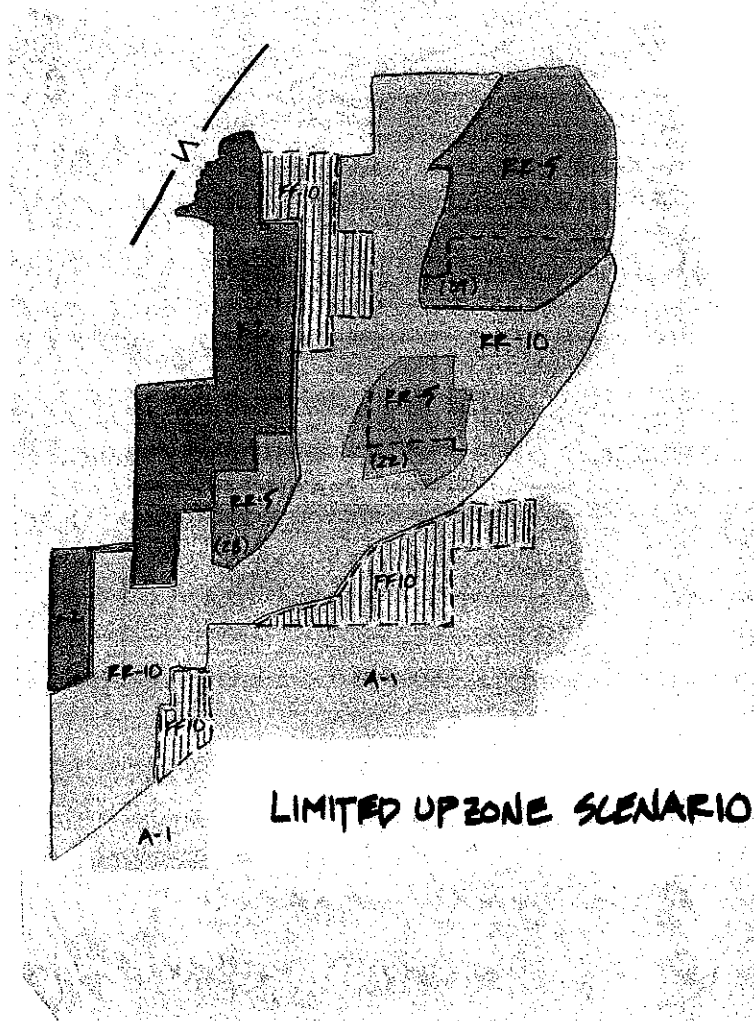
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### **6.2 Limited Upzone Alternative**

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### **6.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17

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INCORPORATED

## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

### **6.3.1 Intent and Impacts of the Future Expansion Alternative**

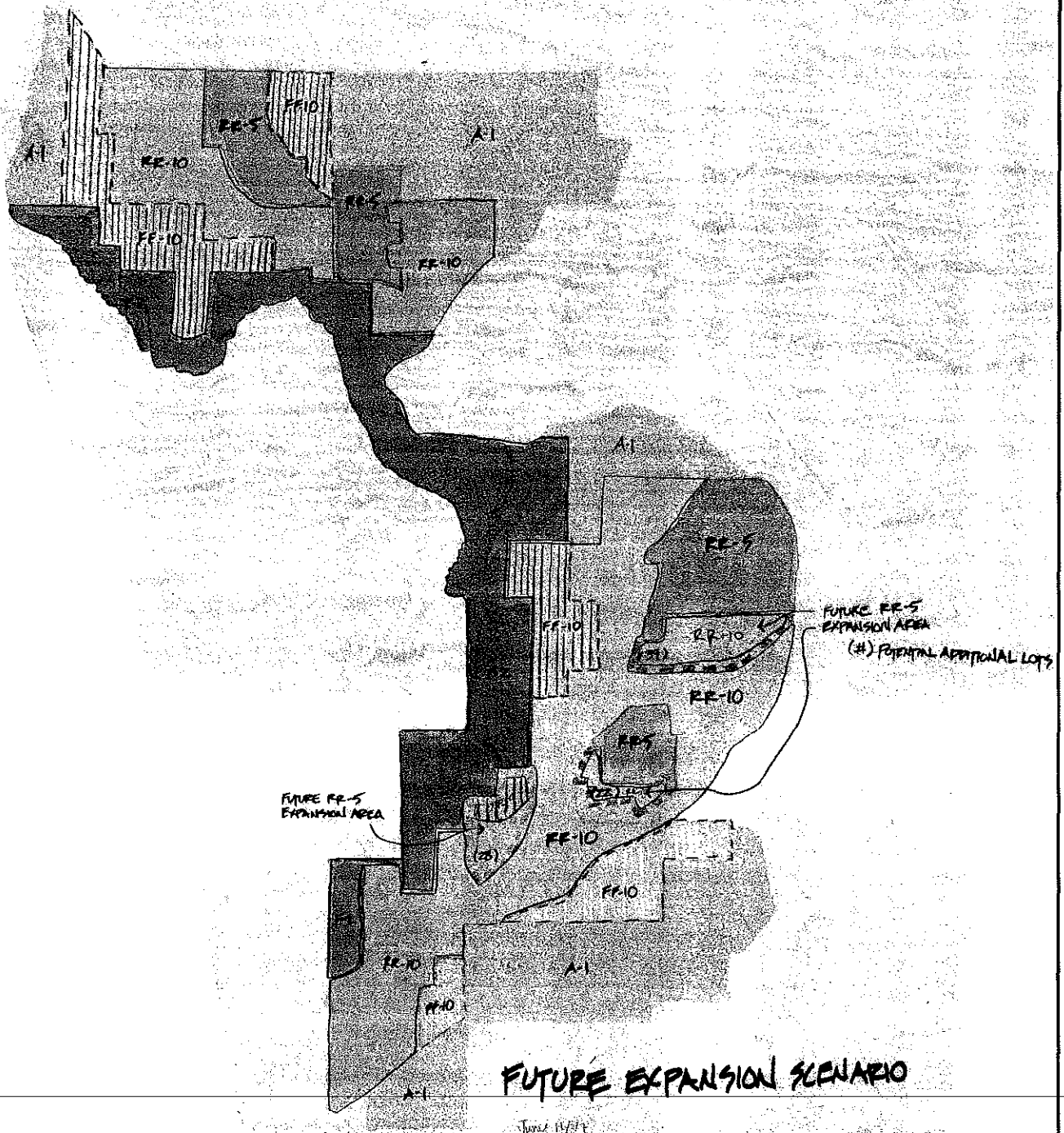
#### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

#### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.





Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Future Expansion Alternative

**FIGURE**  
**18**



**SRI/SHAPIRO/AGCO**  
INCORPORATED

## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.



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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervey

**EXHIBIT 4**



**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervy

**SUMMARY**

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

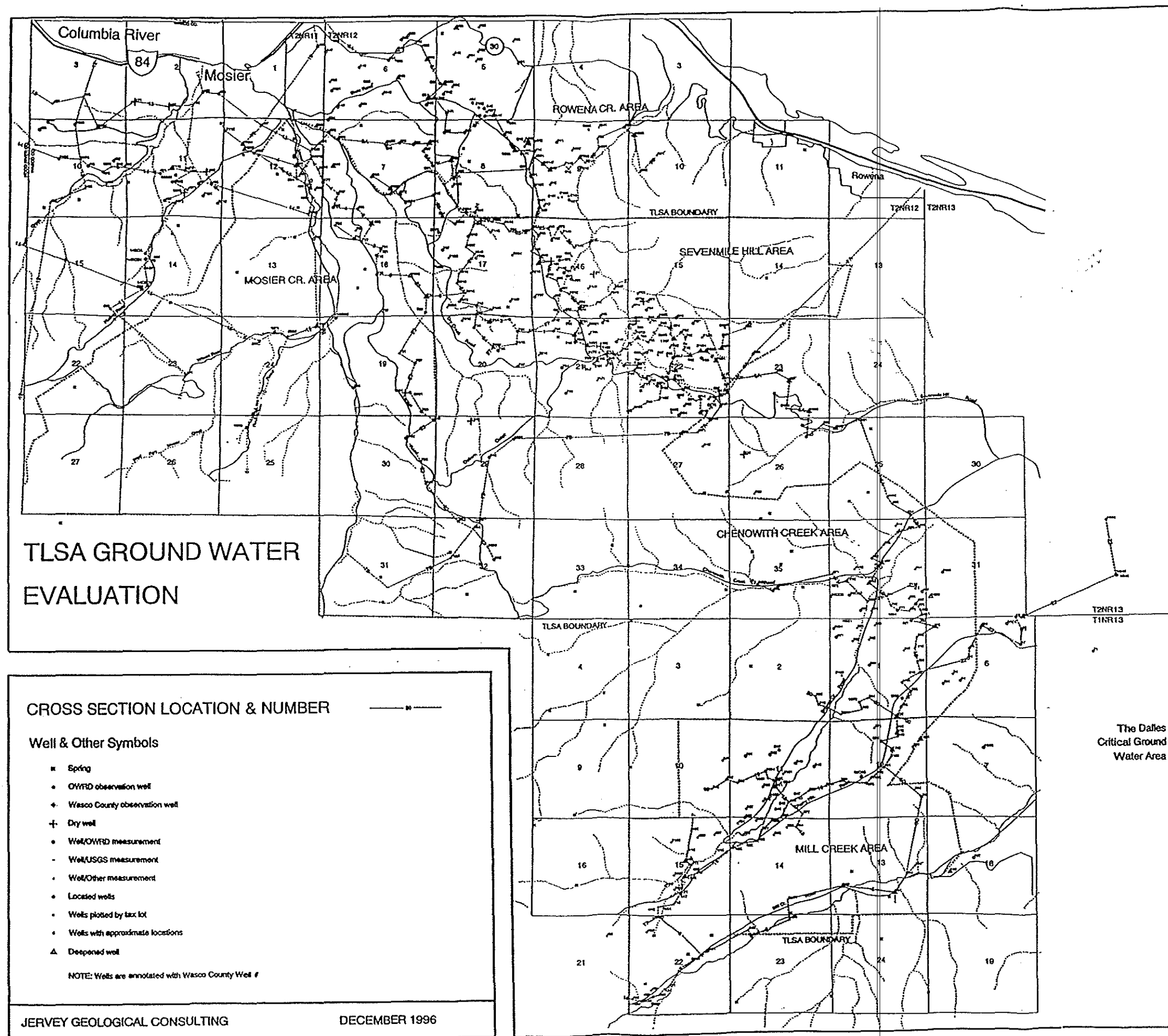
**INTRODUCTION**

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceeding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervy Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervy Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners (1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year



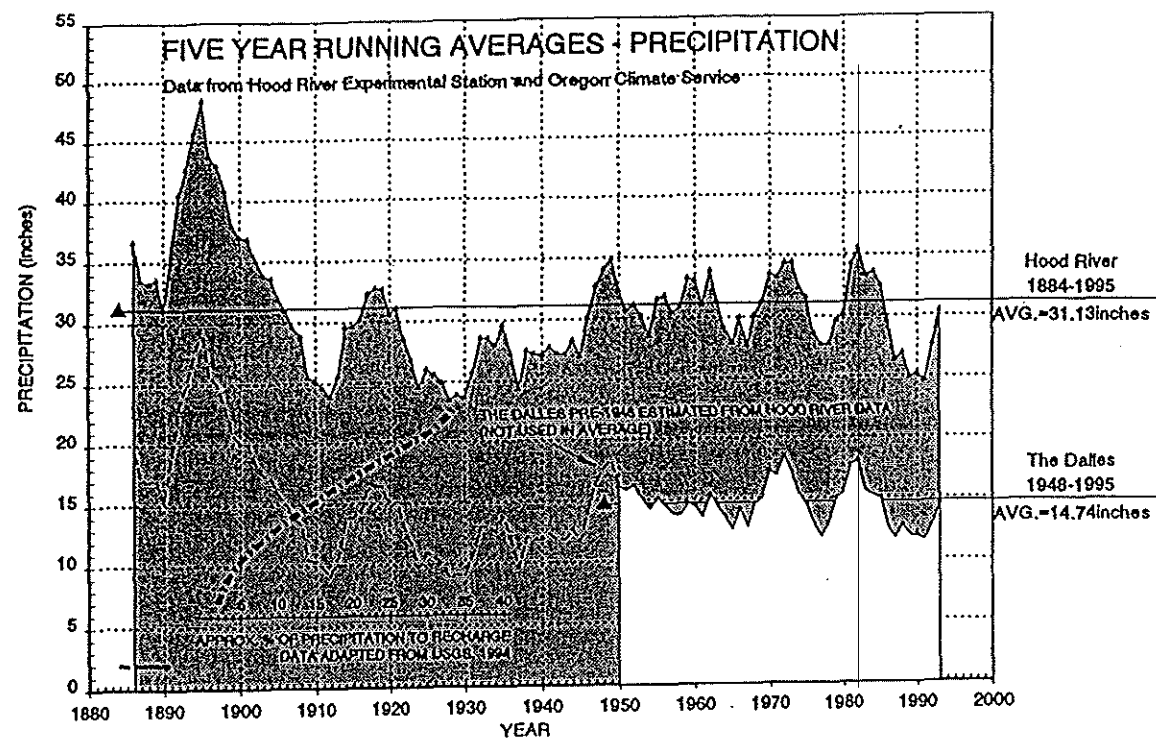


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

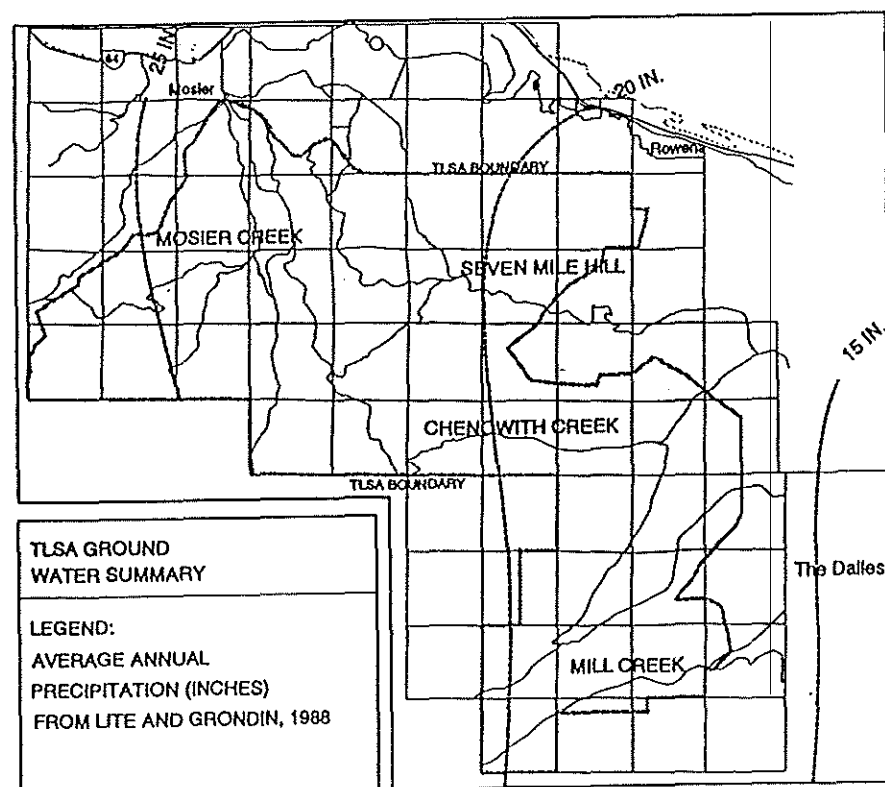


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				89,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

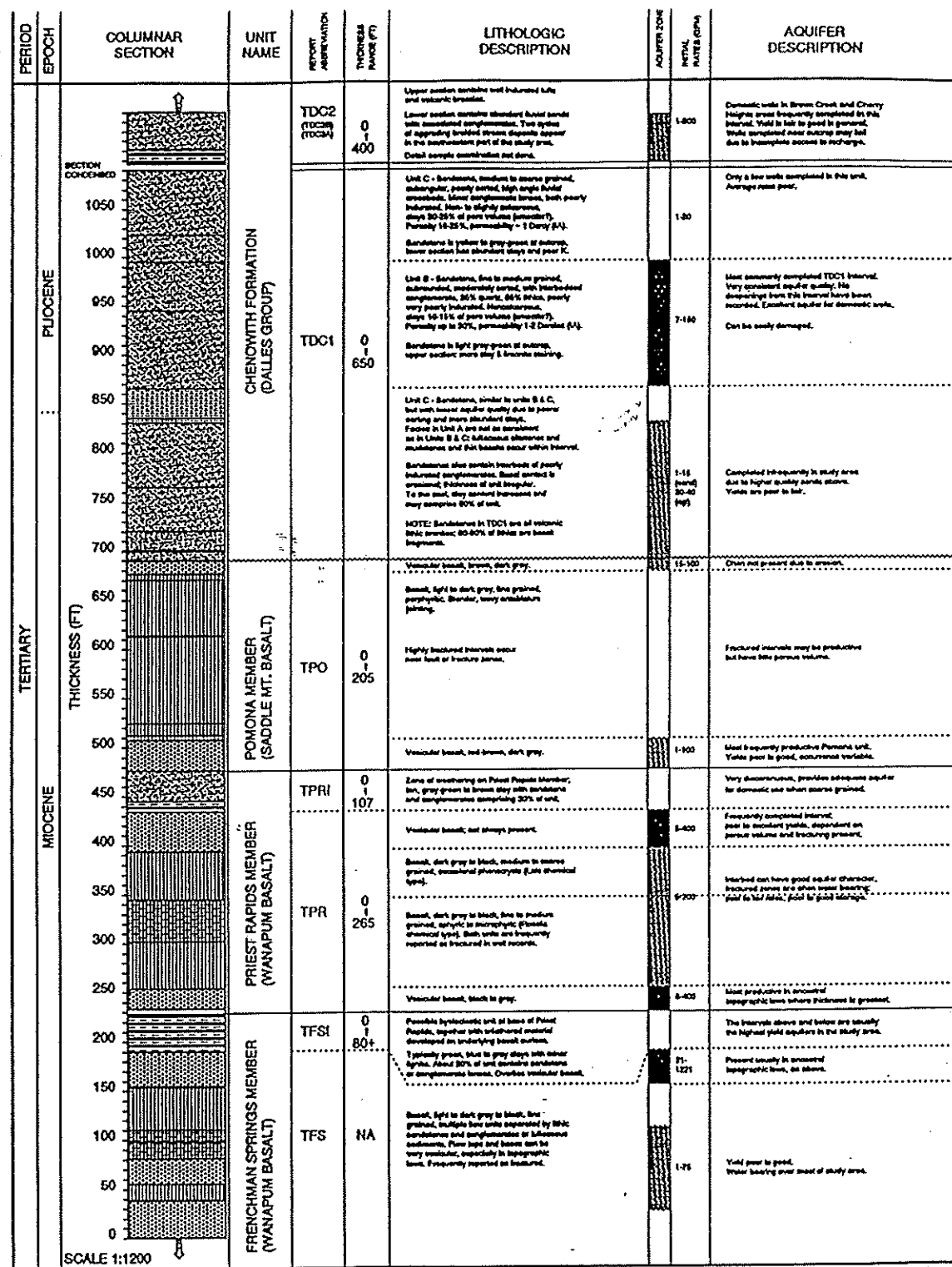
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

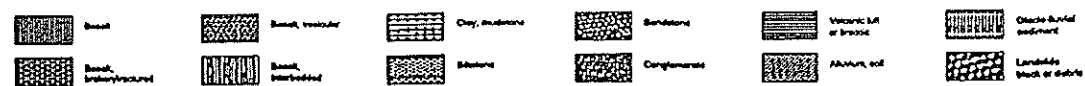


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).

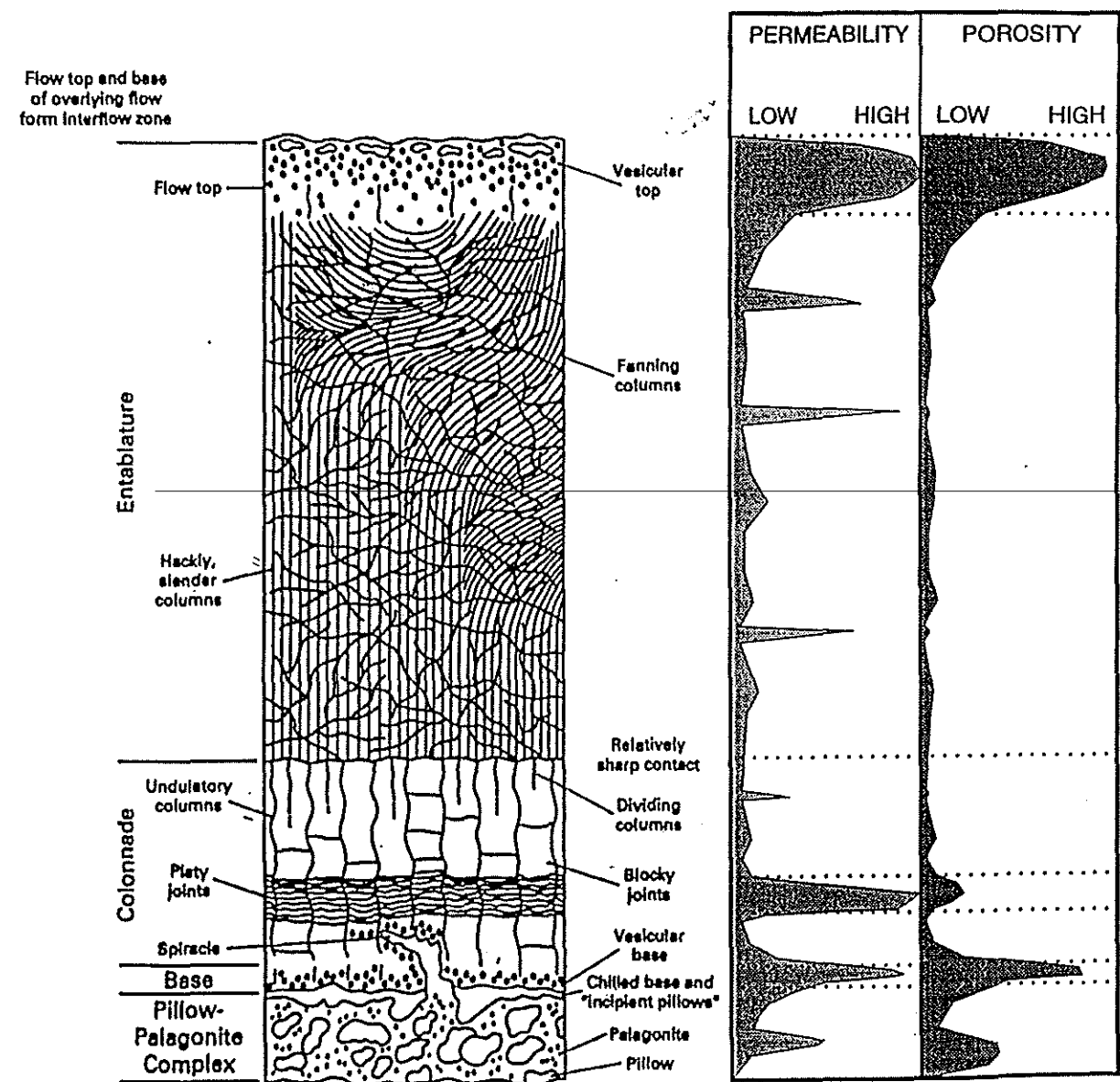


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).

general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest



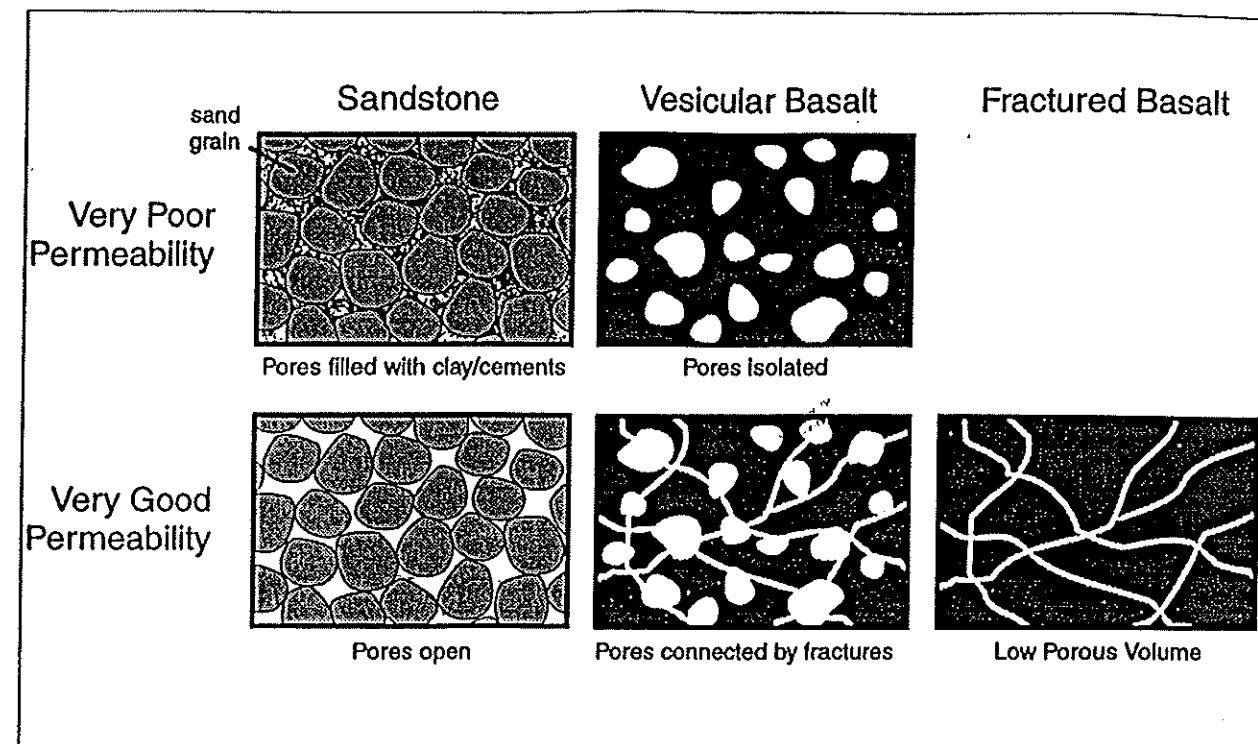


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

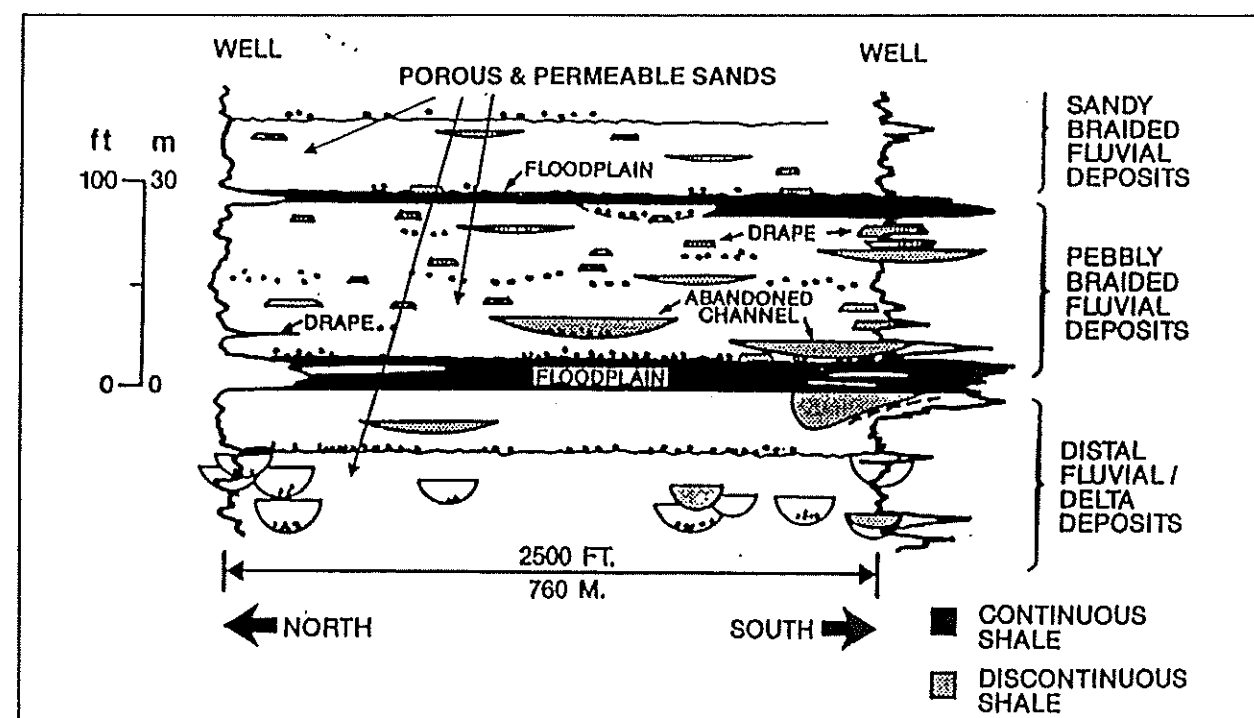


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

### TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

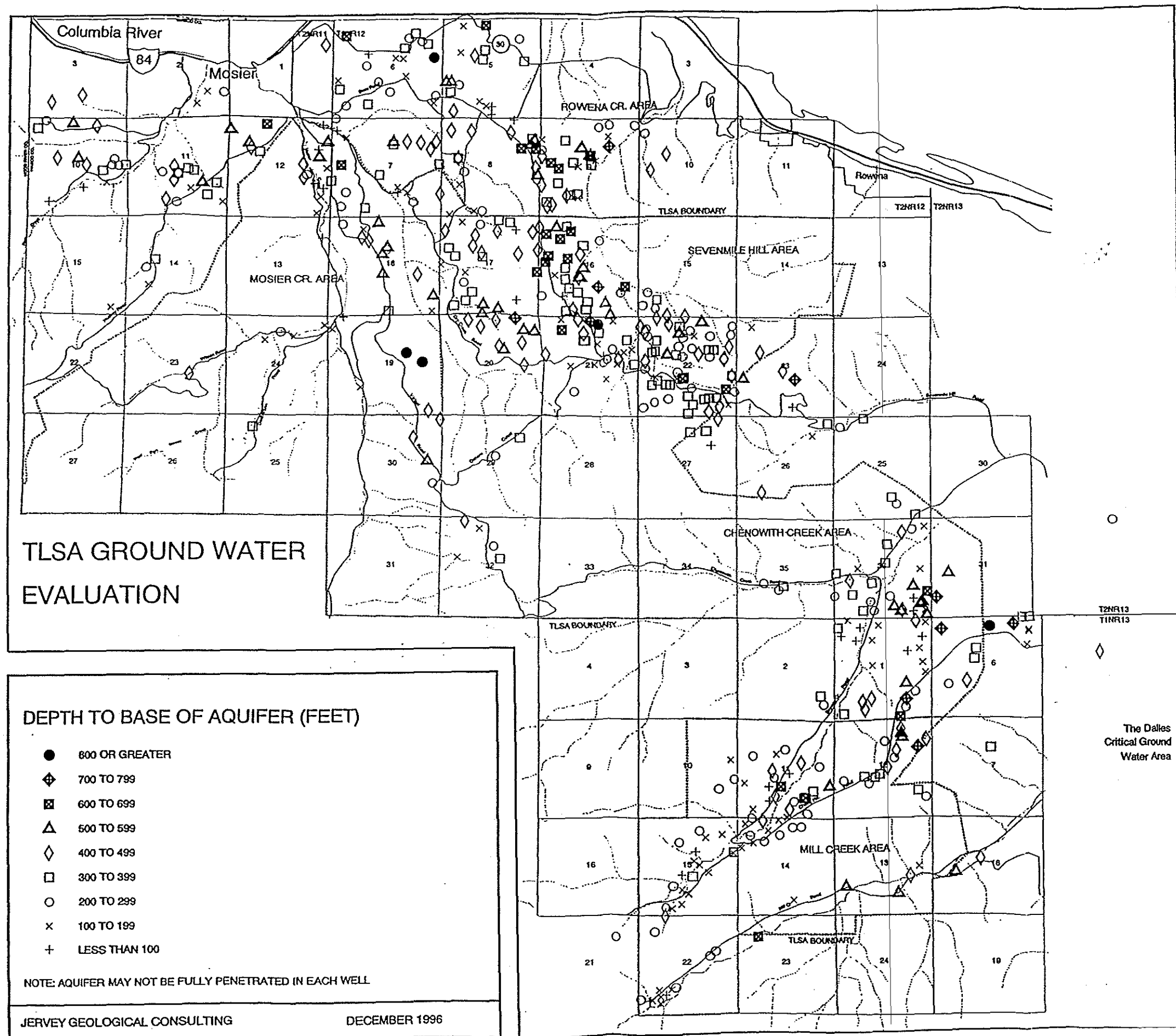
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

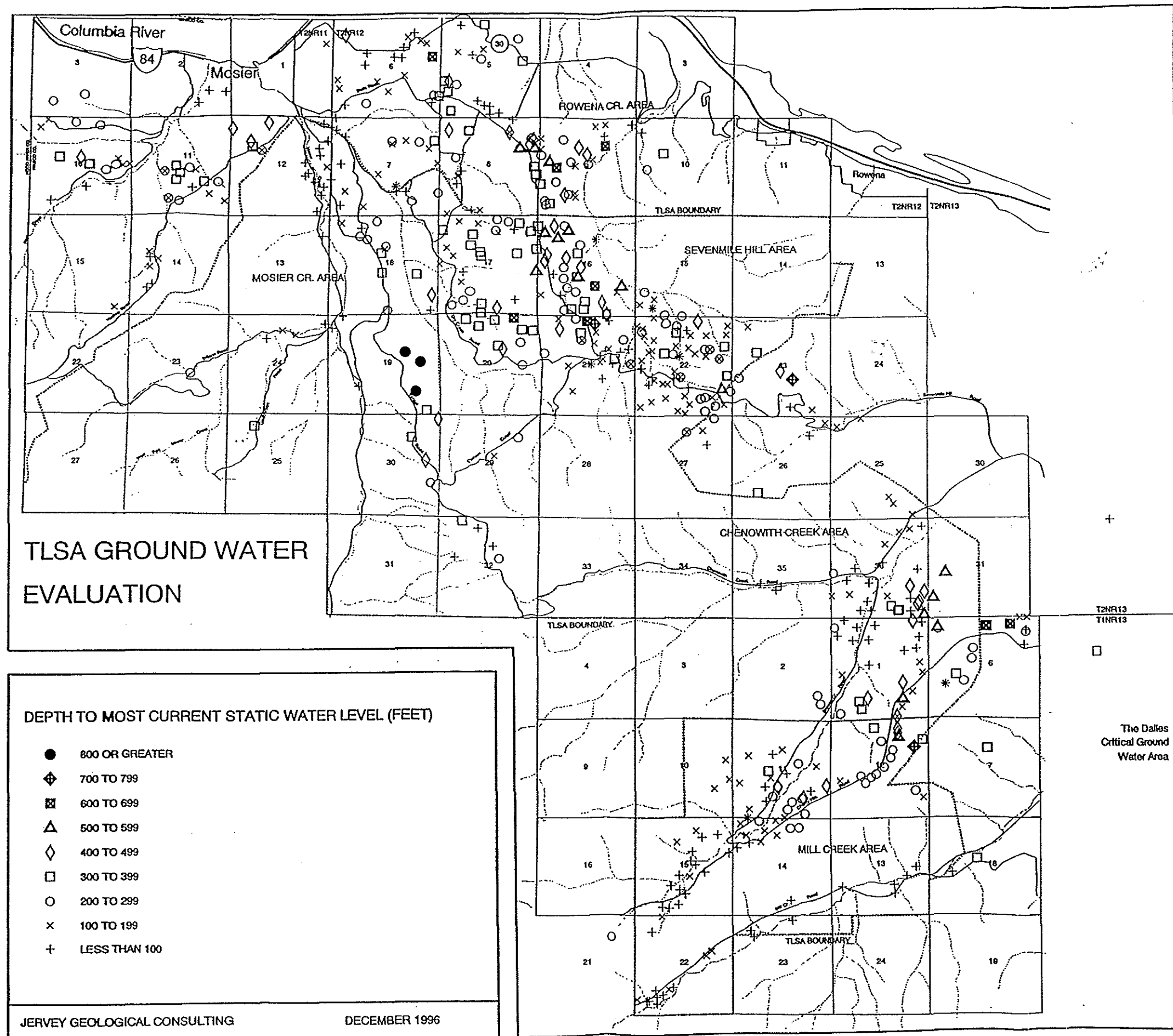
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

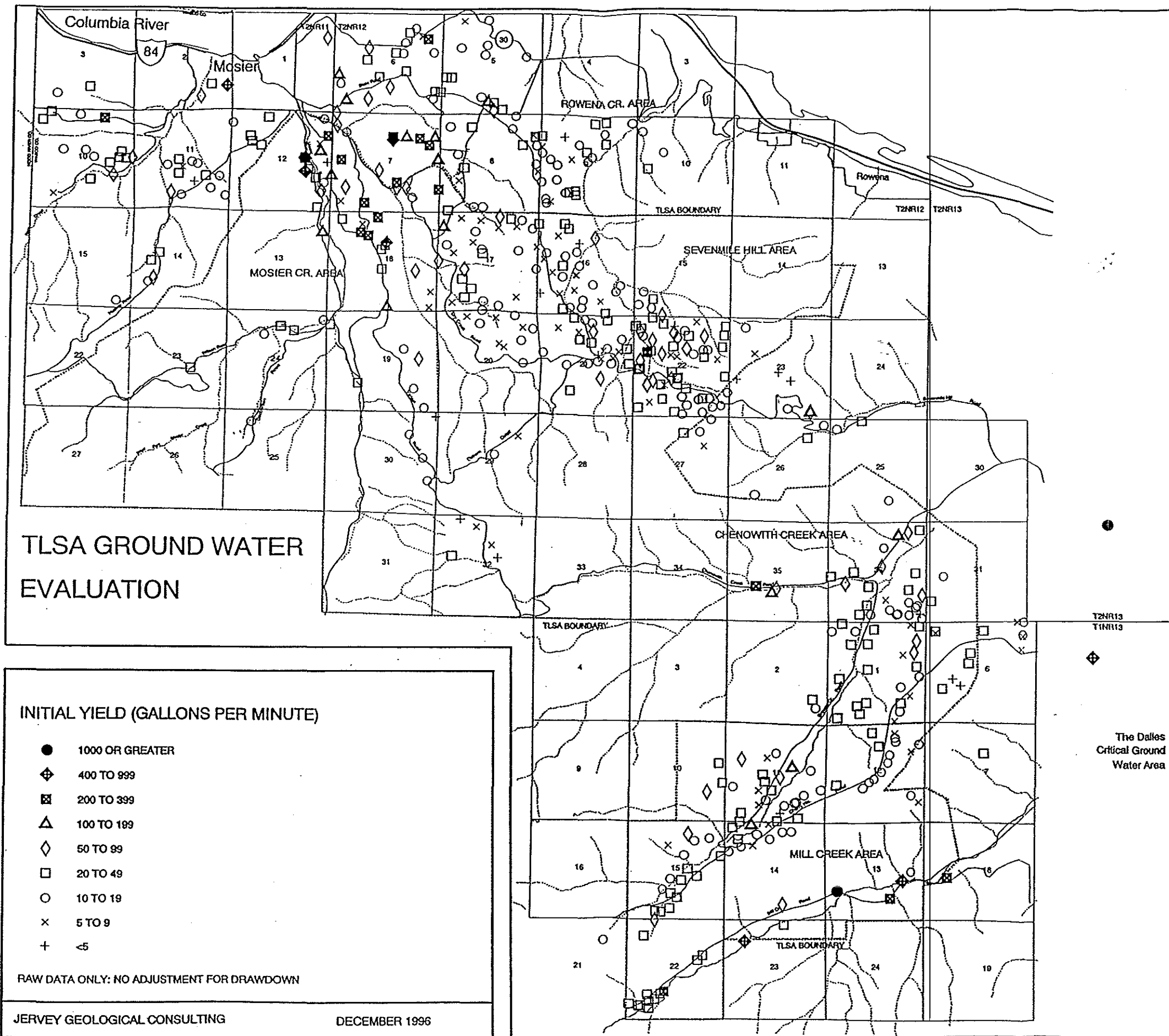
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mazeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise







WEST

ROCK CREEK TRIBUTARY

SOUTH

NORTH

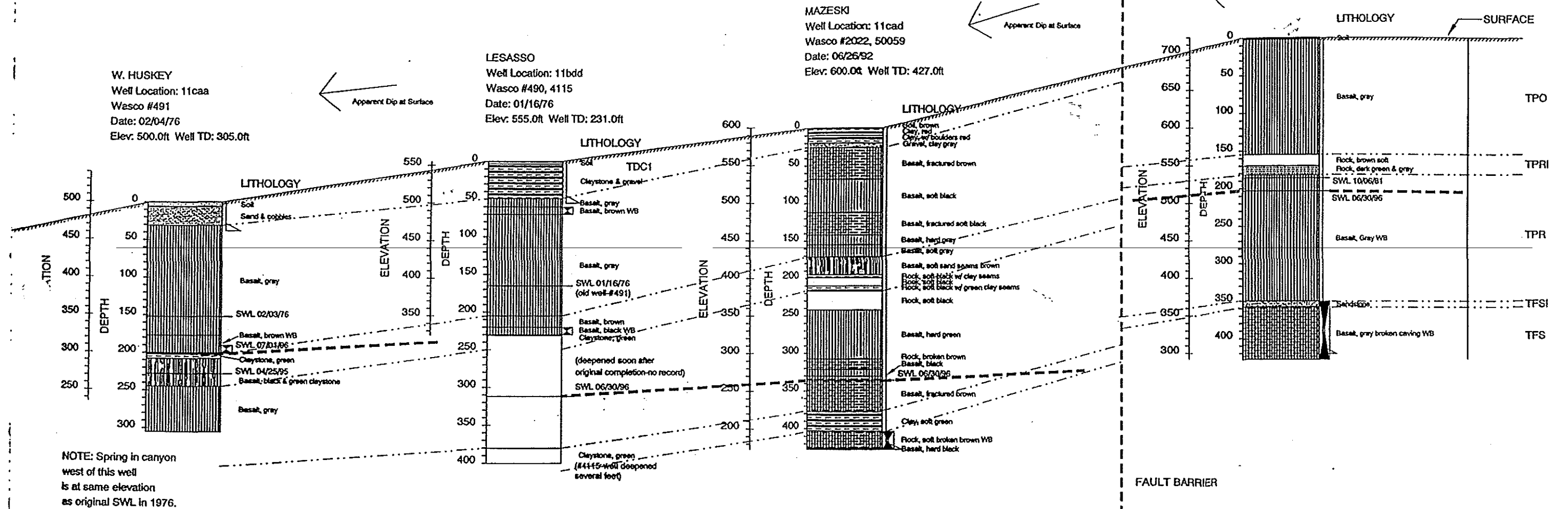
HUSKEY ROAD

NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft



TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt



as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepening (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

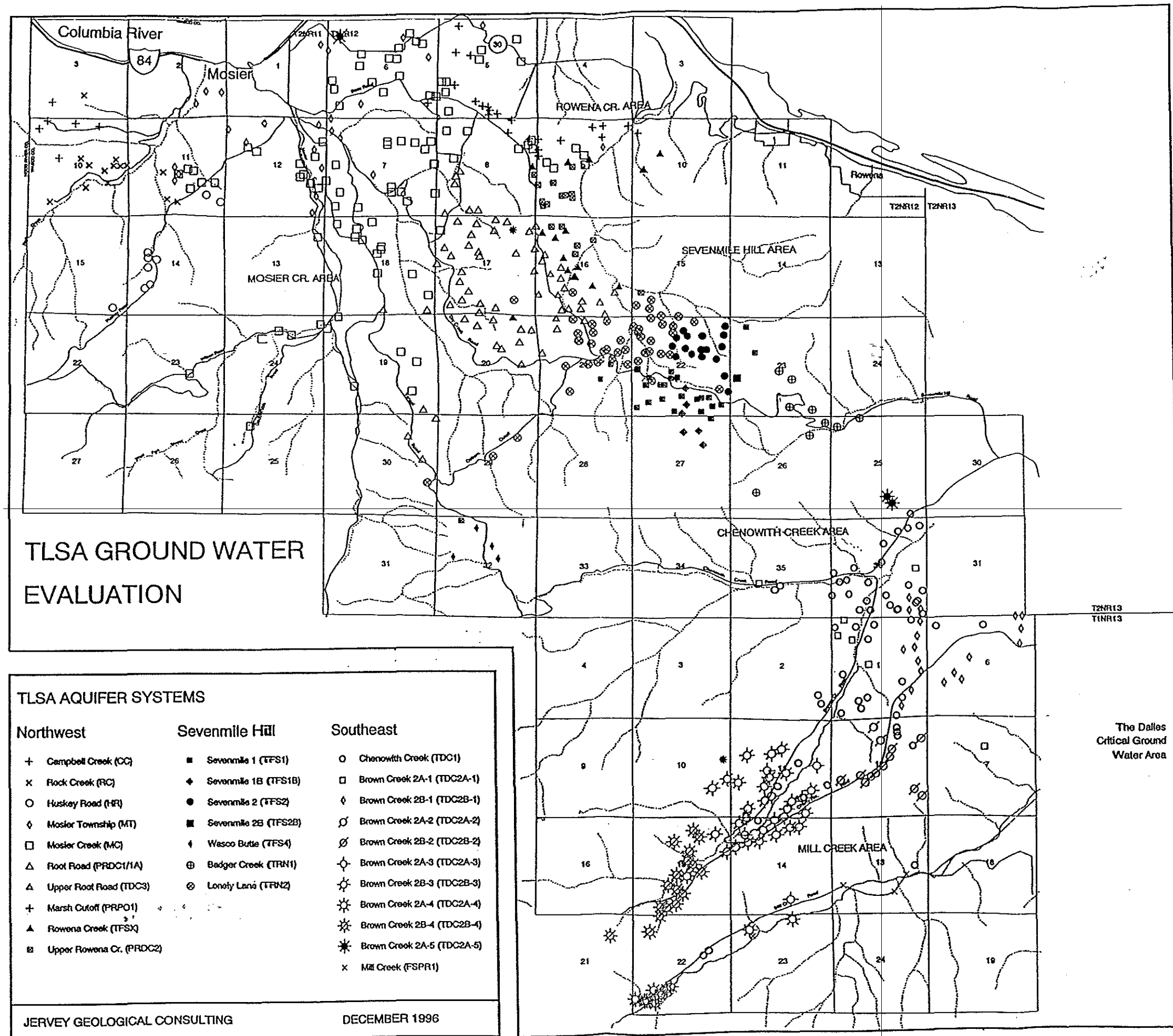
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DEPTH	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH SWL	AVG H2O CLRN	# OF DEEPEENINGS MAJ	# OF MOD	# OF MIN	WELLS SWLS	AVG CHNG SWL	AVG TEMP F	COMMENT
NORTHWEST TLSA															
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61	1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TPR	14	719	286	30	545	174	113	0	1	0	4	-26	56	
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58	
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0	*	1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58	HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61	HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60	2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60	SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53	
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56	SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61	
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59	
SEVENMILE HILL															
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57	HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55	
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53	
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60	
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53	ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52	SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*	*	SIMILAR TO TRN2?
SOUTHEAST TLSA															
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58	
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	58	
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56	1 SWL CHANGE OMITTED(+122)
Hill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77	

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.



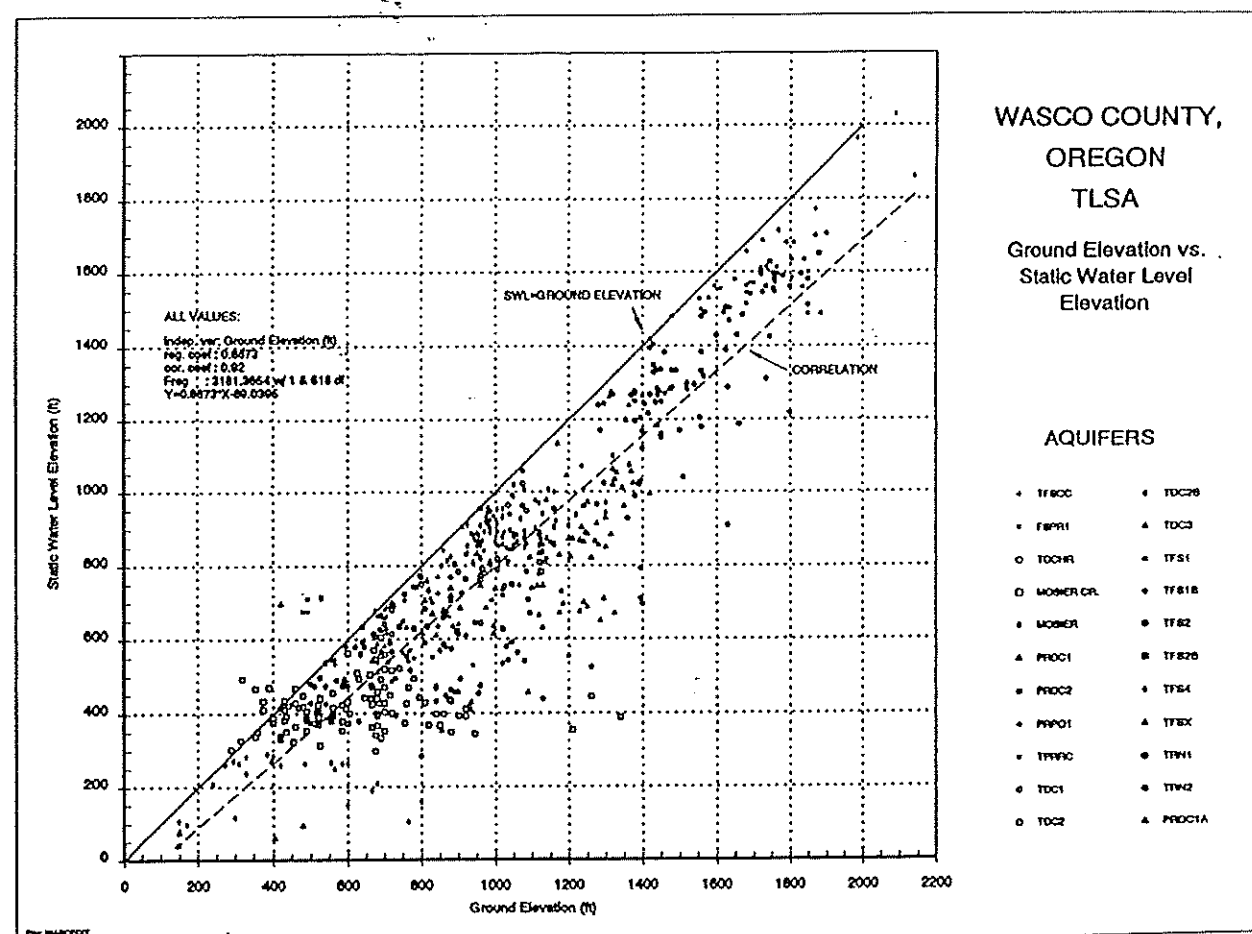


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

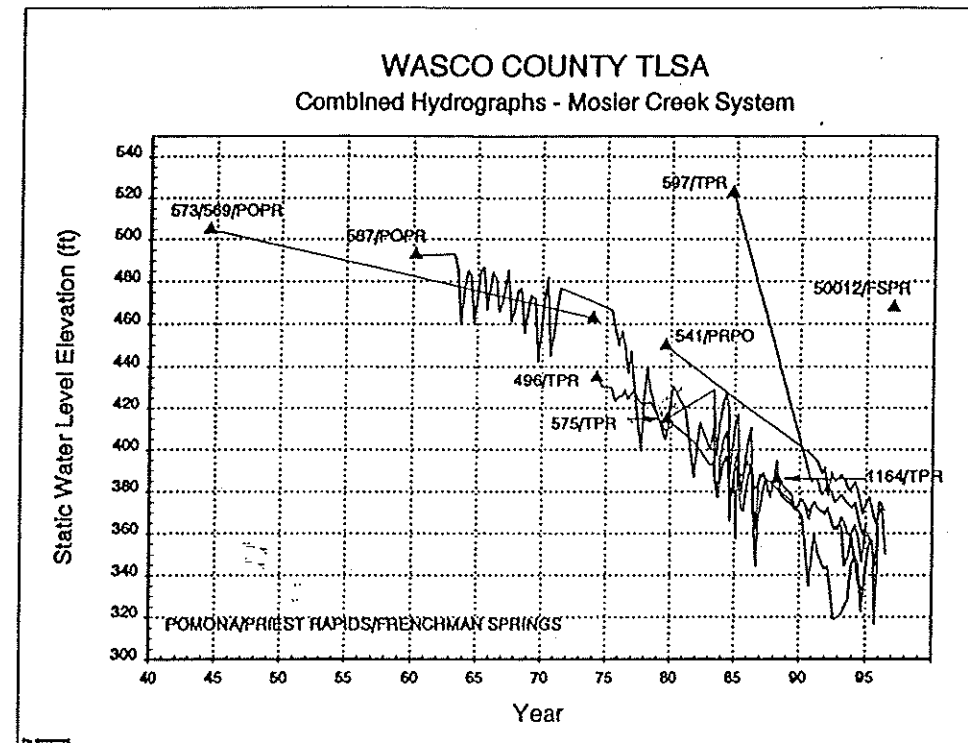


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

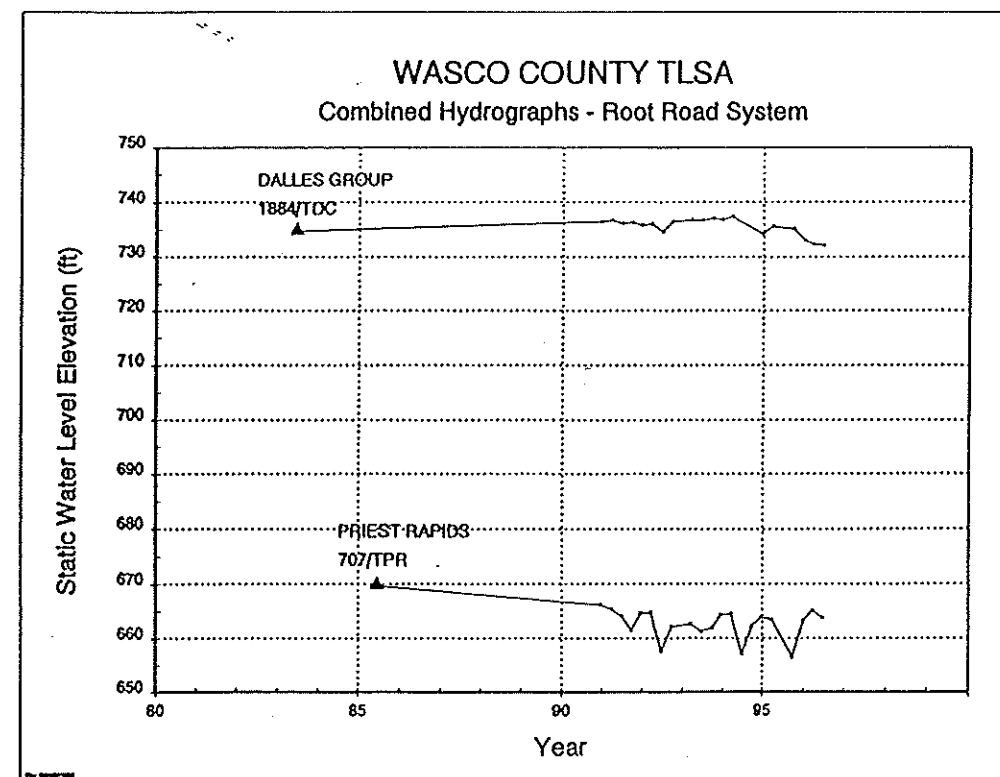


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

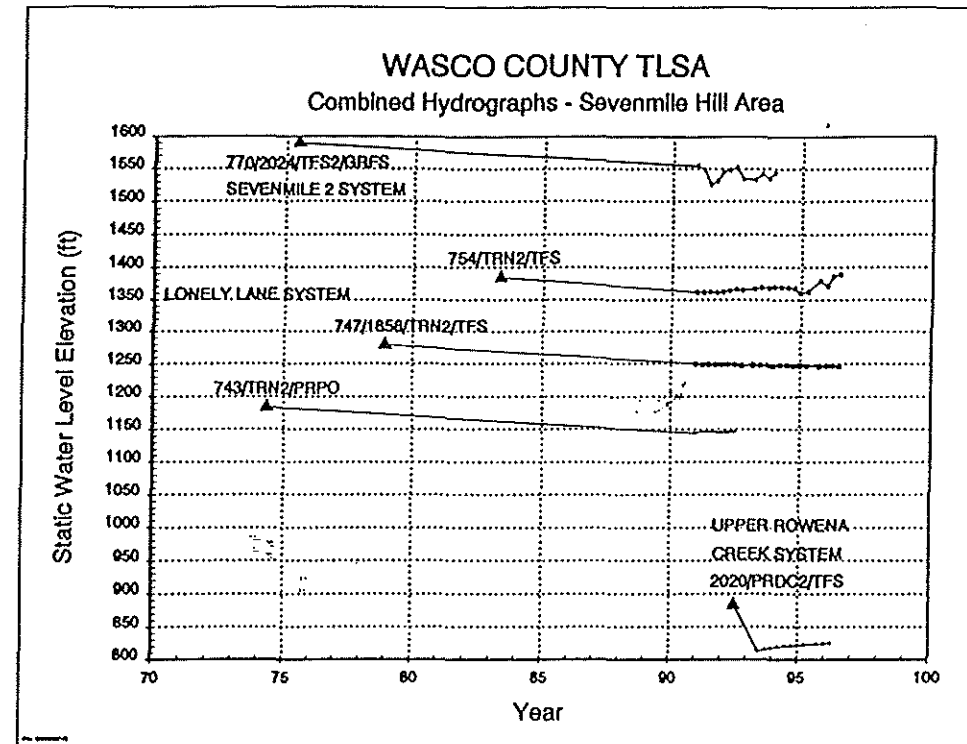


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

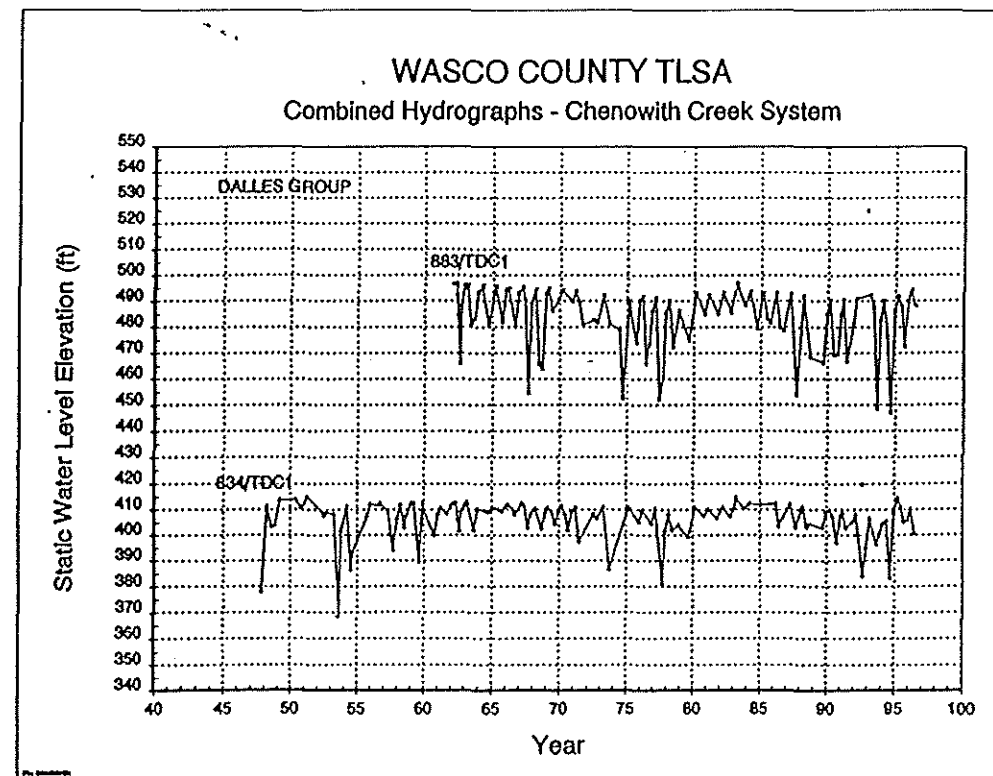


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.



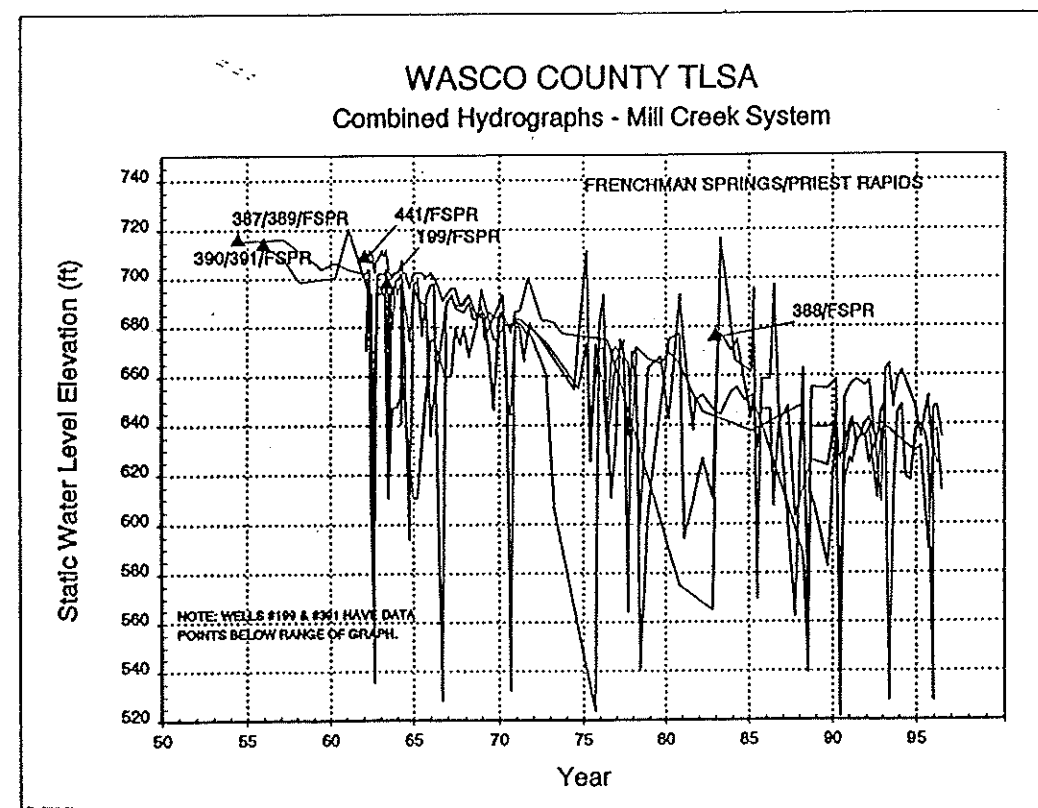


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no

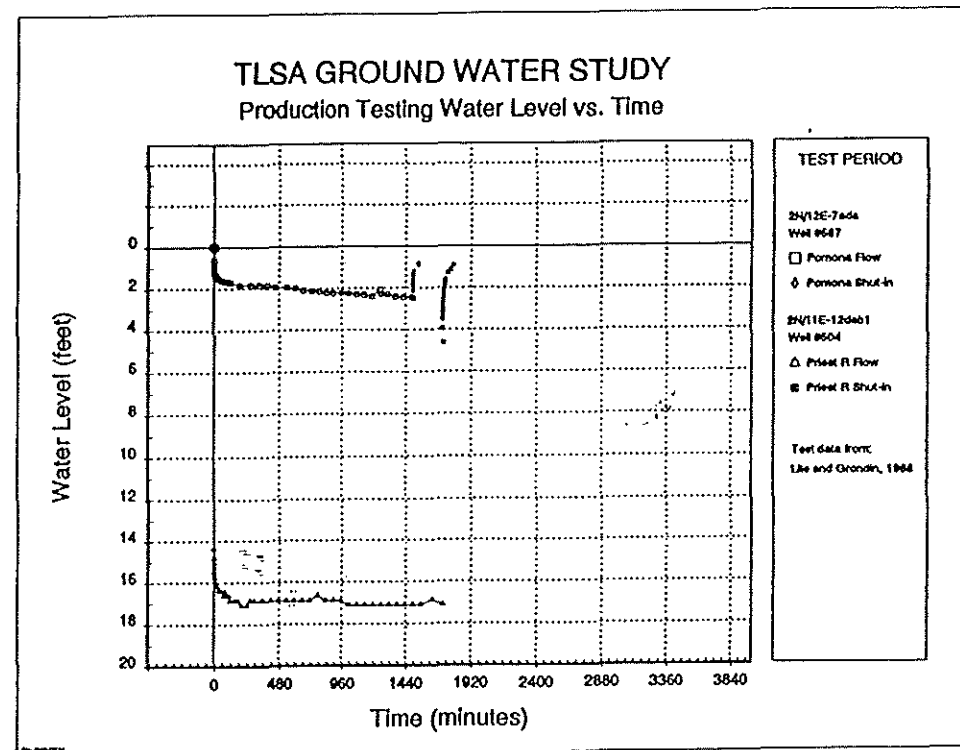


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

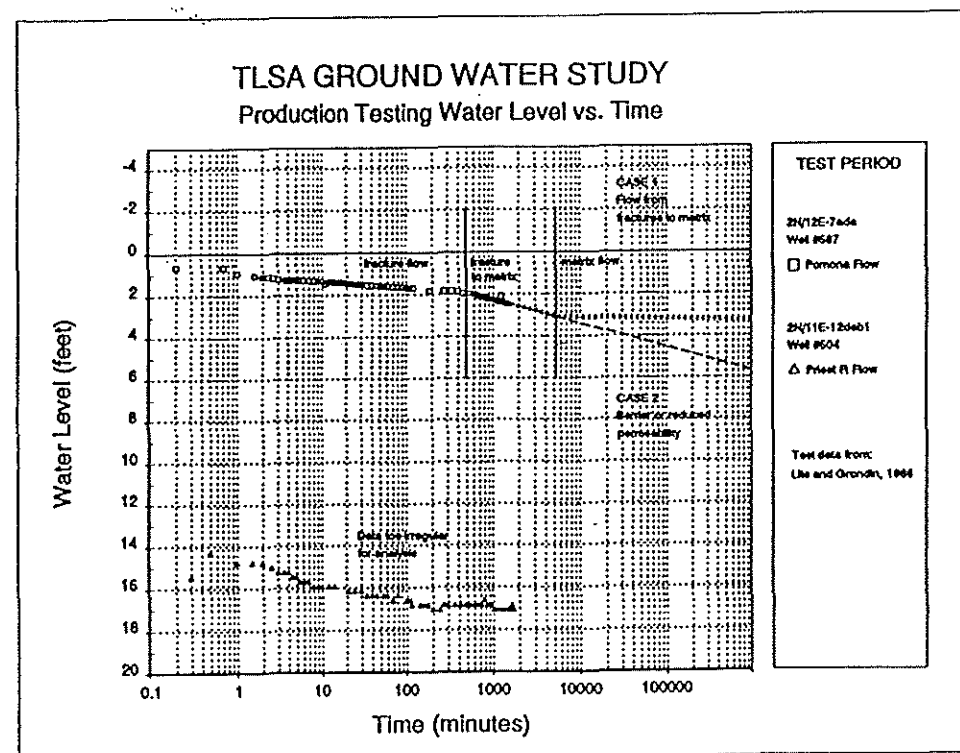


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

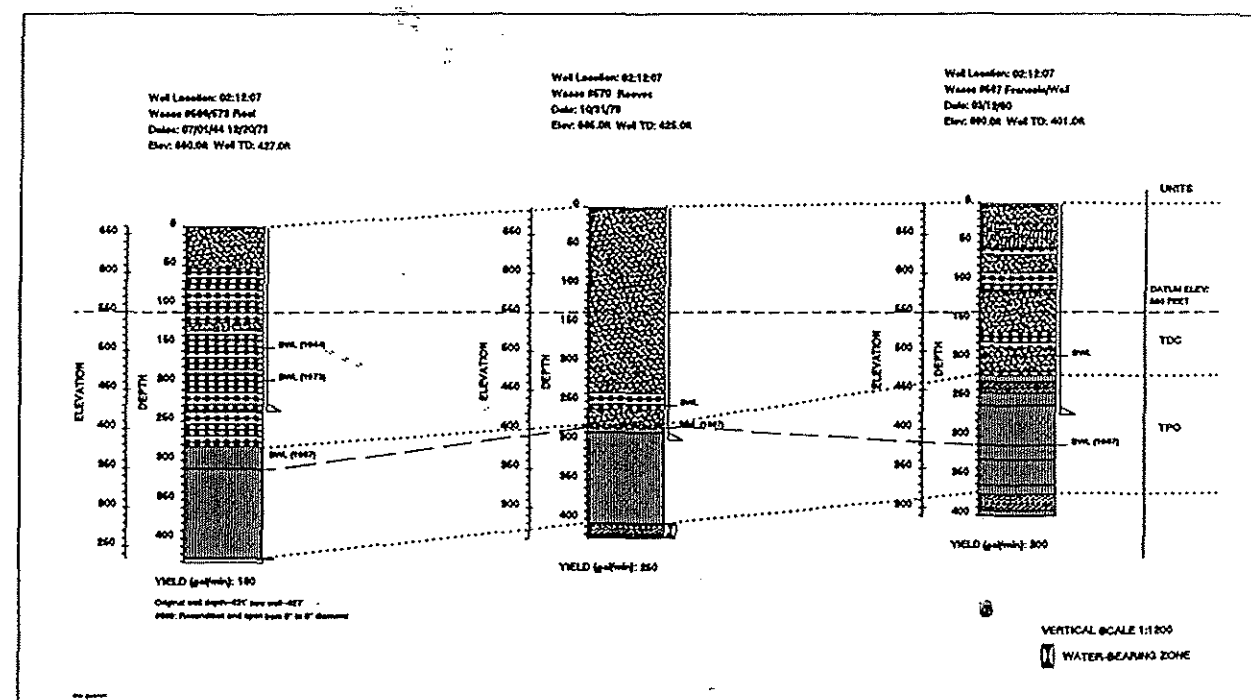


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

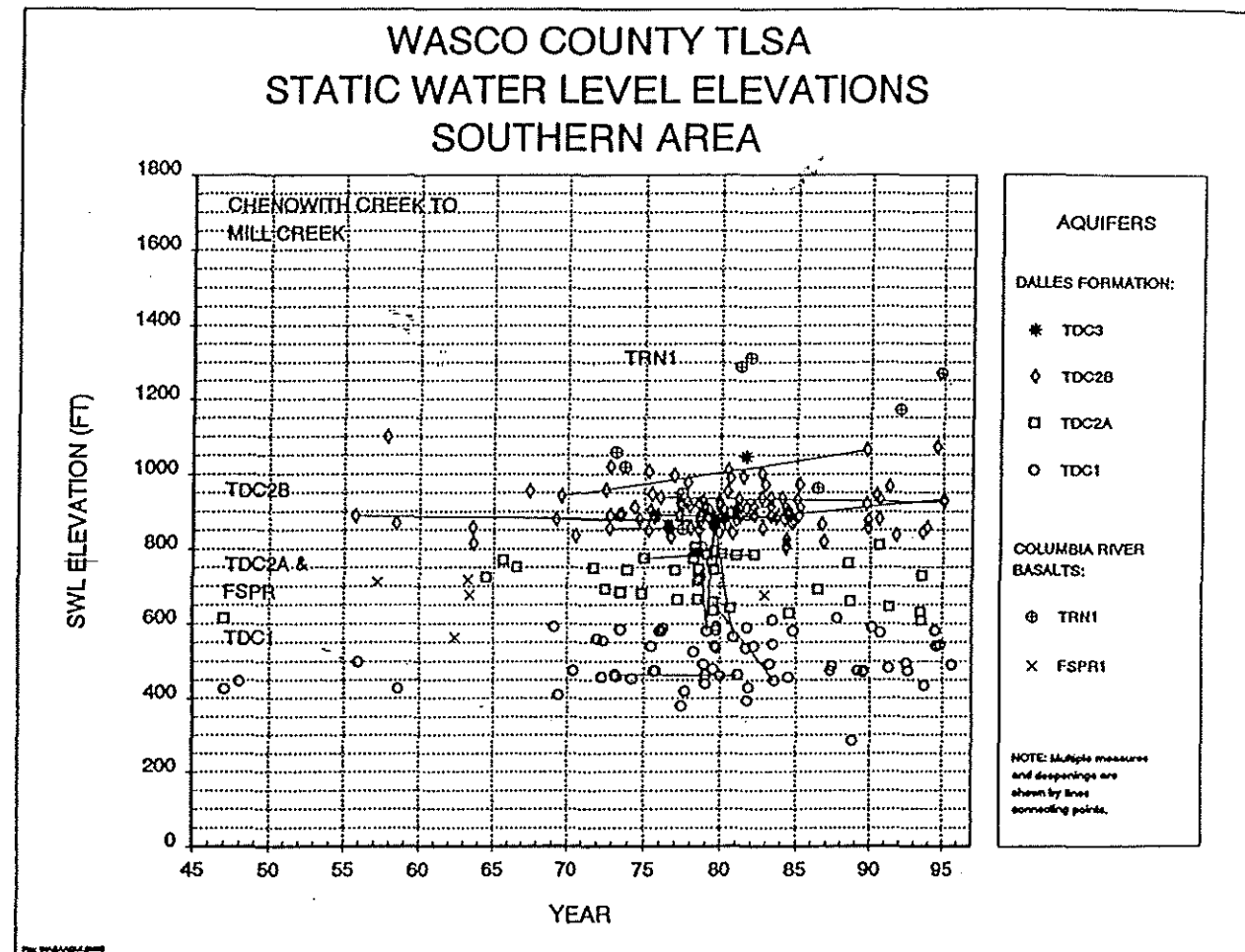


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

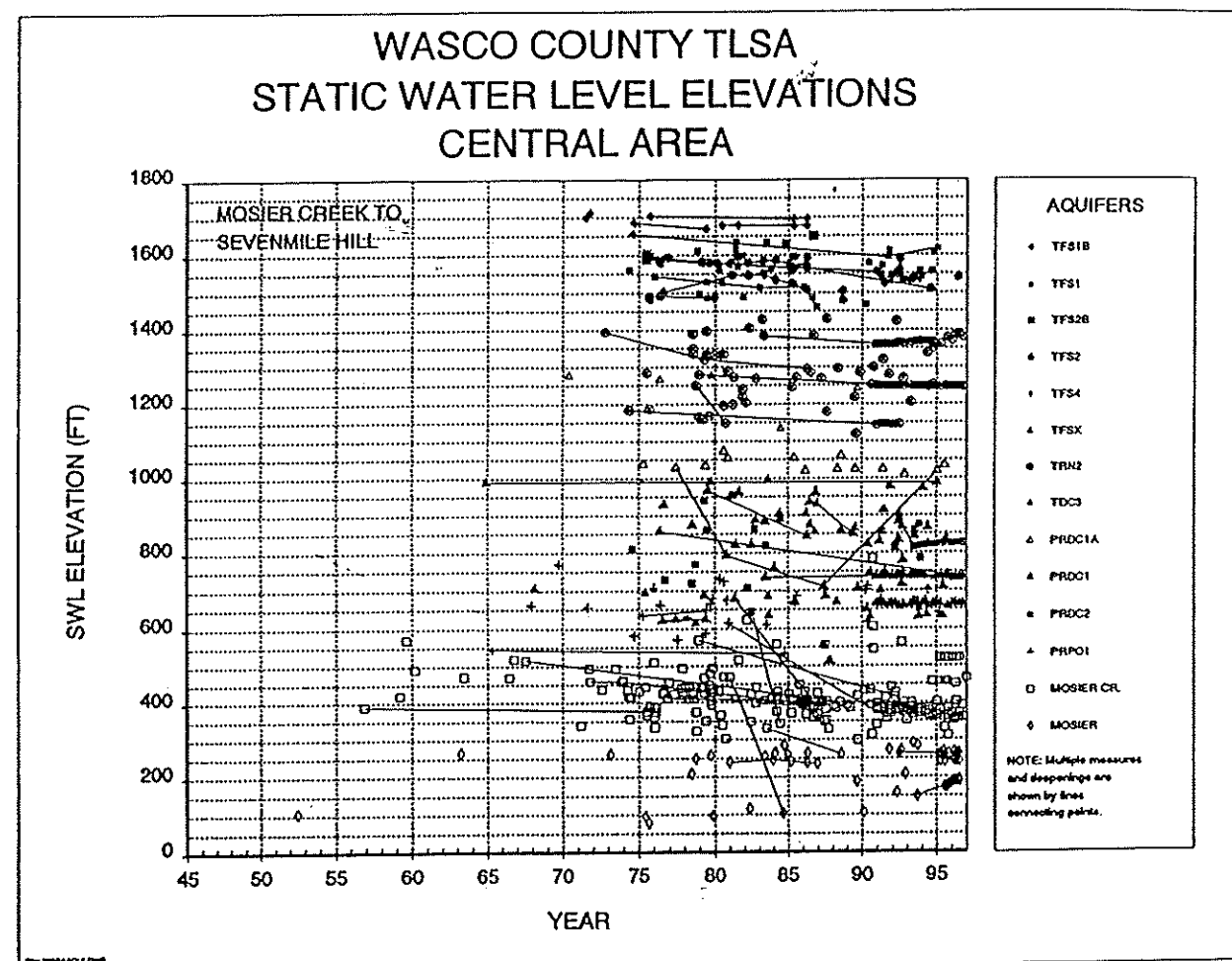


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.



significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPENED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A

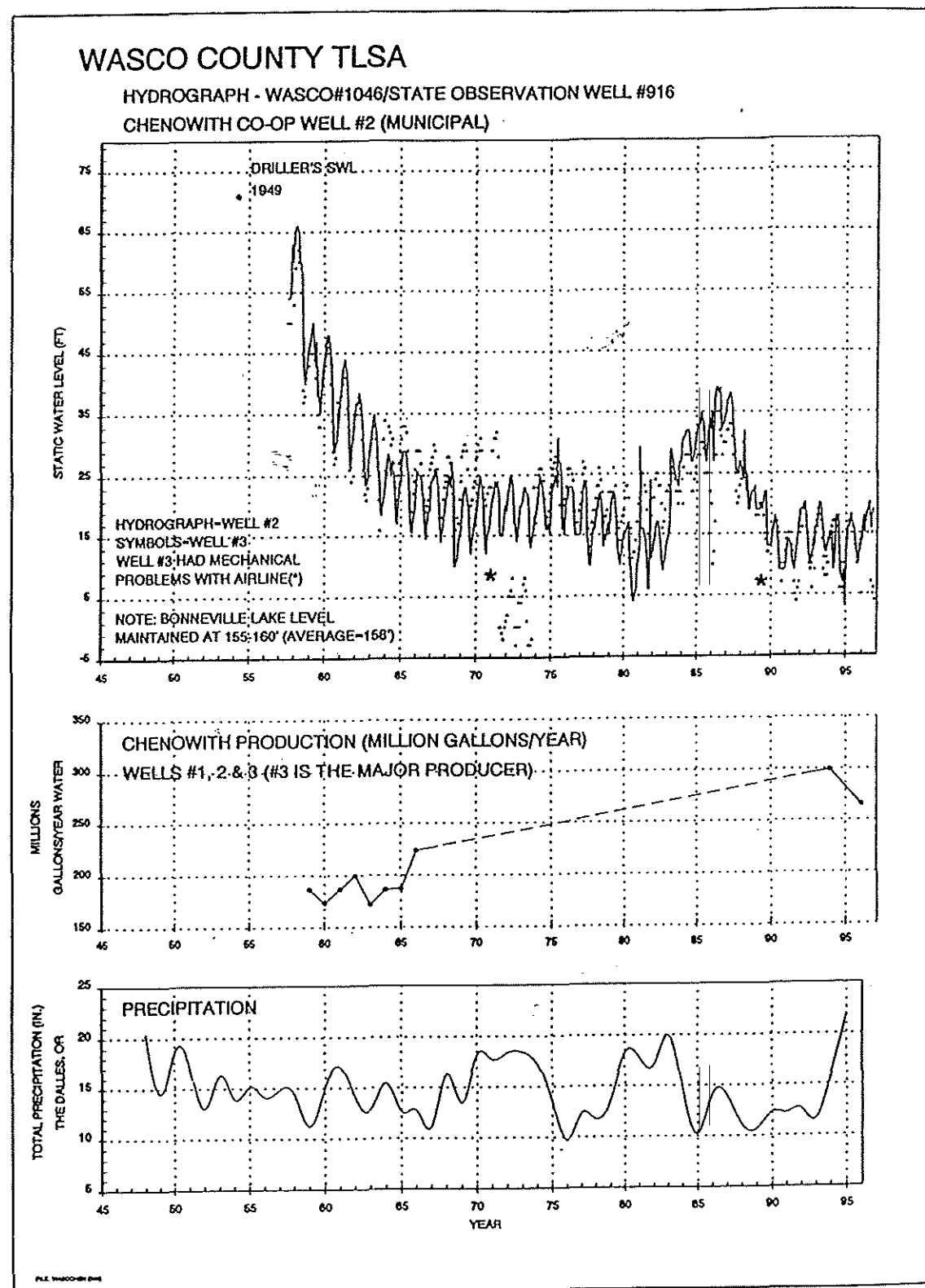


Figure 14. Chenowith Co-op water well data, 1949-1996.

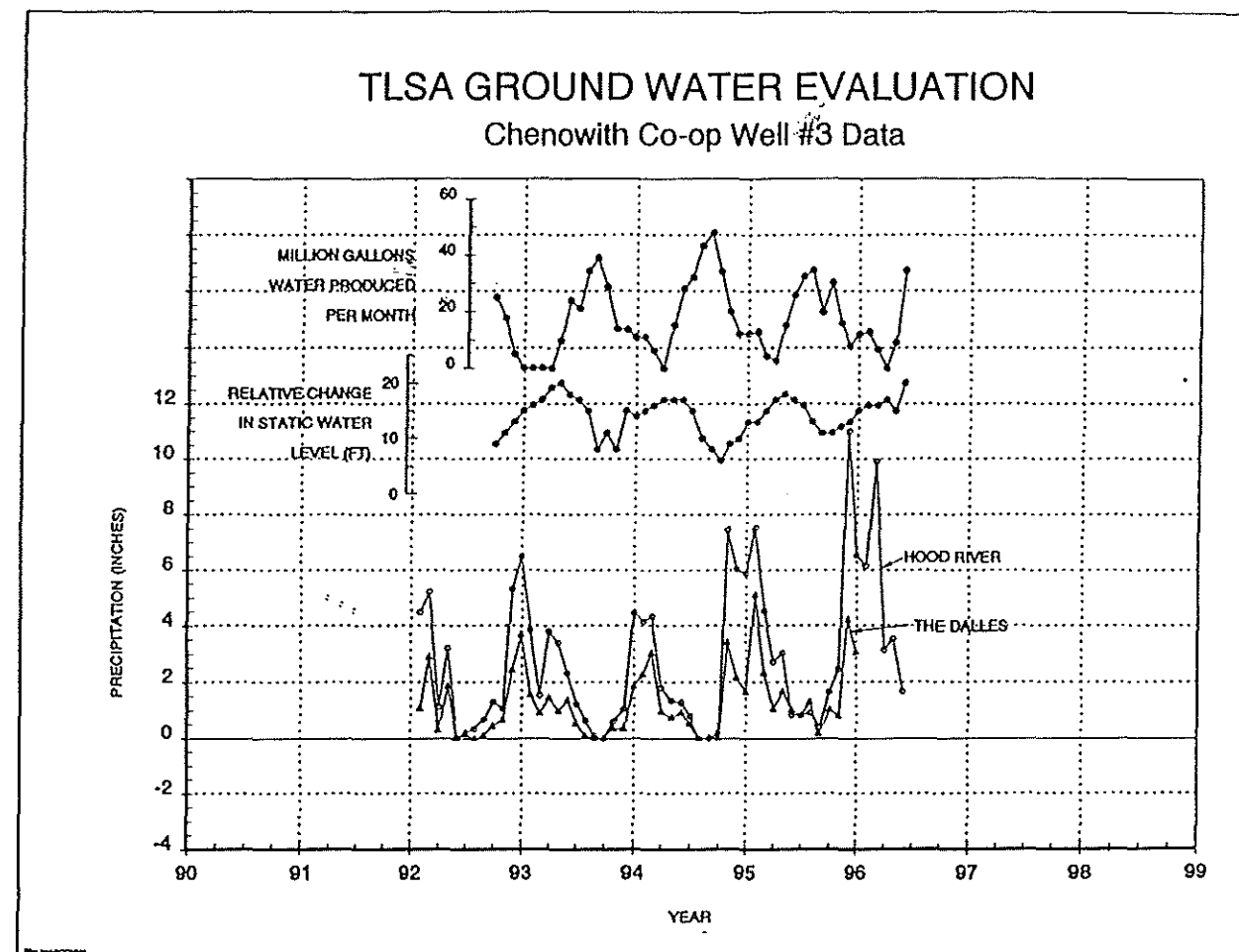


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E (Appendix A). Minor and moderate deepening may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepening in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepening is of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepening within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

#### 1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

#### 2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

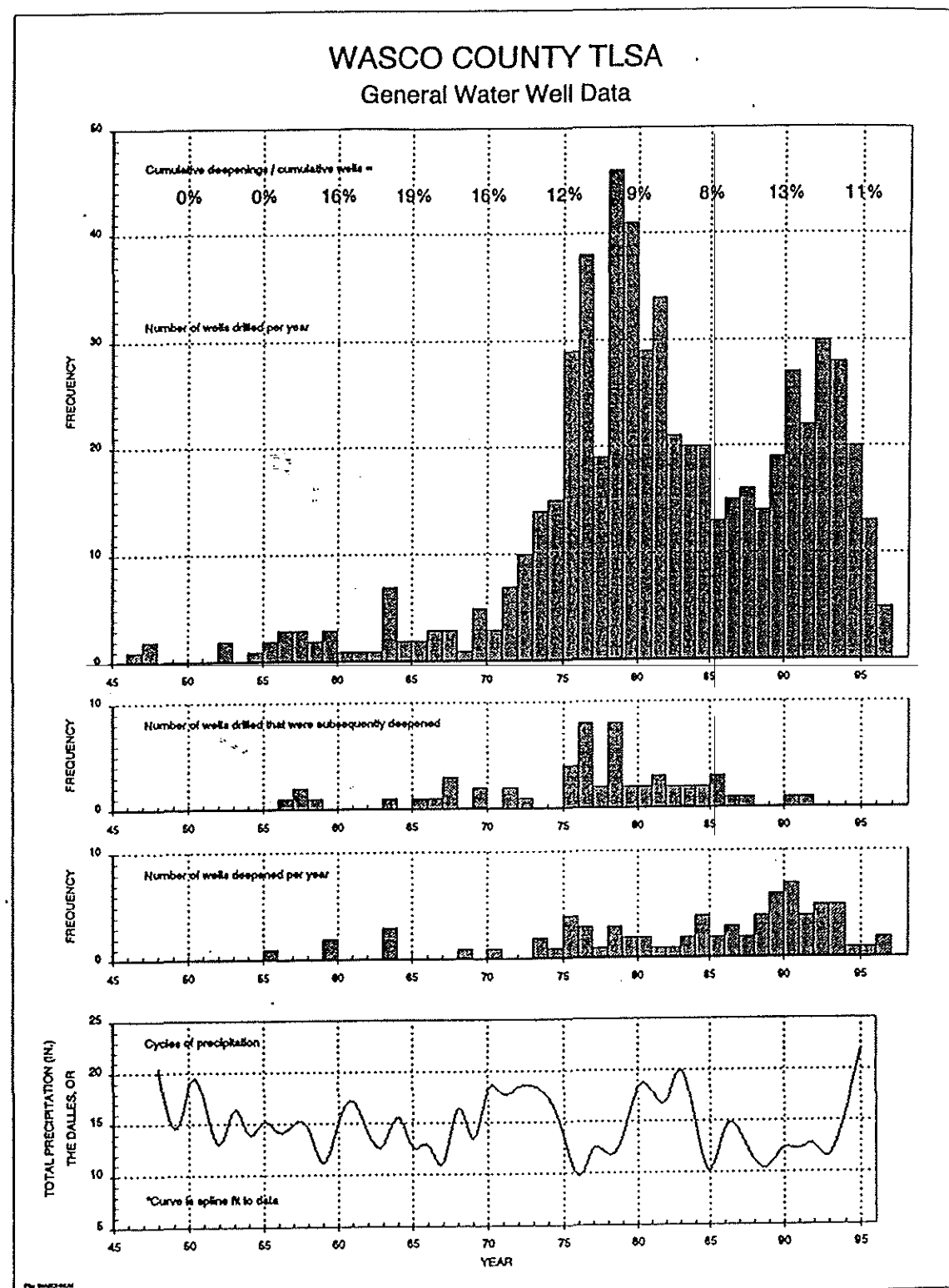


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

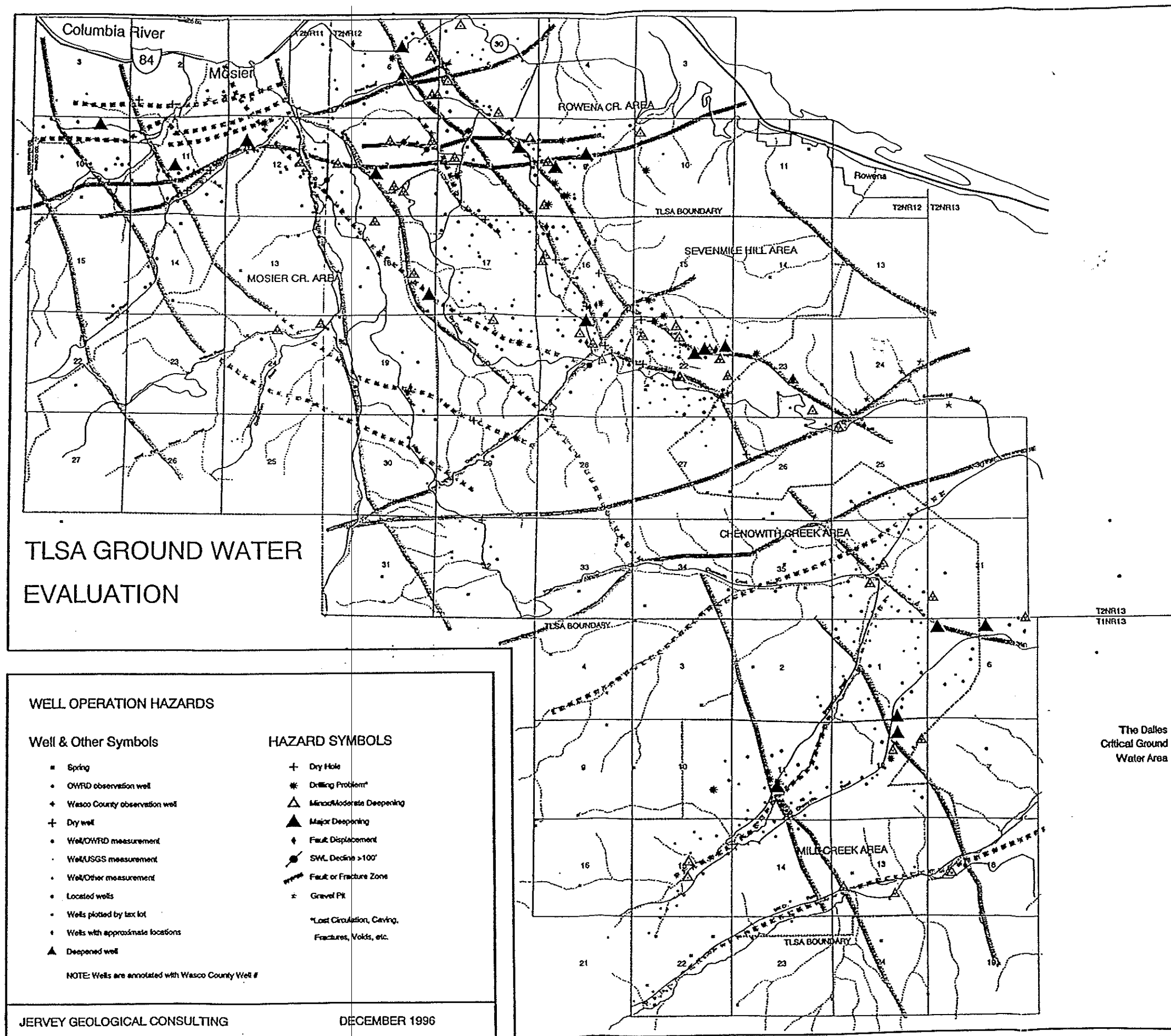






Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

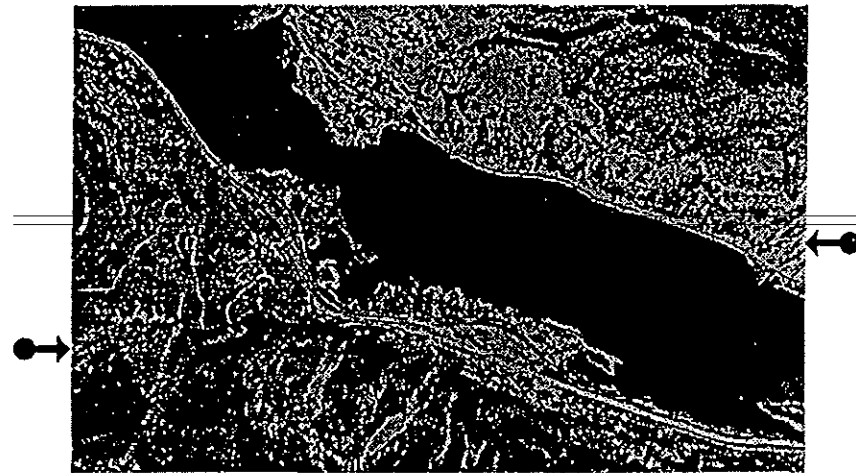


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.



Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

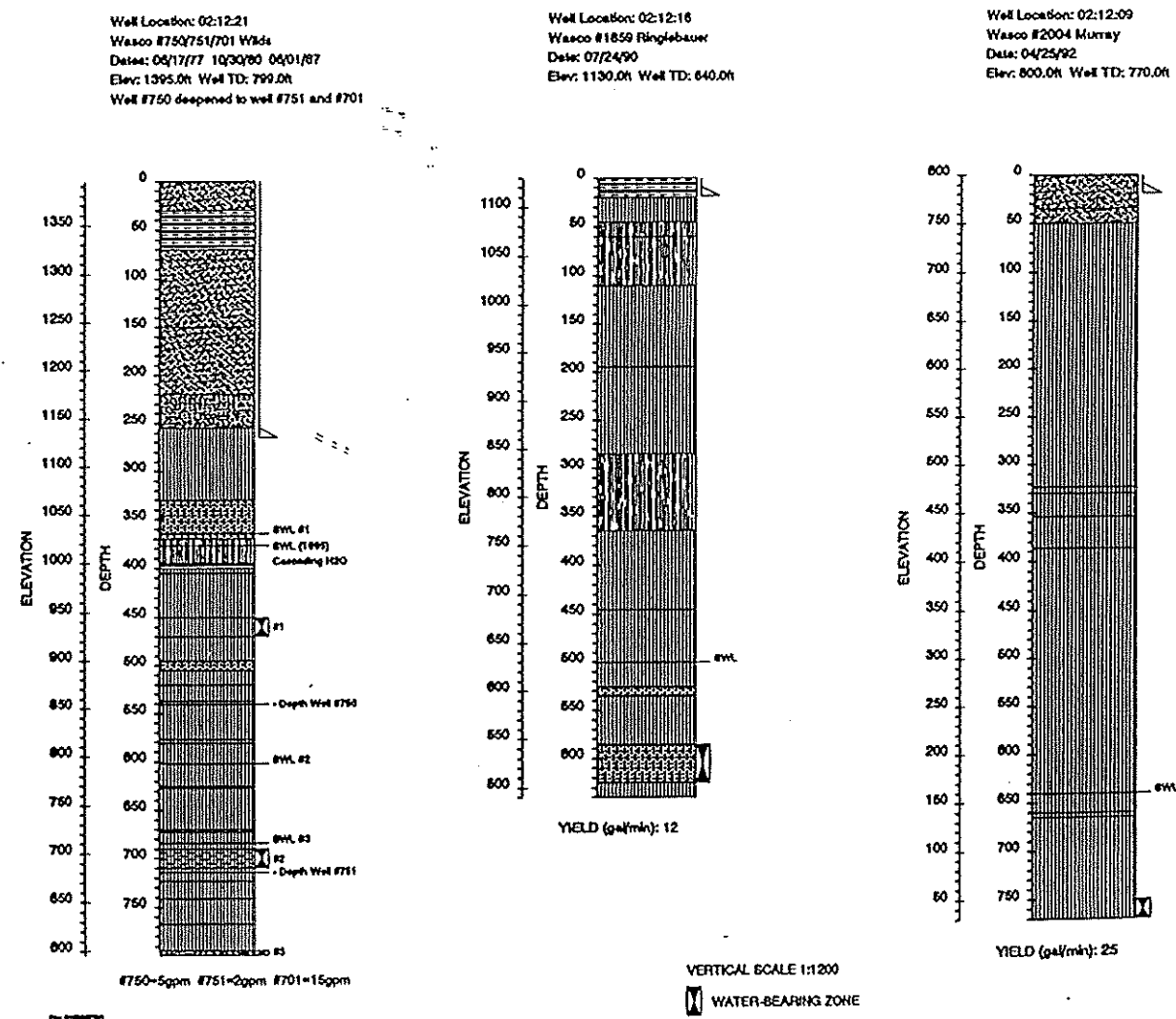


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

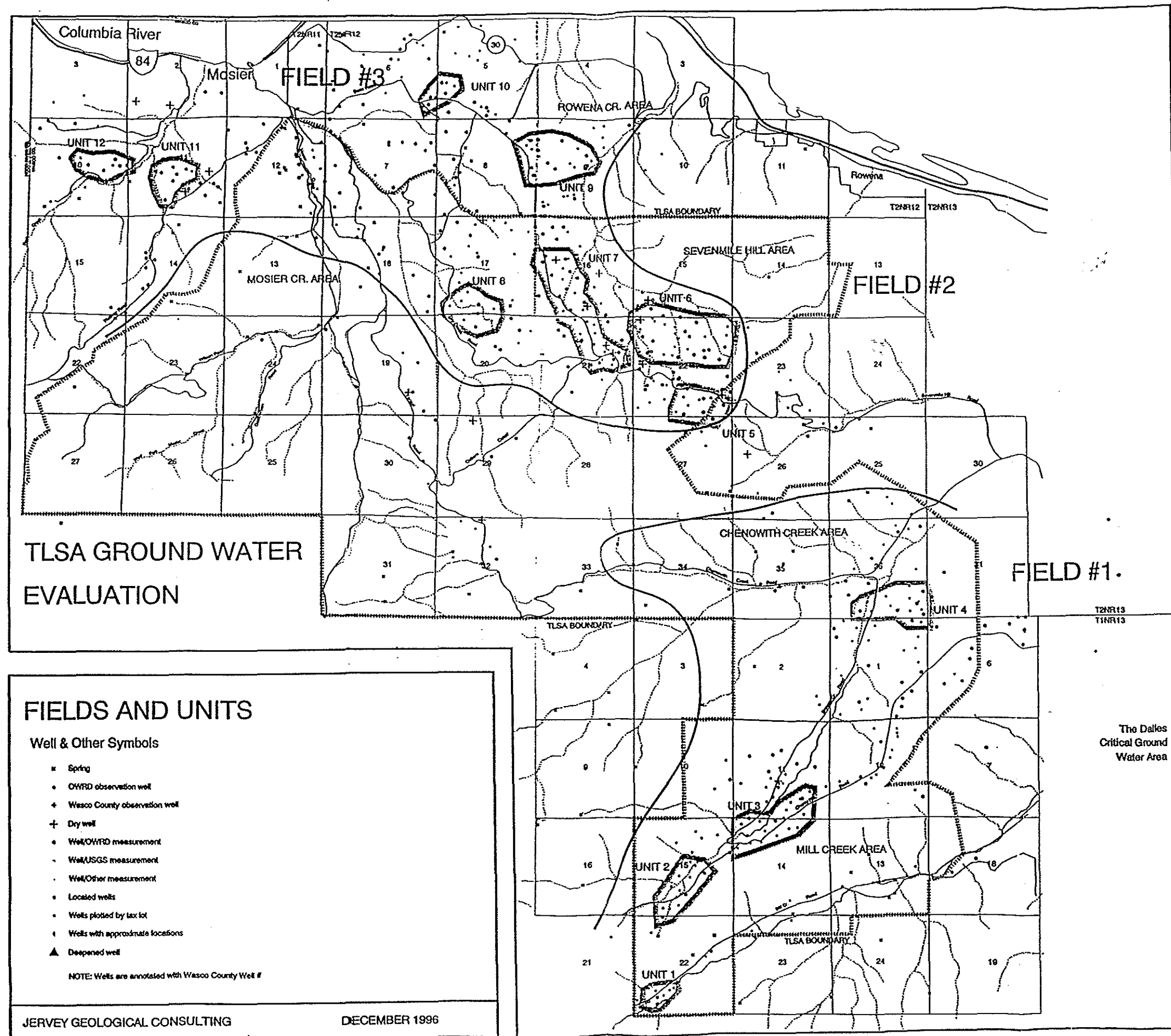
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.



REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by land-owners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL AREA		PER WELL	AVERAGE WELL DISTANCE		DENSEST ACRES PER WELL	PRIORITY
		WELLS	ACRES		FEET	LOWER 1/3 WELL DISTANCE FEET		
1	TDC2A	8	49	6	388	318	3	
2	TDC2A&B	12	142	12	604	416	4	
3	TDC2B	19	212	11	653	478	5	
4	TDC1&2B	17	177	10	708	491	5	HIGH
5	TFB1&1B	12	123	10	602	393	4	
6	TFB2/TRN2	33	342	10	599	386	3	HIGH
7	TRN2 PRDC1A TFBX	32	322	10	563	333	3	HIGH
8	PRDC1	9	138	15	798	580	8	
9	PRPO1 MC TFBX	18	216	12	-	-	-	HIGH
10	MC	7	68	10	-	-	-	
11	MT/RC	7	97	14	-	-	-	
12	RC	7	91	13	-	-	-	

Table 3. Summary of well spacing in TLSA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

**ACKNOWLEDGEMENTS**

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

**RESIDENTS/LAND OWNERS OF WASCO COUNTY:**

Sue Bennett	Carol Goter	Mark and Diane Mazeski
Frans Bosman	Wayne Haythorn	Sandra and Deane Preston
Steven Cain	Delbert and Elaine Huskey	Bill and Jeanne Reeves
Brenda and Ron Carroll	Jack and Betty Huskey	Mike Sandoz
Linda Cartwright	Ken and Wendy Huskey	Carole Schmidt
Janine and Joseph Czerniecki	Wayne and Helen Huskey	Tamara Shannon
Betty Daniel	Greg Koonce	Mary Soden
Jim Deaton	Frank and Mary Kurz	Fred and Sylvian Stewart
Jackie Fulps	Nick and Mary Linebarger	

**PUBLIC AGENCIES/PRIVATE COMPANIES**

Larry Toll/Staff Wasco County Watermasters Office	Jerry Schmidt Oregon Water Consultants, Inc.
Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenowith Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

**WATER WELL DRILLERS**

All well drillers in the past and present have contributed information to this study. Those who were especially helpful (in the detail of their well records and/or their comments on the subject) include:

Charles Austin	Leonard Marinelli
Greg Byrd	Charles Moore
Gilbert Clayton, Jr. and Sr.	Richard Murray
Harry Douthit	Clyde Root



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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.

## **ATTACHMENT D – EXHIBIT 2**

“Settlement Agreement”

## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not

approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.


15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

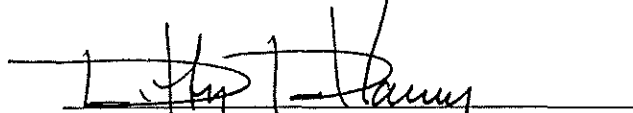
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

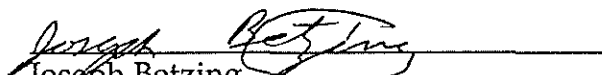
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing

## **ATTACHMENT D – EXHIBIT 3**

“Original Application”



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

FILE NUMBER: 921-18-000086-PLNG

FEE: 0 (paid previously)

**LAND USE APPLICATION COVERPAGE**

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>APPLICANT INFORMATION</b>		<b>OWNER INFORMATION</b>	
Name: <u>David W. Wilson</u>		Name: <u>Same</u>	
Address: <u>7100 Seven Mile Hill Road</u>		Address: _____	
City/State/Zip: <u>The Dalles, Oregon 97058</u>		City/State/Zip: _____	
Phone: <u>(541) 490-3730</u>		Phone: _____	
Email: _____		Email: _____	

**PROPERTY INFORMATION**

Township/Range/Section/Tax Lot(s)	Acct #	Acres	Zoning
2N 12E 22 4400	884	40.1	F-2

Property address (or location): 7100 Seven Mile Hill Road

Zoning Designation: F-2 Environmental Protection District: EPD 8

Proposed Use: F-F Permitted Subject to Section: \_\_\_\_\_

Water source: Well Sewage disposal method: Septic

Are there wetlands/waterways on your property? ☒ NO ☐ YES (description) \_\_\_\_\_

Name of road providing access: Seven Mile Hill Road

Current use of property: Residential Use of surrounding properties: Residential, farm

Do you own neighboring property? ☐ NO ☒ YES (description) Tax lots 4800, 2100

**DETAILED PROJECT DESCRIPTION (proposed use, structures, dimensions, etc.):** \_\_\_\_\_

Zone change from F-2 to F-F

☐ Additional description/maps/pictures attached

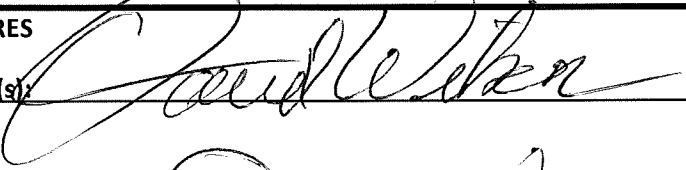
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**LEGAL PARCEL STATUS**

Partition, Subdivision, OR

Most Recent Pre-9/4/1974 Deed #: PLAPAR-17-05-0002 Date Filed: September 8, 2017

Current Deed #: \_\_\_\_\_ Date Filed: \_\_\_\_\_

*The deed and a map showing the property described in the deed(s) must accompany this application.***SIGNATURES**Applicant(s):  Date: 5/4/18Property Owner(s):  Date: 5/4/18

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PLEASE NOTE:** Before this application will be processed, you **must** supply all requested information and forms, and address **all listed or referenced criteria**. Pursuant to ORS 215.428, this office will review the application for completeness and notify Applicant of any deficiencies within 30 days of submission. By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.

**ALL LAND USE APPLICATIONS MUST INCLUDE:**

- ☐ Application Fee – Cash or Check (credit cards now accepted with additional fee)
- ☐ Site Plan
- ☐ Elevation Drawing
- ☐ Fire Safety Self-Certification
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_**APPLICATIONS FOR PROPERTIES IN THE NATIONAL SCENIC AREA MUST ALSO INCLUDE:**

- ☐ Scenic Area Application/Expedited Review
- ☐ Color and Material Samples
- ☐ Landscaping Plan
- ☐ Grading Plan
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_

**SHADED AREA TO BE COMPLETED BY PLANNING DEPARTMENT**

**Legal Parcel**

Deed/Land Use Action: \_\_\_\_\_

☐ NO

☐ YES

**Previous Map and Tax Lot:** \_\_\_\_\_

**Past Land Use Actions:** If yes, list file #(s) \_\_\_\_\_

☐ NO

☐ YES

Subject to previous conditions?

☐ NO

☐ YES

**Assessor Property Class:** \_\_\_\_\_

**Zoning:** \_\_\_\_\_

**Environmental Protection Districts – List applicable EPDs:**

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

**Water Resources**

Are there bodies of water or wetlands (seasonal or permanent) on property or adjacent properties? ☐ NO ☐ YES

Describe (include setback distances): \_\_\_\_\_

☐ Fish bearing ☐ Non fish bearing ☐ Seasonal Creek

☐ Irrigation ditch ☐ Wetland ☐ Pond/Lake ☐ Not identified

*(Note: Check buffers. Different zones have different setback requirements that may require a more extensive permitting process.)*

**Access:**

County or ODOT approach permit on file? ☐ NO ☐ YES, # \_\_\_\_\_

**Address:**

Address exists and has been verified to be correct?

☐ NO

☐ YES

Address needs to be assigned after approval?

☐ NO

☐ YES

**Fire District:** \_\_\_\_\_

**Fees (List Review Type and Cost):** \_\_\_\_\_



PLANNING DEPARTMENT

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FILE NUMBER: PLAZNC

FEE: \_\_\_\_\_

## ZONE CHANGE APPLICATION

Date Received: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

Date Complete: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

### Current Zoning

Comprehensive Plan Map Designation: FOREST

Zoning Designation: F.2 (80)

### Proposed Zoning

Comprehensive Plan Map Designation: FOREST- FARM

Zoning Designation: F.F (10)

Total Acreage to be Rezoned: 40.10

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. Describe how the original zoning was the product of a mistake; or
3. Establish that:
  - a. The rezoning will conform with the Comprehensive Plan (including but not limited to all applicable goals and policies); and,
    - Goal 1: Citizen Involvement
    - Goal 2: Land Use Planning
    - Goal 3: Agricultural Lands
    - Goal 4: Forest Lands
    - Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources
    - Goal 6: Air, Water and Land Resources Quality
    - Goal 7: Areas Subject to Natural Disasters and Hazards
    - Goal 8: Recreational Needs
    - Goal 9: Economy of the State
    - Goal 10: Housing
    - Goal 11: Public Facilities and Services
    - Goal 12: Transportation
    - Goal 13: Energy Conservation
    - Goal 14: Urbanization

- b. The site is suitable to the proposed zone (taking into consideration among other things slope, access, flooding, traffic, availability of public facilities and services, and impact to adjacent properties); and
  - c. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.
4. What effect would the proposed change have on surrounding properties? Include a description of the existing land uses within 1,000 feet of the proposed zone change.
  5. Is there a public need or demand to support this requested zone change? ☐ No ☐ Yes. If YES, please describe.
  6. Fire Safety. If converting Farm or Forest zoned land to a non-resource zone, include an analysis of how future division and residential development could meet fire safety standards.
  7. Any other information which may add to the viability of the request.

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### SITE INFORMATION

The following maps shall be required for a complete application:

**Zoning Map:** Show area of proposed re-zoning.

**Soils Map:** If converting Forest or Farm zoned land to a non-resource zone include a soils map. These are available at the Wasco County GIS Department or the Farm Services Agency.

**Site Plan Map for the area to be rezoned and lands within at least 1000' that includes the following:**

- ☐ North Arrow
- ☐ Scale
- ☐ Boundaries or properties proposed to be rezoned (dimensions)
- ☐ All waterways, wetlands, noticeable landforms and drainage of property
- ☐ Structures (including dwelling, accessory buildings, barns, walls and fences) with location and size
- ☐ Utilities (existing)
  - Electric/Communication corridors including poles
  - Septic tanks & drain fields (primary and reserve)/Wells and supply lines
- ☐ All points of ingress and egress (roads and driveways) and whether they are public or private with their length, width and surface type
- ☐ Significant terrain features and land forms including slopes over 20%

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### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Zone Change will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set. A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

In case of Appeal: Written notice of the appeal must be filed with the Planning Director, within twelve (12) days of the subject decision. Forms are available at the Wasco County Planning Department.



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
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FILE NUMBER: **PLACPA-**\_\_\_\_\_

FEE: \_\_\_\_\_

## COMPREHENSIVE PLAN AMENDMENT

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>PROPOSED CHANGE</b>			

Indicate specific Comprehensive Plan section(s) or element(s) proposed to be amended or added:

Amend Comprehensive Plan to re-zone tax lot 2N 12E 22 4400 from F-2(80) to F-F(10)

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### FINDS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. A landowner or their representative may only initiate a quasi-judicial plan amendment. Describe how the proposal meets the standard of a quasi-judicial amendment and not a legislative amendment.

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership.

3. The amendment will be in compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable and substantial proof that such change shall not be detrimental to the spirit and intent of such goals. These goals include:

Goal 1: Citizen Involvement  
Goal 2: Land Use Planning  
Goal 3: Agricultural Lands  
Goal 4: Forest Lands  
Goal 5: Open Spaces, Scenic and Historic Areas  
and Natural Resources  
Goal 6: Air, Water and Land Resources Quality  
Goal 7: Areas Subject to Natural Disasters and Hazards

Goal 8: Recreational Needs  
Goal 9: Economy of the State  
Goal 10: Housing  
Goal 11: Public Facilities and Services  
Goal 12: Transportation  
Goal 13: Energy Conservation  
Goal 14: Urbanization

4. Demonstrate there was a mistake in the original comprehensive plan or change in the character of the neighborhood.
  5. Address factors which relate to the public need for healthful, safe and aesthetic surrounding and conditions.
  6. Include proof of change in the inventories originally developed.
  7. Amendment shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established. Provide additional studies and established need to justify the amendment.
- A response (findings of fact) to each of the questions above has been submitted? ☐ No ☒ YES

---

#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Comprehensive Plan Amendment will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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FILE NUMBER: PLAEXC

FEE: \_\_\_\_\_

## GOAL EXCEPTION APPLICATION

Date Received:

Planner Initials:

Date Complete:

Planner Initials:

### PROPOSED EXCEPTION

Indicate the Goal(s) for which the exception is requested:

Goal 4 - Forest Lands

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed goal exception?
2. Is there a public need or demand to support this requested Goal Exception? ☐ No ☐ Yes. If YES, please describe.
3. An exception is a decision to exclude certain land from the requirements of one or more applicable statewide goals. Goal Exceptions fall into three categories: Physically Developed; Irrevocably Committed; and Reasons.

Indicate which type of goal exception is being proposed and include findings for the review criteria listed below and any additional referenced criteria. These are directly from Oregon Administrative Rule and are available at [http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_004.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_004.html). Oregon Revised Statute criteria are available at <http://landru.leg.state.or.us/ors/>

a. Exception Requirements for Land Physically Developed to Other Uses

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**b. Exception Requirements for Land Irrevocably Committed to Other Uses**

- (1)** A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a)** A "committed exception" is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b)** For the purposes of this rule, an "exception area" is that area of land for which a "committed exception" is taken;
  - (c)** An "applicable goal," as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.
- (2)** Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:
  - (a)** The characteristics of the exception area;
  - (b)** The characteristics of the adjacent lands;
  - (c)** The relationship between the exception area and the lands adjacent to it; and
  - (d)** The other relevant factors set forth in OAR 660-004-0028(6).
- (3)** Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(1)(b), in Goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is "impossible." For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable:
  - (a)** Farm use as defined in ORS 215.203;
  - (b)** Propagation or harvesting of a forest product as specified in OAR 660-033-0120; and
  - (c)** Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).
- (4)** A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.
- (5)** Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.
- (6)** Findings of fact for a committed exception shall address the following factors:
  - (a)** Existing adjacent uses;
  - (b)** Existing public facilities and services (water and sewer lines, etc.);
  - (c)** Parcel size and ownership patterns of the exception area and adjacent lands:
    - (i)** Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels;

- (ii) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownerships are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.
  - (d) Neighborhood and regional characteristics;
  - (e) Natural or man-made features or other impediments separating the exception area from adjacent resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;
  - (f) Physical development according to OAR 660-004-0025; and
  - (g) Other relevant factors.
- (7) The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.
- (8) The requirement for a map or aerial photograph in section (7) of this rule only applies to the following committed exceptions:
  - (a) Those adopted or amended as required by a Continuance Order dated after the effective date of section (7) of this rule; and
  - (b) Those adopted or amended after the effective date of section (7) of this rule by a jurisdiction with an acknowledged comprehensive plan and land use regulations.
- c. Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)  
 An exception Under Goal 2, Part II(c) can be taken for any use not allowed by the applicable goal(s). The types of reasons that may or may not be used to justify certain types of uses not allowed on resource lands are set forth in the following sections of this rule:
  - (1) For uses not specifically provided for in subsequent sections of this rule or in OAR 660-012-0070 or chapter 660, division 14, the reasons shall justify why the state policy embodied in the applicable goals should not apply. Such reasons include but are not limited to the following:
    - (a) There is a demonstrated need for the proposed use or activity, based on one or more of the requirements of Goals 3 to 19; and either
    - (b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near the resource. An exception based on this subsection must include an analysis of the market area to be served by the proposed use or activity. That analysis must demonstrate that the proposed exception site is the only one within that market area at which the resource depended upon can reasonably be obtained; or
    - (c) The proposed use or activity has special features or qualities that necessitate its location on or near the proposed exception site.
  - (2) Rural Residential Development: For rural residential development the reasons cannot be based on market demand for housing, except as provided for in this section of this rule, assumed continuation of past urban and rural population distributions, or housing types and cost characteristics. A county must show why, based on the economic analysis in the plan, there are reasons for the type and density of housing planned which require this particular location on resource lands. A jurisdiction could justify an exception to allow residential development on resource land outside an urban growth boundary by determining that the rural

- location of the proposed residential development is necessary to satisfy the market demand for housing generated by existing or planned rural industrial, commercial, or other economic activity in the area.
- (3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts include, but are not limited to, the following:
- (a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports; or
  - (b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or
  - (c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.
- (4) Expansion of Unincorporated Communities: For the expansion of an Unincorporated Community defined under OAR 660-022-0010(10), appropriate reasons and facts include but are not limited to the following:
- (a) A demonstrated need for additional land in the community to accommodate a specific rural use based on Goals 3-19 and a demonstration that either:
    - (i) The use requires a location near a resource located on rural land; or
    - (ii) The use has special features necessitating its location in an expanded area of an existing unincorporated community, including:
      - (a) For industrial use, it would have a significant comparative advantage due to its location (i.e., near a rural energy facility, or near products available from other activities only in the surrounding area; or it is reliant on an existing work force in an existing unincorporated community);
      - (b) For residential use, the additional land is necessary to satisfy the need for additional housing in the community generated by existing industrial, commercial, or other economic activity in the surrounding area. The plan must include an economic analysis showing why the type and density of planned housing cannot be accommodated in an existing exception area or UGB, and is most appropriate at the particular proposed location. The reasons cannot be based on market demand for housing, nor on a projected continuation of past rural population distributions.
  - (b) Need must be coordinated and consistent with the comprehensive plan for other exception areas, unincorporated communities, and UGBs in the area. Area encompasses those communities, exception areas, and UGBs which may be affected by an expansion of a community boundary, taking into account market, economic, and other relevant factors;
  - (c) Expansion requires demonstrated ability to serve both the expanded area and any remaining infill development potential in the community at time of development with the level of facilities determined to be appropriate for the existing unincorporated community.
- (5) Expansion of Urban Unincorporated Communities: Expansion of an urban unincorporated community defined under OAR 660-022-0010(9) shall comply with OAR 660-022-0040.

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## REVIEW PROCESS

Before this application will be processed, you must supply all the requested information pursuant to the attached instructions. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Goal Exception will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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P:\Development Applications\GoalException.docx

Last Updated 7/13/2017

**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A



Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells, and there is a well on the subject property serving the existing residence and associated accessory buildings. The general conclusion of the Groundwater Study is that this area has capacity to support additional residential development. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the

TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

- 1.1.** The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."
- 1.2.** This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

1.3. The following provisions apply and are addressed in the following sections.

1.4. Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

1.5. Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

1.6. The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_)

### **1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid- Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the

area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.



**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLISA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

"1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - "TPR"). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 Forest Lands.”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 north south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.



## 2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### 2.3.1 OAR 660-004-0028(1) provides:

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### 2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### 2.3.3 (b) “the characteristics of the adjacent lands;”

#### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911;

Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

#### 2.3.4 (c) The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of

these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

- (a) Farm use as defined in ORS 215.203;
- (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;
- (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other

agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice." Webster's New World Dictionary, 2nd College Edition, 1980. Capable means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (unabridged ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of "forest products" can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores."

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared

for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject



property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas

to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6** (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7** “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3 OAR 660-004-0040(6) and (7) provide:**

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

"Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);"

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<sup>1</sup> Missing text in published version of Section 9.010.

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  1. The rezoning will conform with the Comprehensive Plan; and,
  2. The site is suitable to the proposed zone;
  3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable



plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff s office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

### Goal 12-Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road

is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property, which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and

increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.





## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY				
				(PCT)	4	10	40	200		INDEX				
0-7 IL		ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 UWB														
DEPTH	CLAY (IN.)	MOIST BULK (PCT)	DENSITY (G/CHS)	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS (K)	WIND EROD. GROUP (PCI)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE		
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LGW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	-	LOW	1.43					
44														
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL		
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP.	FROST
NONE			26.0						140-60	HARD	-	-	1 B	MODERATE
SANITARY FACILITIES				CONSTRUCTION MATERIAL										
SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY			ROADFILL			FAIR-AREA RECLAIM, THIN LAYER							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND			IMPROBABLE-EXCESS FINES							
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK			GRAVEL			IMPROBABLE-EXCESS FINES							
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE			TOPSOIL			FAIR-SLOPE							
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER			POND RESERVOIR AREA			WATER MANAGEMENT SEVERE-SLOPE							
BUILDING SITE DEVELOPMENT														
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE			EMBANKMENTS DIKES AND LEVEES			SEVERE-PIPING							
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE			EXCAVATED PONDS AQUIFER FED			SEVERE-NO WATER							
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE			DRAINAGE			DEEP TO WATER							
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION			SLOPE, ERODES EASILY							
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION			TERRACES AND DIVERSIONS			SLOPE, ERODES EASILY							
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE			GRASSED WATERWAYS			SLOPE, ERODES EASILY							



RECREATIONAL DEVELOPMENT												
CAMP AREAS	MODERATE-SLOPE, DUSTY					PLAYGROUNDS		SEVERE-SLOPE				
PICNIC AREAS	MODERATE-SLOPE, DUSTY					PATHS AND TRAILS		SEVERE-ERODES EASILY				
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)												
	CAPABILITY	WHEAT (BU)	GRASS HAY (TONS)									
	4E	35	1.5	NI	IR	NI	IR	NI	IR	NI	IR	
<i>Severe limitations (e) erosion</i>												
WOODLAND SUITABILITY												
ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORTALITY	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY COMMON TREES		TREES TO PLANT				
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK		170. PONDEROSA PINE				
<i>4 cubic yds / 1000 lbs / 1000 ft</i>												
WINDBREAKS												
SPECIES		IHT	SPECIES		IHT	SPECIES		IHT	SPECIES			
NONE												
WILDLIFE HABITAT SUITABILITY												
POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:						
GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWOOD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPEN WETLAND	WOODLAND	WETLAND	RANGELAND	
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	-	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)												
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)										
IDAHO FESCUE	FE10	45										
BLUEBUNCH WHEATGRASS	AGSP	10										
SANDBERG BLUEGRASS	POSE	5										
NARROWLEAF BALSAMROOT	BASA3	2										
ANTELOPE BITTERBRUSH	PUTR2	10										
OREGON WHITE OAK	QUGA4	5										
PONDEROSA PINE	PIPO	5										
POTENTIAL PRODUCTION (LBS./AC. DRY WT):												
FAVORABLE YEARS		950										
NORMAL YEARS		800										
UNFAVORABLE YEARS		450										

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES												
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLAS- TICITY INDEX					
0-7 IL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5					
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5					
28-44 IL, SCL		ML	A-4	0	95-100 95-100 90-95 55-75	30-35	5-10					
44 LUWB												
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL K I T	EROSION WIND FACTORS EROD. MATTER (PCT)	CORROSIVITY STEEL CONCRETE			
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43				LOW
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43				
44												
FLOODING												
HIGH WATER TABLE				CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO-POTENTIAL		
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	ACTION
NONE			>6.0					10-50	HARD			MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE		ROADFILL	FAIR-AREA RECLAIM	THIN LAYER	SLOPE
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE		GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			POND RESERVOIR AREA	SEVERE-SLOPE		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			DRAINAGE	DEEP TO WATER		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
				GRASSED WATERWAYS	SLOPE, ERODES EASILY		

RECREATIONAL DEVELOPMENT														
CAMP AREAS	SEVERE-SLOPE					PLAYGROUNDS				SEVERE-SLOPE				
PICNIC AREAS	SEVERE-SLOPE					PATHS AND TRAILS				SEVERE-ERODES EASILY				
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)														
	CAPA-BILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)											
	4E	35	1.5											
WOODLAND SUITABILITY														
ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY									
	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT.Y.	WINDTH. HAZARD	PLANT COMPET.	COMMON TREES				SITE INDEX	TREES TO PLANT			
4A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK				70	PONDEROSA PINE			
WINDBREAKS														
SPECIES		INT	SPECIES		INT	SPECIES		INT	SPECIES		INT	SPECIES		INT
NONE														
WILDLIFE HABITAT SUITABILITY														
POTENTIAL FOR HABITAT ELEMENTS														
GRAIN & SEED		GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD	WOODLD	WETLAND	RANGELD		
POOR		FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR			
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)														
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)												
IDAH0 FESCUE	FEID	45												
SANDBERG BLUEGRASS	POSE	5												
BLUEBUNCH WHEATGRASS	AGSP	10												
NARROWLEAF BALSAMROOT	BASA3	2												
ANTELOPE BITTERBRUSH	PUTR2	10												
OREGON WHITE OAK	OUGA4	5												
PONDEROSA PINE	PIPO	5												
POTENTIAL PRODUCTION (LBS./AC. DRY WT):														
FAVORABLE YEARS		950												
NORMAL YEARS		800												
UNFAVORABLE YEARS		450												

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

RECEIVED 9-25-92  
FROM ODF

Ponderosa Pine Site Classes and Site Index Table  
Compared with Cubic Foot Site Classes

	Site Index												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Site Index →													
Potential Yield Cubic Feet Per Acre Gross Cubic Foot	20	20-49			50-84		85-119		120-164		165-224		225+
Cubic Foot Site Class	7	6			5		4		3		2		1

Red Fir - Noble Fir - Pacific Silver Fir Site Index and  
Cubic Foot Site Class Table (Forest Survey)

	Site Index				
	20	30	40	50	60
Potential Yield Cubic Feet/Acre	50-84	85-119	120-164	165-224	
Cubic Foot Site Class	5	4	3	2	

Sitka Spruce Site Index and Cubic Foot  
Site Class Table (Forest Survey)

	Site Index														
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
Potential Yield Cubic Feet/Acre	20-49	50-84		85-119		120-164		165-224			225+				
Cubic Foot Site Class	6	5		4		3		2			1				



**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A



Geologic Survey was published in 1996 as part of the TLISA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLISA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLISA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLISA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."

1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm

uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

**1.3.** The following provisions apply and are addressed in the following sections.

**1.4.** Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

**1.5.** Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

**1.6.** The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_\_\_\_)

**1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.

6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception

is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built

and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most



appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

“1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - “TPR”). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197 .932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 'Forest Lands.’”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 feet north/south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.



The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other commercial agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot

sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## **2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.**

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### **2.3.1 OAR 660-004-0028(1) provides:**

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### **2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:**

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### **2.3.3 (b) “the characteristics of the adjacent lands;”**

### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the

parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911; Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the

area. The subject property has never produced merchantable timber or been logged commercially.

**2.3.4 (c)** The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice.” Webster’s New World Dictionary, 2nd College Edition, 1980. Capable means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (unabridged ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject

parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of “forest products” can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.”

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons



explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

**2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be

irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current

designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

2.3.9.6 (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

2.3.9.7 “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3** OAR 660-004-0040(6) and (7) provide:

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

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**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:



“Application for a zone change may be initiated as follows:

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C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);”

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process

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<sup>1</sup> Missing text in published version of Section 9.010.

there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject

property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

#### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

#### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

#### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

#### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

#### Goal 12 -Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

#### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

#### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5.1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property,

which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.

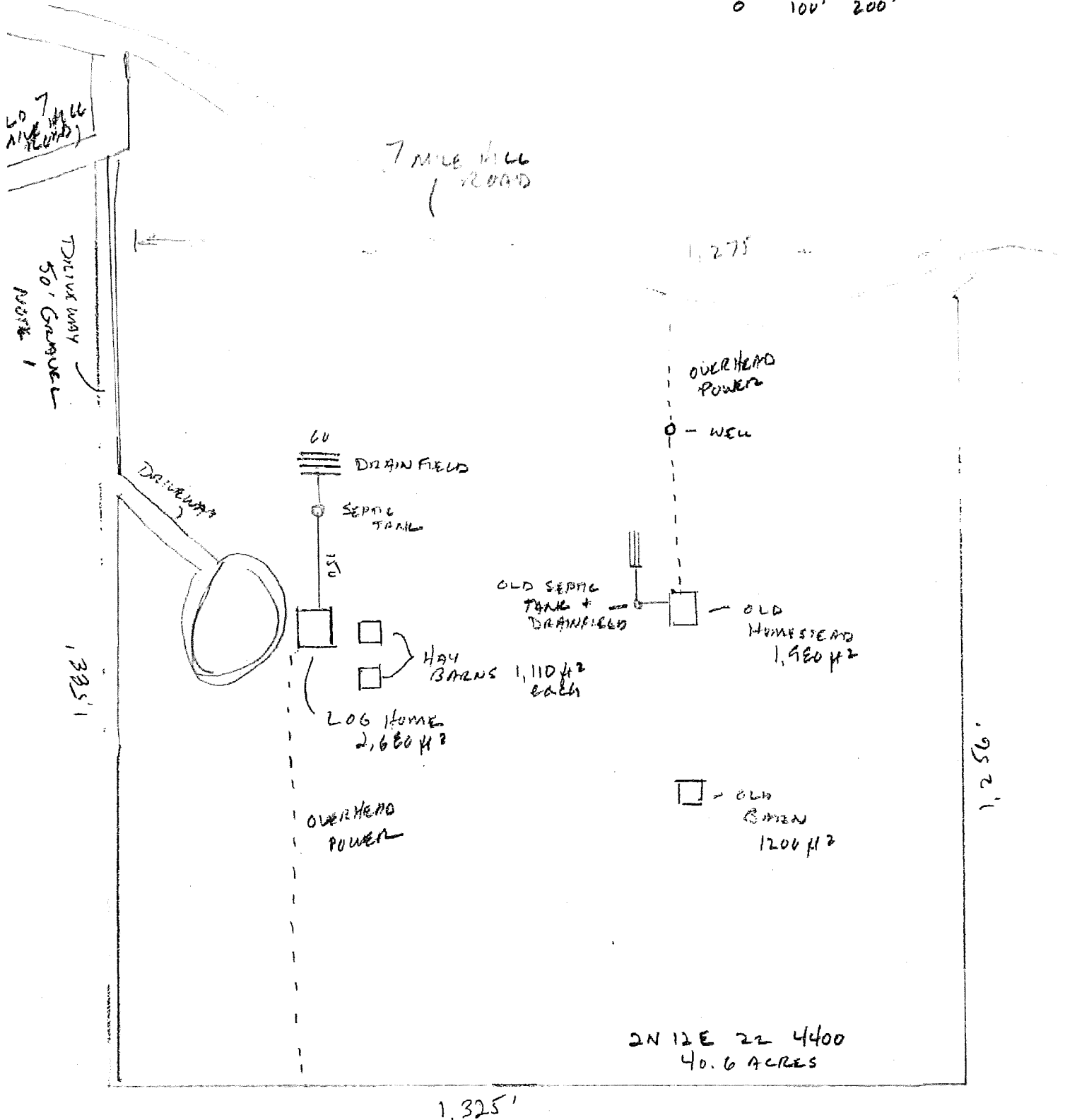


# WISON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'







RECEIVED

WVASC  
003105

24/2E-22cb

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.785)

APR 20 1987

## (1) OWNER:

Name Richard J. Murray Well Number: \_\_\_\_\_  
Address 2175 Ridge Rd WATER RESOURCES DEPT  
City The Dalles, State Oregon Zip 97058 SALEM, OREGON

## (2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

## (3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other \_\_\_\_\_

## (4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other \_\_\_\_\_

## BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 3/20 ft.  
Explosives used ☐ Yes ☒ No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE		SEAL		Amount	
meter	From To	Material	From To	sacks or pounds	
12	0 24	Bentonite	0 24	700#	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other \_\_\_\_\_ RoddedBackfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

## (6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

location of shoe(s) \_\_\_\_\_

## (7) PERFORATIONS/SCREENS:

☐ Perforations Method \_\_\_\_\_  
☐ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

## (8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing ☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done? ☐ Yes By whom NODid any strata contain water not suitable for intended use? ☒ Too little☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_

Depth of strata: \_\_\_\_\_

## (9) LOCATION OF WELL by legal description:

County Wasco Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Seven Mile Rd

## (10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

## (11) WATER BEARING ZONES:

From	To	Estimated Flow Rate	SWL
230	270	5	
334	350	2 1/2 50	150

## (12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

## (unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed \_\_\_\_\_ WWC Number 606  
Date 4/17/87

## (bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed Richard J. Murray WWC Number 606  
Date 4/17/87

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Do not write above this line)

WVAGSO

State Well No. 2N-12E-22

State/Permit No. ....

003111

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

New Well ☐ Deepening ☐ Reconditioning ☒ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

Rotary	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Jetted	<input type="checkbox"/>
Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

**CASING INSTALLED:** Threaded ☐ Welded ☒

8" Diam. from 0 ft. to 43 ft. Gage 250

6" Diam. from 0 ft. to 110 ft. Gage 250

" Diam. from ft. to ft. Gage

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name .....

Type ..... Model No. ....

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller

Yield: 60 gal./min. with 100 ft. drawdown after 2 hrs.

" " "

" " "

Baller test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m.

Well seal—Material used Cement  
Well sealed from land surface to 42 ft.  
Diameter of well bore to bottom of seal 12 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite Yellowstone  
Number of pounds of bentonite per 100 gallons  
of water 65 lbs./100 gals.  
Was a drive shoe used? ☒ Yes ☐ No Plugs X Size: location ft.  
Did any strata contain unusable water? ☐ Yes ☒ No  
Type of water? depth of strata  
Method of sealing strata off   
Was well gravel packed? ☐ Yes ☒ No Size of gravel:   
Gravel placed from  ft. to  ft.

County	Wasco	Driller's well number
NW ¼ SW ¼ Section	22 T. 2N R. 12 E	E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road

Depth at which water was first found 25 ft.  
 Static level 33 ft. below land surface. Date 7-23-74  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

Cleaned out \_\_\_\_\_  
Depth drilled \_\_\_\_\_ ft. Depth of completed well 320 ft.

**Formation:** Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

[illegible]

Work started	7-16	1974	Completed	7-22	1974
Date well drilling machine moved off of well				7-23	1974

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] William Clayton Date Oct. 30 1975  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 129

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

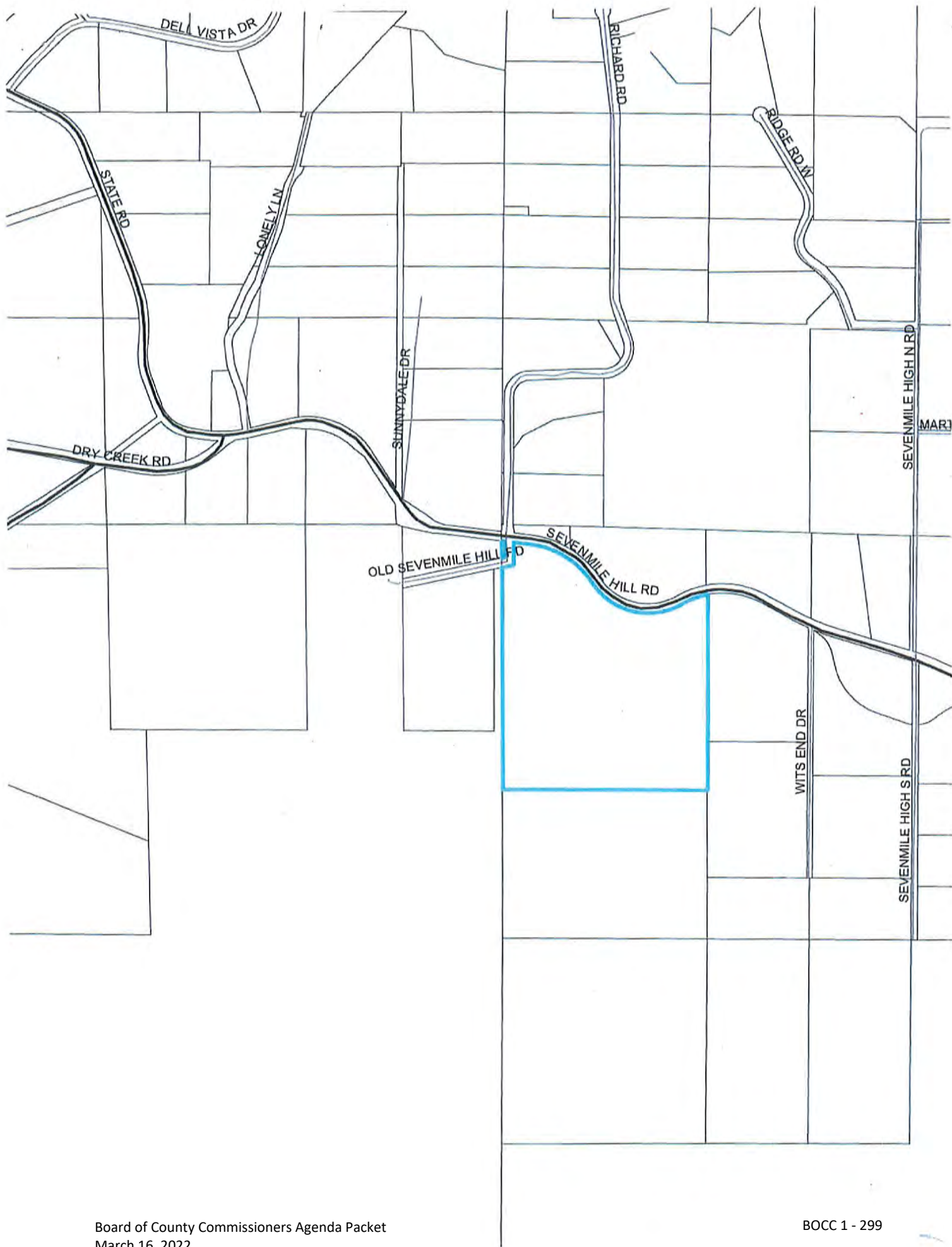
Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt 1, Box 61-A, The Dalles, Ore.

[Signed] Gilbert Clayton  
(Water Well Contractor)  
Contractor's License No. 569 Date Oct. 30, 1975

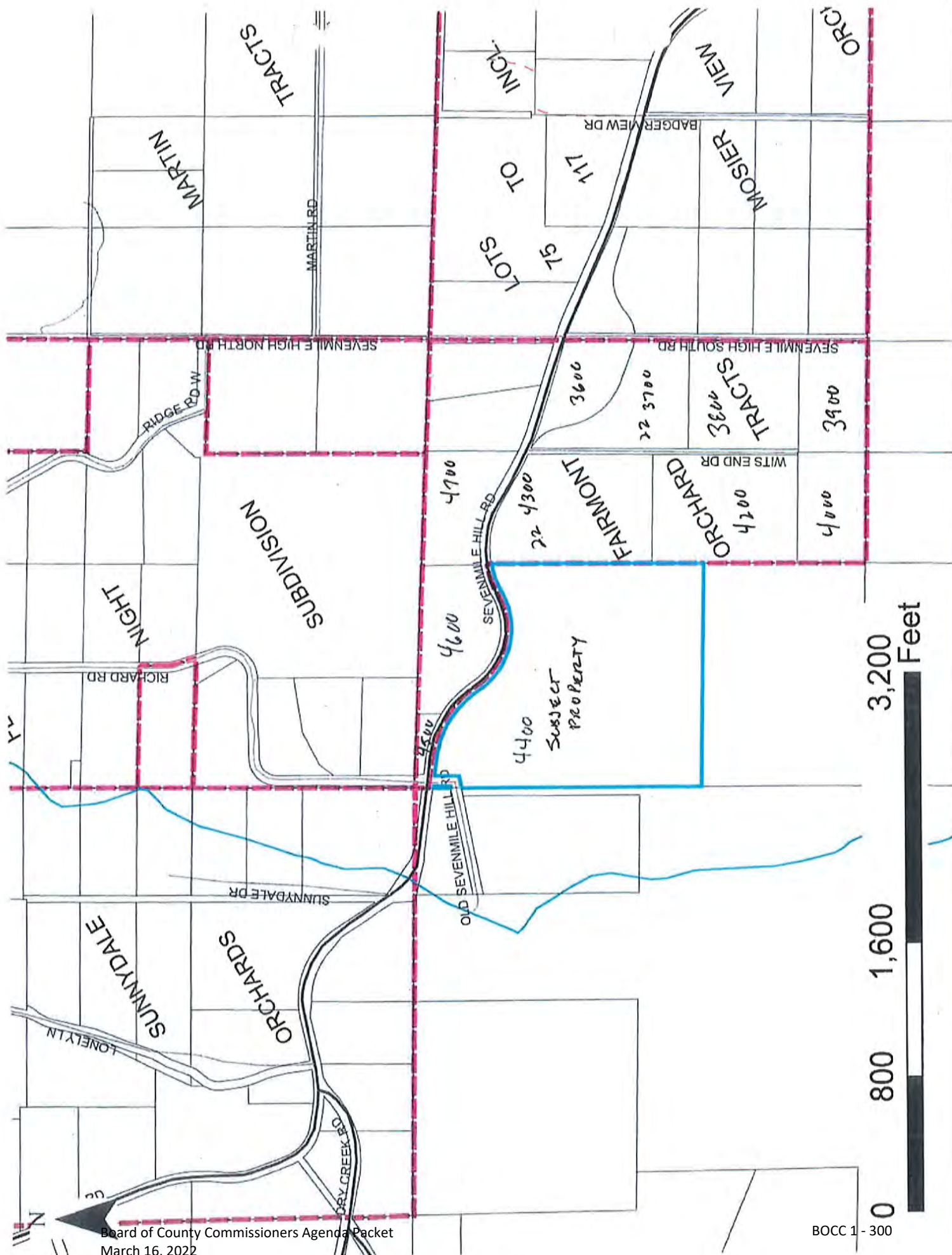
(USE ADDITIONAL SHEETS IF NECESSARY)

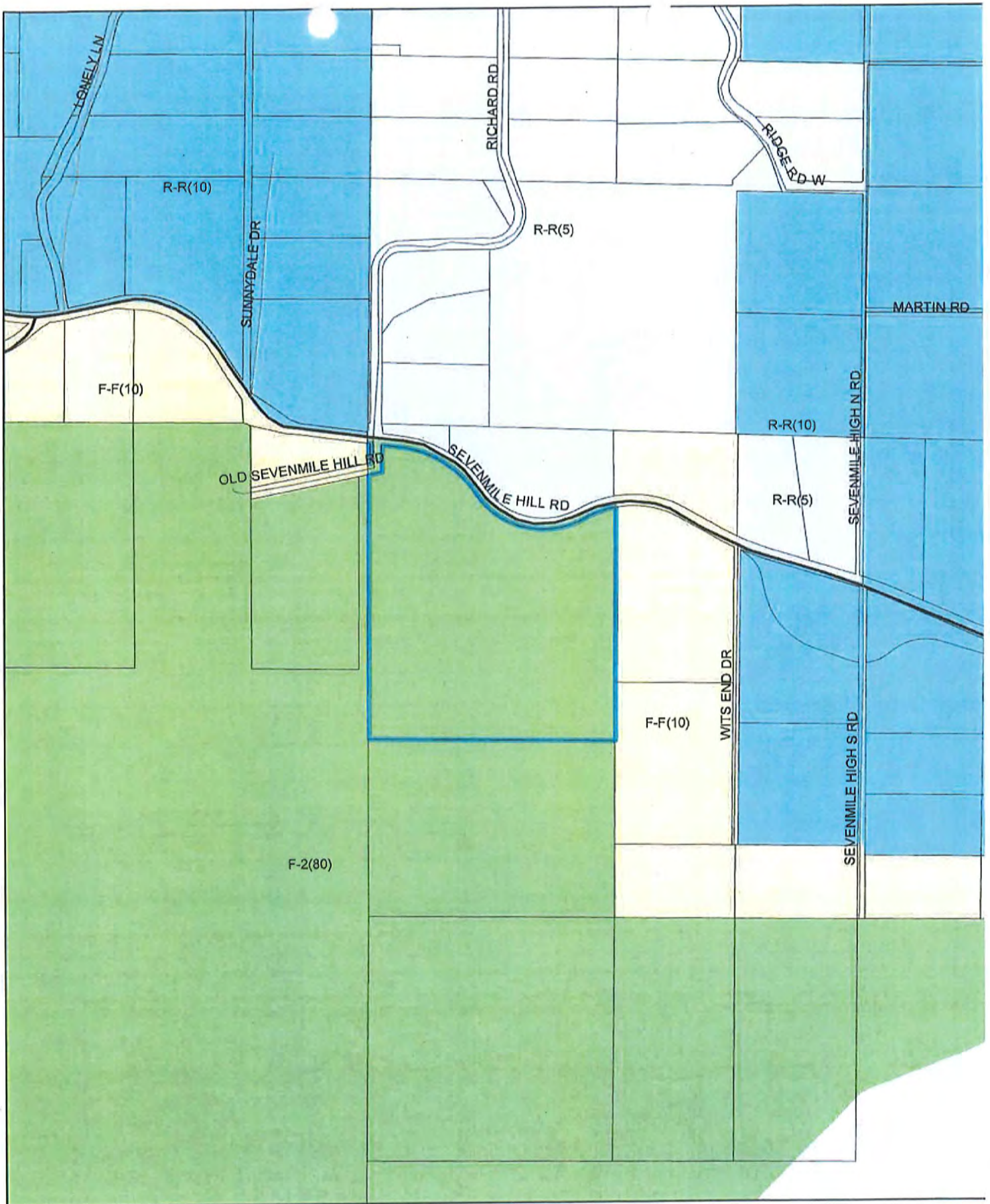
SP\*45656-119



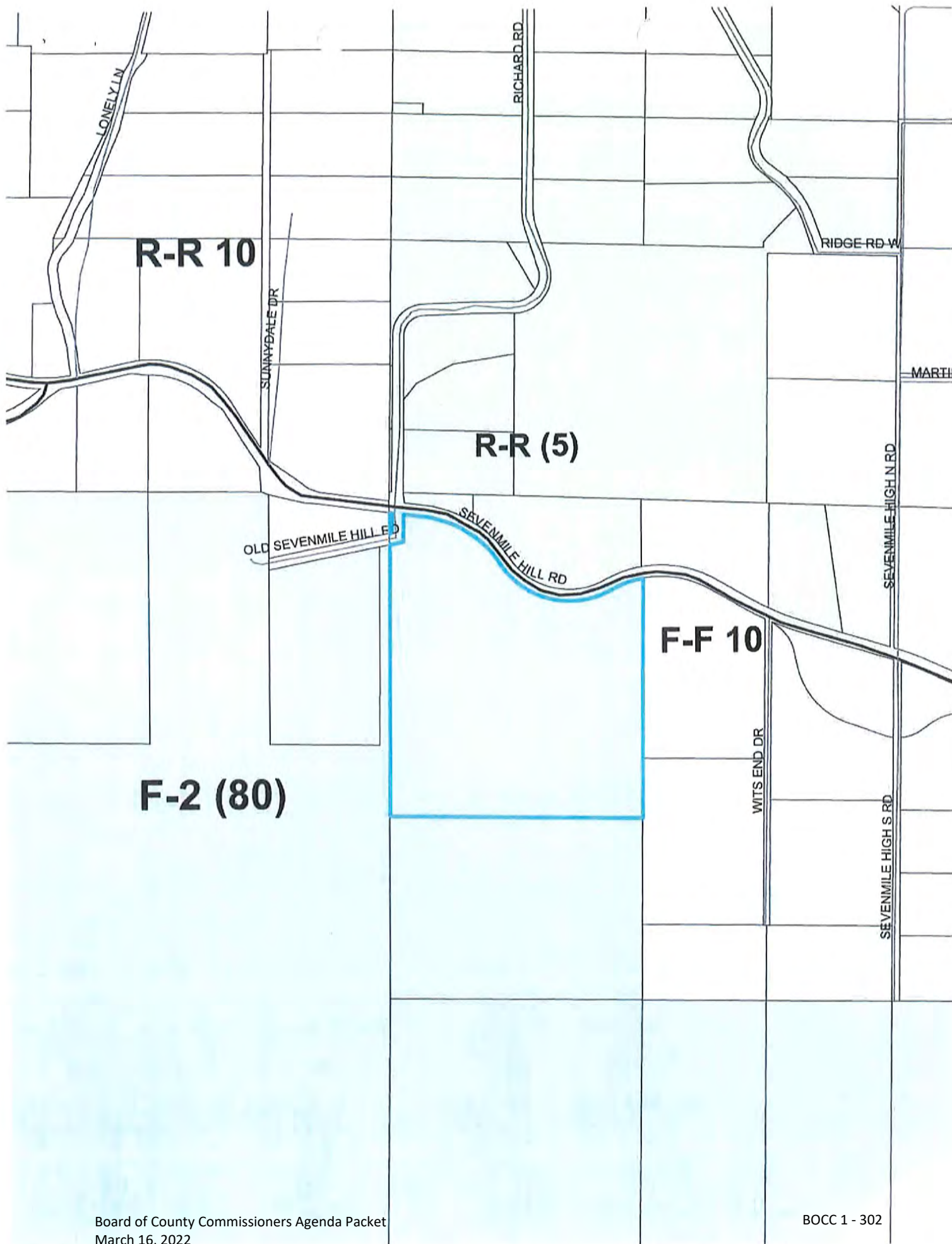








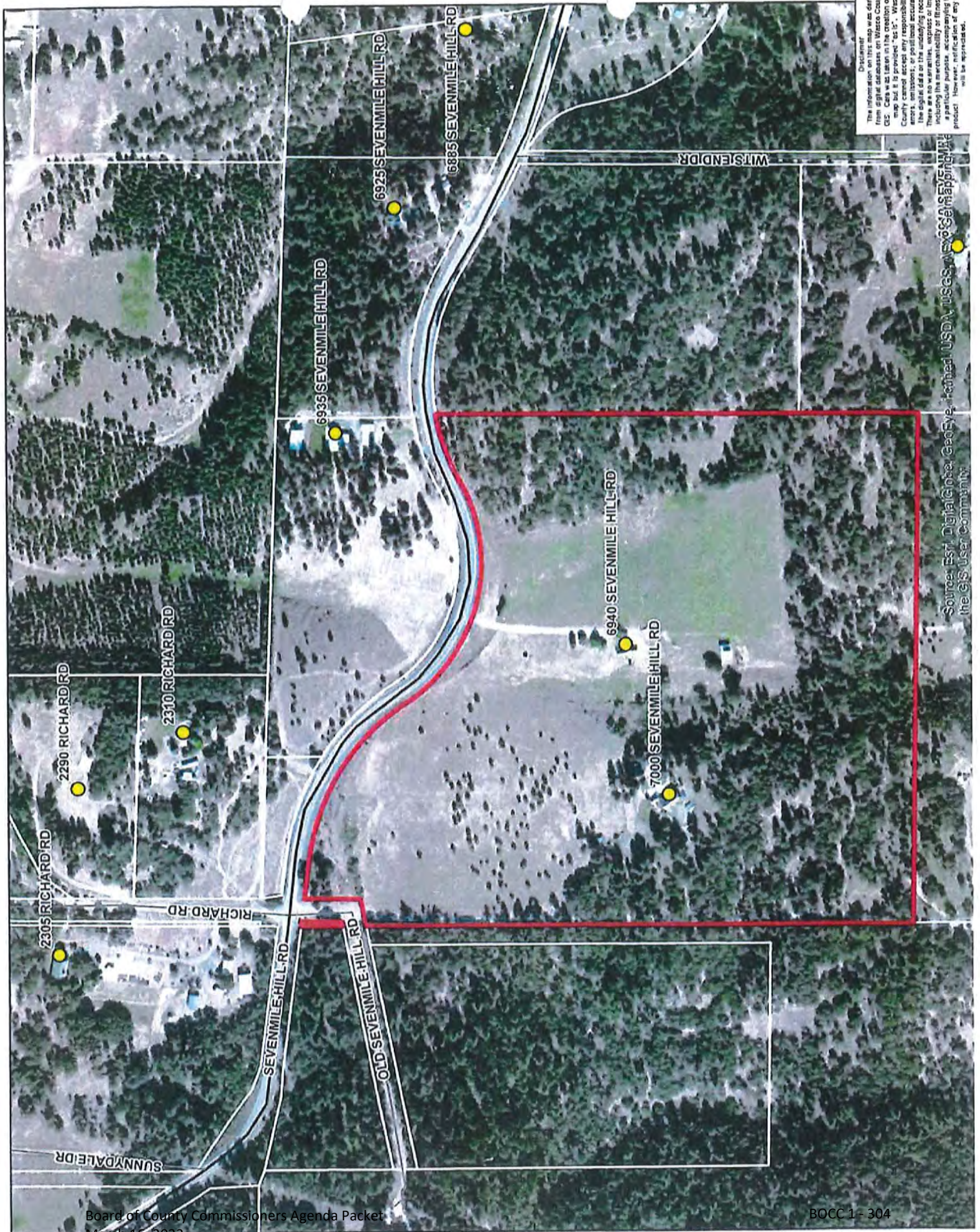












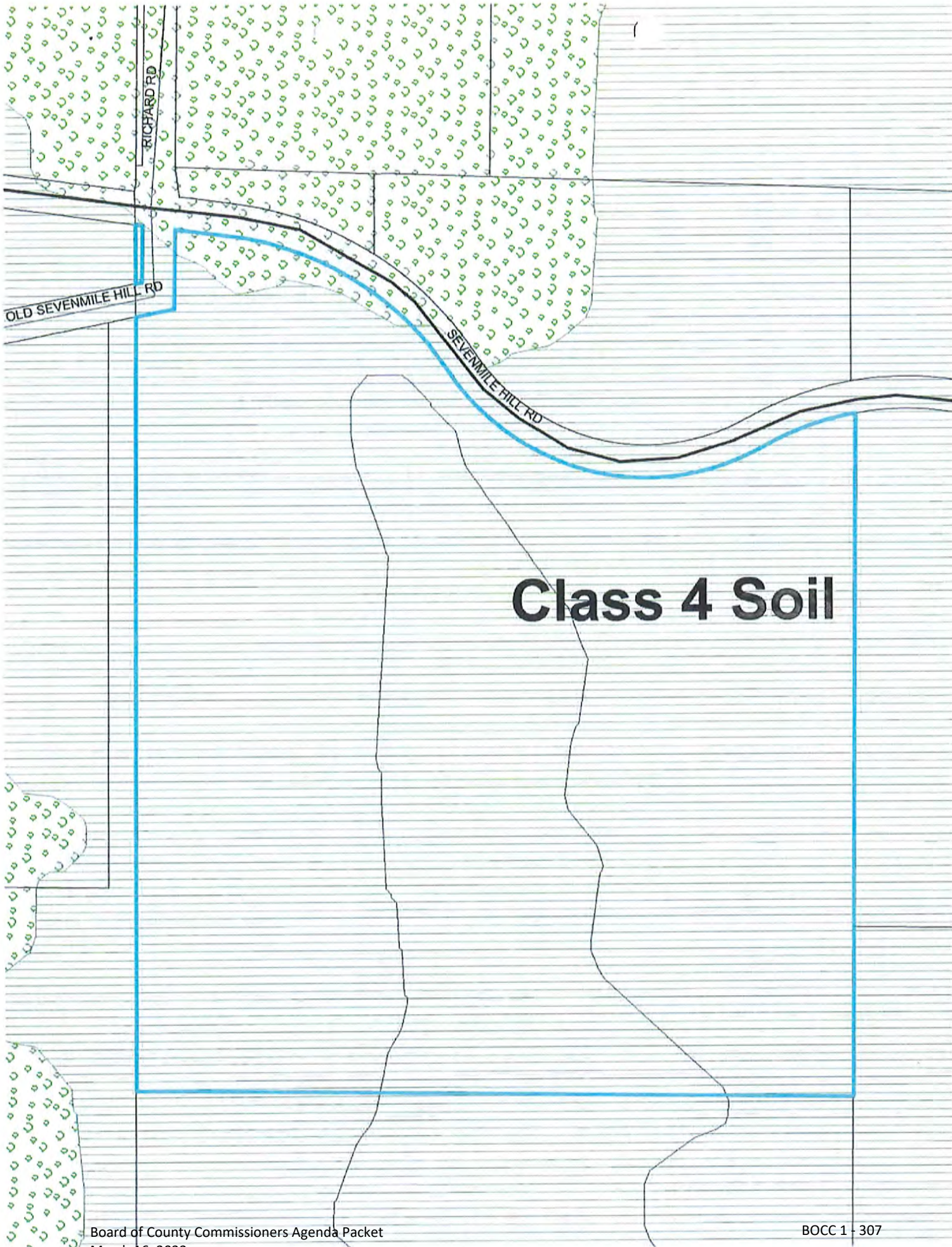




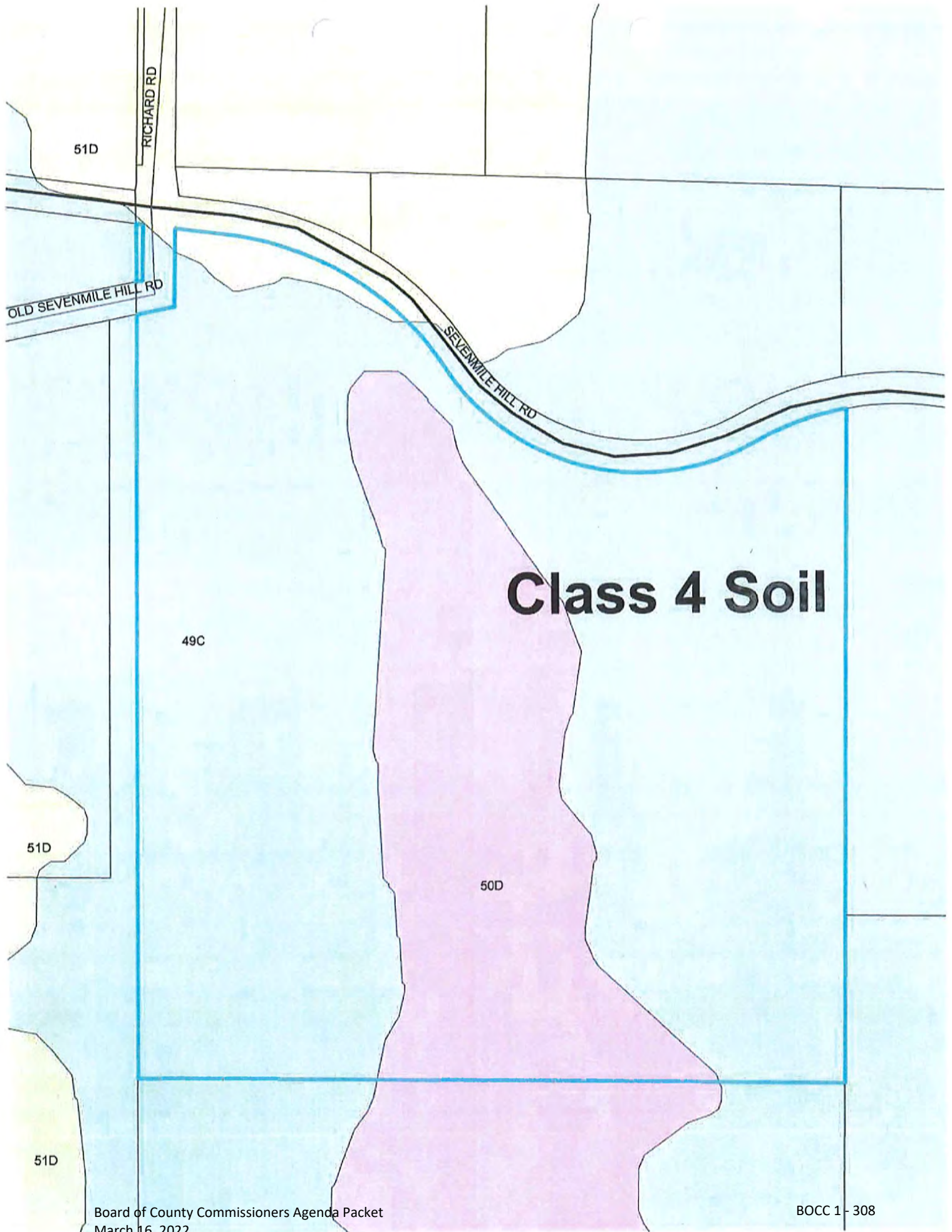




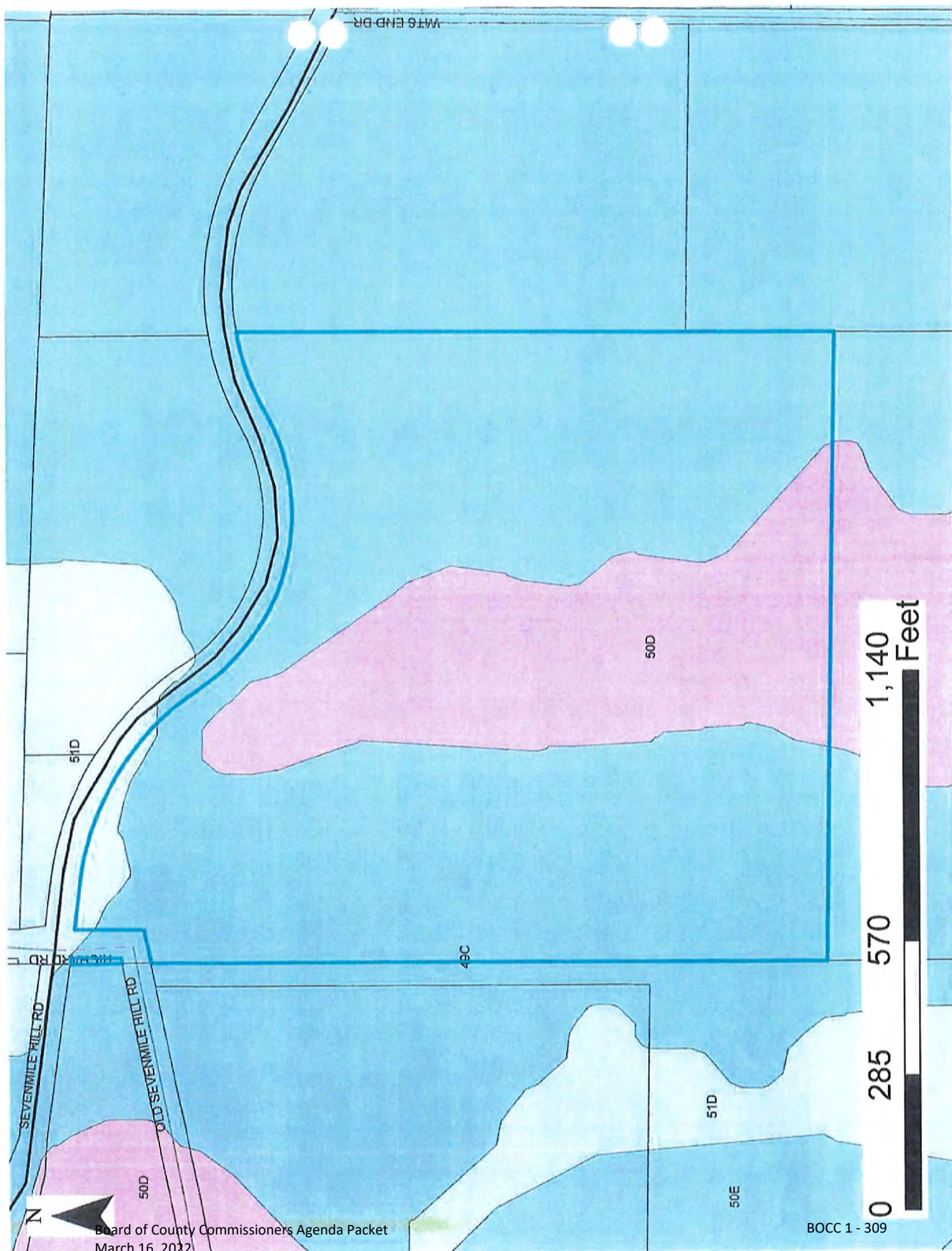












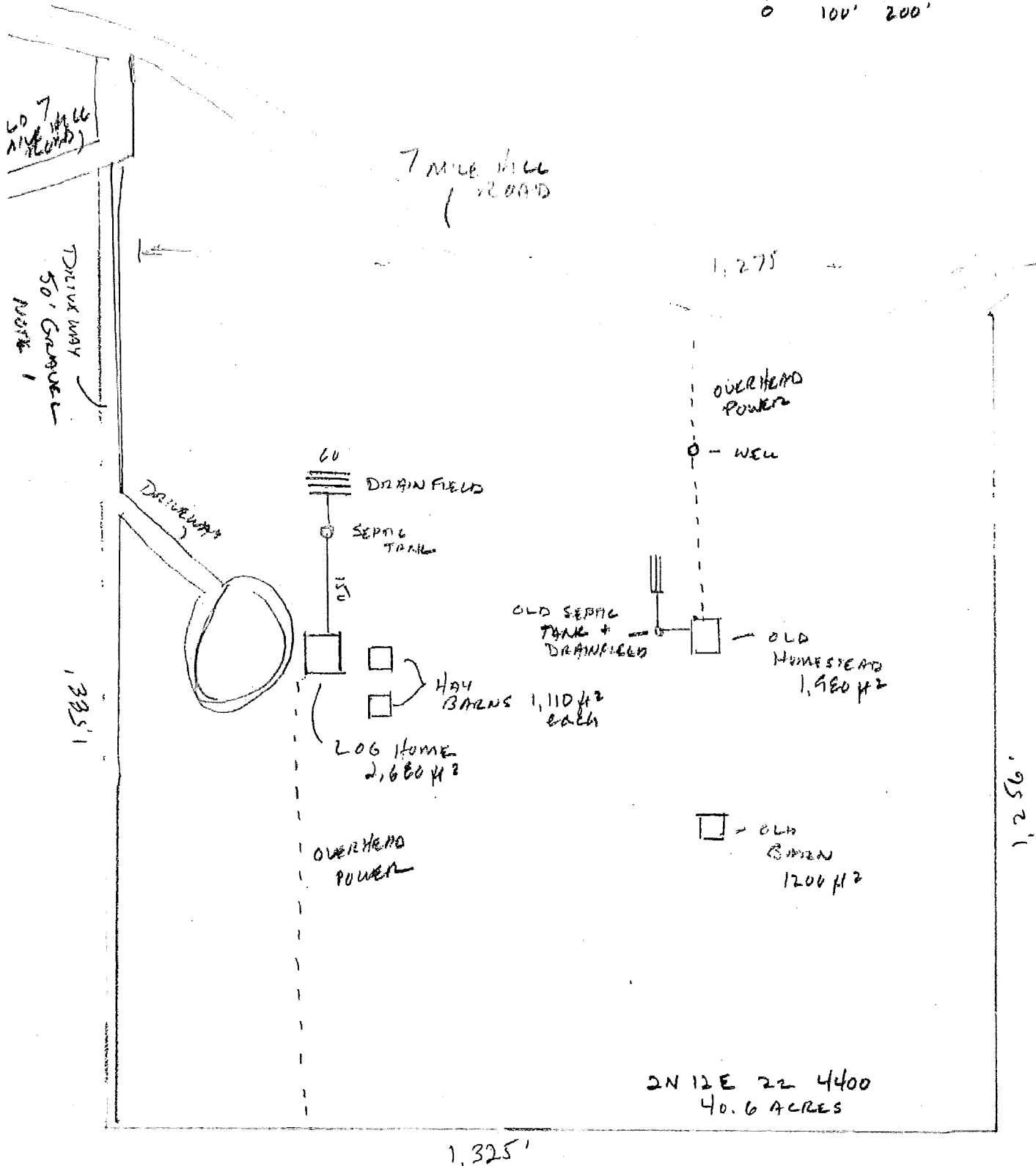


# WISON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'





## **ATTACHMENT D – EXHIBIT 4**

“Remand Letter”

# PHILLIPS REYNIER SUMERFIELD & CLINE, LLP

DEBORAH M. PHILLIPS  
RONALD H. REYNIER  
WILLIAM H. SUMERFIELD  
JULIE L. CLINE

ATTORNEYS AT LAW  
P. O. BOX 758  
718 STATE STREET  
HOOD RIVER, OREGON 97031

(541) 386-4264  
FAX: (541) 386-2557  
E-MAIL: [bill@phillipsreynier.com](mailto:bill@phillipsreynier.com)

Licensed in Oregon & Washington

July 9, 2021

Kelly Howsley-Glover, Interim Director  
Wasco County Planning Department  
2705 E. Second Street  
The Dalles, OR 97058

**Hand Delivered**

RE: **PLAQJR-15-09-0002**  
**921-18-000086-PLNG**  
**LUBA No. 2019-065**

David Wilson zone change, comprehensive plan amendment, and goal exception applications – remand hearing

Greetings,

I represent the applicant, David Wilson, in the above matters. By decision dated January 14, 2020, LUBA remanded the above zone change approval. Mr. Wilson is prepared to proceed with the remand hearing, and submits the following new evidence for consideration. Applicant also anticipates submitting written argument prior to the hearing, and appearing at the hearing to present the new evidence and make argument. All of the matters raised in this letter will be addressed in more detail in the written argument to be submitted prior to the hearing.

The remand hearing fee of \$350.00 is included with this letter.

## **Soils Assessment**

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.<sup>1</sup>

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. A complete copy of Mr.

---

<sup>1</sup> Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error.

Kitzrow's report and DLCD's review is included with this letter for inclusion in evidence and consideration on remand.

### **Aerial Photo of Subject Property and Adjoining Area**

Previous aerial photos submitted tended to focus tightly on the subject property and on the adjoining residential enclaves. There are lands west and south of the subject parcel which are zoned for resource use, and a portion of those lands are in commercial timber production. LUBA faulted the county for failing to adequately address those lands:

"The findings do not address at all the relationship of the subject property to the adjacent approximately 450 acres of F-2 zoned lands located to the west of the subject property that are in timber production and/or that possess soils suitable for forestry production, or the approximately 2,000 acres of resource land that are in forest use located immediately south of intervenor's 69-acre adjacent F-2 parcel to the south of the subject property, or the potential for resources use of the property in conjunction with the adjacent F-2 zoned properties." *LUBA decision, p. 12, lines 1-8.*

What the local decision-making bodies knew, and what LUBA failed to grasp, is that there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property and lands immediately adjacent to the south and west of the subject property. This aerial photo, taken with a much wider perspective, clearly shows the literal moonscape nature of the adjoining properties south of the subject property.

### **Physically Developed Map & Area Calculations**

On appeal, Appellants claimed, and LUBA accepted the claim, that only approximately 12 percent of the subject property was physically developed, while more than 87 percent of the property was undeveloped. LUBA cited the administrative rule discussing the necessary findings:

"Whether land has been physically developed with uses not allowed by an applicable goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception." OAR 660-004-0025(2).

While there is a comprehensive site plan in the record which formed the basis for the County's findings,<sup>2</sup> Applicant submits a more comprehensive map with this letter for additional clarity.

---

<sup>2</sup> Record on Appeal at 215.

Wasco County Planning Department  
July 9, 2021  
Wilson Remand Hearing

In the previous hearings, Applicant testified as to his knowledge of applicable buffers, and argued that common sense required recognition of reasonable buffers around such development as power lines, structures, and septic drain fields. The county decision makers accepted that argument. LUBA was not impressed by this application of common sense:

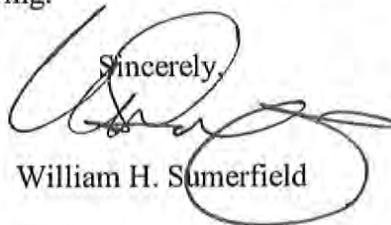
“Intervenor responds that managing the subject property for commercial forestry would require ‘extensive’ fire buffers along the eastern and northern borders that are adjacent to developed residential areas and around the existing dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points out that ‘two strings’ of overhead power lines are located on the property, and that forestry uses would require a buffer from those lines. *Id.* We understand intervenor to argue that such extensive buffers mean that the property is ‘physically developed to the extent it is no longer available’ for forestry uses.

\*\*\*\*\*

Further, we agree with petitioners that the county’s decision is not supported by substantial evidence in the record, where the evidence in the record is that the property has available at least 87 percent of its area for forestry. Intervenor does not attempt to quantify the amount of buffer that would be required to conduct forestry uses or quantify the amount by which that buffer would decrease the amount of property available for forestry uses to such an extent that the property ‘is no longer available for forestry uses.’ We conclude that the county’s findings in support of its approval of a physically developed exception are not supported by substantial evidence in the record.”

Applicant takes LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. Applicant has again discussed the powerline buffer with the power company (15’ from centerline), and has applied those in the attached calculations, in addition to a 50’ buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50’ buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Please add this letter and supporting materials to the record on remand. I look forward to working with you to schedule a hearing.

Sincerely,  
  
William H. Sumerfield

WHS/

Enclosures (*Soils Assessment, Aerial Photo, Development Map, Developed Area Calculations*)

### **Power Lines**

15' either side from center line

$$10,024 \text{ linear feet} \times 30' = 300,730 \text{ ft}^2$$

### **Structures**

50' each side from dimensions below

$$\text{Log Home } 80 \times 100 = 36,000 \text{ ft}^2$$

$$\text{Barn \#1 } 24 \times 35 = 16,740 \text{ ft}^2$$

$$\text{Barn \#2 } 30 \times 30 = 16,900 \text{ ft}^2$$

$$\text{Lean To } 16 \times 30 = 15,627 \text{ ft}^2$$

$$\text{Old Homestead Home } 55 \times 55 = 24,025 \text{ ft}^2$$

$$\text{Old Homestead Barn } 25 \times 55 = 16,875 \text{ ft}^2$$

$$\text{Total square footage developed area } 426,887 \text{ ft}^2$$

$$40 \text{ acres} = 1,742,700 \text{ ft}^2$$

$$426,887 / 1,740,700 = .2452 \text{ (24.52\% of total area)}$$

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

$$50' \text{ buffer along 7 Mile Hill Road} = 65,000 \text{ ft}^2$$

$$50' \text{ buffer along driveway easement} = 79,300 \text{ ft}^2$$

$$571,187 / 1,740,700 = .3281 \text{ (32.81\% of total area)}$$

## **ATTACHMENT D – EXHIBIT 5**

Arthur Smith, Wasco County Public Works Director

Melanie Brown, Wasco County Chief Appraiser

Hilary Foote, Oregon Land Conservation and Development (DLCD) Farm Forest Specialist



Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## Inquiry: Soil Assessment Completeness Review

5 messages

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: hilary.foote@state.or.us

Tue, Oct 26, 2021 at 9:05 AM

Good morning,

I hope this email finds you well.

My name is Daniel, a planner with Wasco County. I'm currently reviewing a land use request for a zone/map change for forest lands. The original request was approved, appealed to LUBA, and remanded back to the county in January 2020. The applicant has requested a remand hearing and has provided the following information (see attached Pdf):

- (1) Soil Assessment Completeness Review; and
- (2) Soil Survey Report & Legal Liability Release Form

Considering that I was not the original reviewing planner, and both the underlying request and soil survey are rare (at least in Wasco County), I wanted to reach out and make sure that the Soil Assessment Completeness Review Letter is all that DLCD provides. From what I've read, I believe that DLCD's role is to ensure the Soil Assessment's report is complete and consistent, and that the local jurisdiction gets to make its own determination as to the survey's accuracy and acceptability.

I appreciate your time and assistance.

Respectfully,

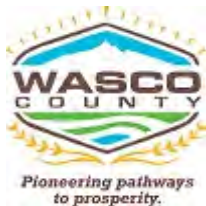
Daniel

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058



### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*





**07132021\_Remand\_Request\_Soil\_Data\_921-18-000086-PLNG.pdf**  
19529K

**FOOTE Hilary \* DLCD** <Hilary.FOOTE@dlcd.oregon.gov>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Tue, Oct 26, 2021 at 9:36 AM

Hi Daniel,

Your understanding is correct. We do not review for technical accuracy – only completeness. I note that the report indicates the property is zoned EFU, not Forest however. Is this a changed from EFU to Forest?

I'm attaching the document that is referenced in OAR 660-006-0005 for addressing data sources for determining forest productivity.

### Hilary Foote



Farm/Forest Specialist | Community Services Division  
Oregon Department of Land Conservation and Development  
635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540  
Cell: 503-881-9249 [hilary.foote@dlcd.oregon.gov](mailto:hilary.foote@dlcd.oregon.gov) | [www.oregon.gov/LCD](http://www.oregon.gov/LCD)

**From:** Daniel Dougherty <[danield@co.wasco.or.us](mailto:danield@co.wasco.or.us)>  
**Sent:** Tuesday, October 26, 2021 9:05 AM  
**To:** FOOTE Hilary \* DLCD <[Hilary.FOOTE@dlcd.oregon.gov](mailto:Hilary.FOOTE@dlcd.oregon.gov)>  
**Subject:** Inquiry: Soil Assessment Completeness Review

Good morning,

I hope this email finds you well.

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that DLCD provides. From what I've read, I believe that DLCD's role is to ensure the Soil Assessment's report is complete and consistent, and that the local jurisdiction gets to make its own determination as to the survey's accuracy and acceptability.

I appreciate your time and assistance.

Respectfully,

Daniel

--

**Daniel Dougherty | Senior Planner**

**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058

**Office Notice about COVID-19**

*Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.*

**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*



**LandUsePlanningNotes3FINAL.pdf**

197K

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: FOOTE Hilary \* DLCD <Hilary.FOOTE@dlcd.oregon.gov>

Tue, Oct 26, 2021 at 9:44 AM

Hi Hilary,

Thank you for the assistance. The subject parcel is currently zoned F-2 (80) Forest. The request is to take the parcel out of Forest and place it within our non-resource Forest-Farm F-F(10) zone.

Respectfully,

Daniel

[Quoted text hidden]

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[danield@co.wasco.or.us](mailto:danield@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

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*It is informational only and a matter of public record.*

---

**FOOTE Hilary \* DLCD** <Hilary.FOOTE@dlcd.oregon.gov>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Tue, Oct 26, 2021 at 10:05 AM

For nonresource determination, OAR [660-006-0010](#) and the PDF I attached would apply to evidence addressing a forest land determination and OAR [660-033-0030](#) and the provided soils report would be evidence addressing an agricultural land determination then.

[Quoted text hidden]

---

**Daniel Dougherty** <danield@co.wasco.or.us>  
To: FOOTE Hilary \* DLCD <Hilary.FOOTE@dlcd.oregon.gov>

Tue, Oct 26, 2021 at 10:19 AM

Excellent. Thank you so much.

Respectfully,

Daniel

[Quoted text hidden]

--



**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[danield@co.wasco.or.us](mailto:danield@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058

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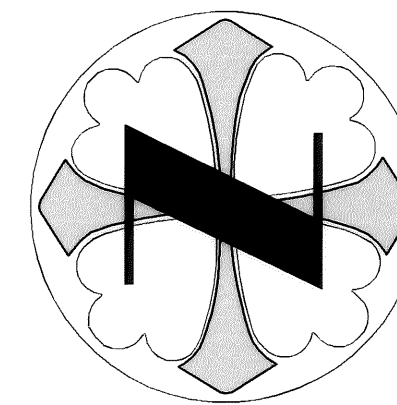
*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

## **ATTACHMENT D – EXHIBIT 6**

“Partition Plat 2017-003560”

# PARTITION PLAT



0' 100' 200' 300' 600'  
SCALE IN FEET

## WASCO COUNTY SURVEYOR'S OFFICE

Survey No. 19-062  
Filed 9/8/2017  
By RE

Document Number 2017-003560  
Plat Number 2017-0010  
Slide Number D152A

## RECORDING INFORMATION

Wasco County Official Records 2017-003560  
PLAT-PART  
Crt=1 Stn=1 WASCO COUNTY 09/08/2017 01:46 PM  
This is a no fee document NO FEE



0008391020170035600020023  
I, Lisa Gamble, County Clerk for Wasco County,  
Oregon, certify that the instrument identified  
herein was recorded in the Clerk records.



## DECLARATION:

WE, DAVID AND JOLENE WILSON,  
THE OWNERS OF THE LAND SHOWN  
HEREIN, HEREBY DECLARE THAT  
THIS DIVISION OF LAND IS A LEGAL  
PLAT PARTITIONED IN ACCORDANCE  
WITH THE PROVISIONS OF ORS  
CHAPTER 92 AND HAS BEEN MADE  
WITH OUR FREE CONSENT AND IN  
ACCORDANCE WITH OUR DESIRES  
AND BY THIS PLAT CREATE THE  
PRIVATE EASEMENT SHOWN HEREON  
FOR THE STATED PURPOSE.

David Wilson 9/7/17  
David Wilson Date  
Jolene Wilson 9/7/17  
Jolene Wilson Date

## ACKNOWLEDGEMENT:

THIS INSTRUMENT WAS  
ACKNOWLEDGED BEFORE ME ON  
THE 7th DAY OF SEPTEMBER, 2017  
BY DAVID AND JOLENE WILSON

BENJAMIN B. BESEDA  
Notary signature  
BENJAMIN B. BESEDA  
NOTARY PUBLIC - OREGON  
COMMISSION No. 951036  
MY COMMISSION EXPIRES MAY 30, 2020

I HEREBY CERTIFY THIS PARTITION  
WAS EXAMINED AND APPROVED  
AS OF THIS 8th DAY OF  
SEPTEMBER, 2017  
B. Beseda  
WASCO COUNTY SURVEYOR

I HEREBY CERTIFY THIS PARTITION  
WAS EXAMINED AND APPROVED  
AS OF THIS 8th DAY OF  
SEPTEMBER, 2017  
Jim Halpin FOR AB  
PLANNING DIRECTOR  
PLAPAR-17-05-0002

I HEREBY CERTIFY THIS PARTITION  
WAS EXAMINED AND APPROVED  
AS OF THIS 8th DAY OF  
SEPTEMBER, 2017  
Jessie Ames  
WASCO COUNTY ASSESSOR  
Jessie Ames  
WASCO COUNTY TAX COLLECTOR

SHEET 1 OF 2

S.D.H.

W.O. #15115par

19-062

BOCC 1 - 323

## OWNERS:

DAVID W. & JOLENE WILSON  
7100 SEVENMILE HILL ROAD  
THE DALLES, OREGON 97058

TAX LOTS 02N-12E-22 4100  
(ACCT. #14901, 13446) AND 4400  
(ACCT. #884, 1197) AND 02N-12E 2800  
(ACCT. #804) IN THE WEST 1/2 OF THE  
SW1/4, SECTION 22 AND IN THE  
NW1/4 OF THE NW1/4 SECTION 27,  
TOWNSHIP 2 N., RANGE 12 E., W.M.  
WASCO COUNTY, OREGON  
SEPTEMBER 7, 2017

## LEGEND:

- o CALCULATED CORNERS, NOT SET.
- REF.# SURVEY REFERENCE NUMBER
- FND. FOUND
- CALC. CALCULATED
- ( ) RECORD SURVEY OR DEED CALL
- MON. MONUMENT
- C.S.# COUNTY SURVEY NUMBER
- (E) EXISTING
- ACCT ACCOUNT NUMBER
- BK/Pg BOOK/PAGE
- R/W RIGHT OF WAY
- L.C. LAND CORNER NUMBER

TAX LOT	EXISTING PROPERTY SIZE	PROPOSED PROPERTY SIZE
2N 12E 4400	40.61 AC.	40.1 AC.±
2N 12E 22 4100	29.16 AC.	69.14 AC.±
2N 12E 0 800	40.16 AC.	0

## ENGINEER / SURVEYOR:

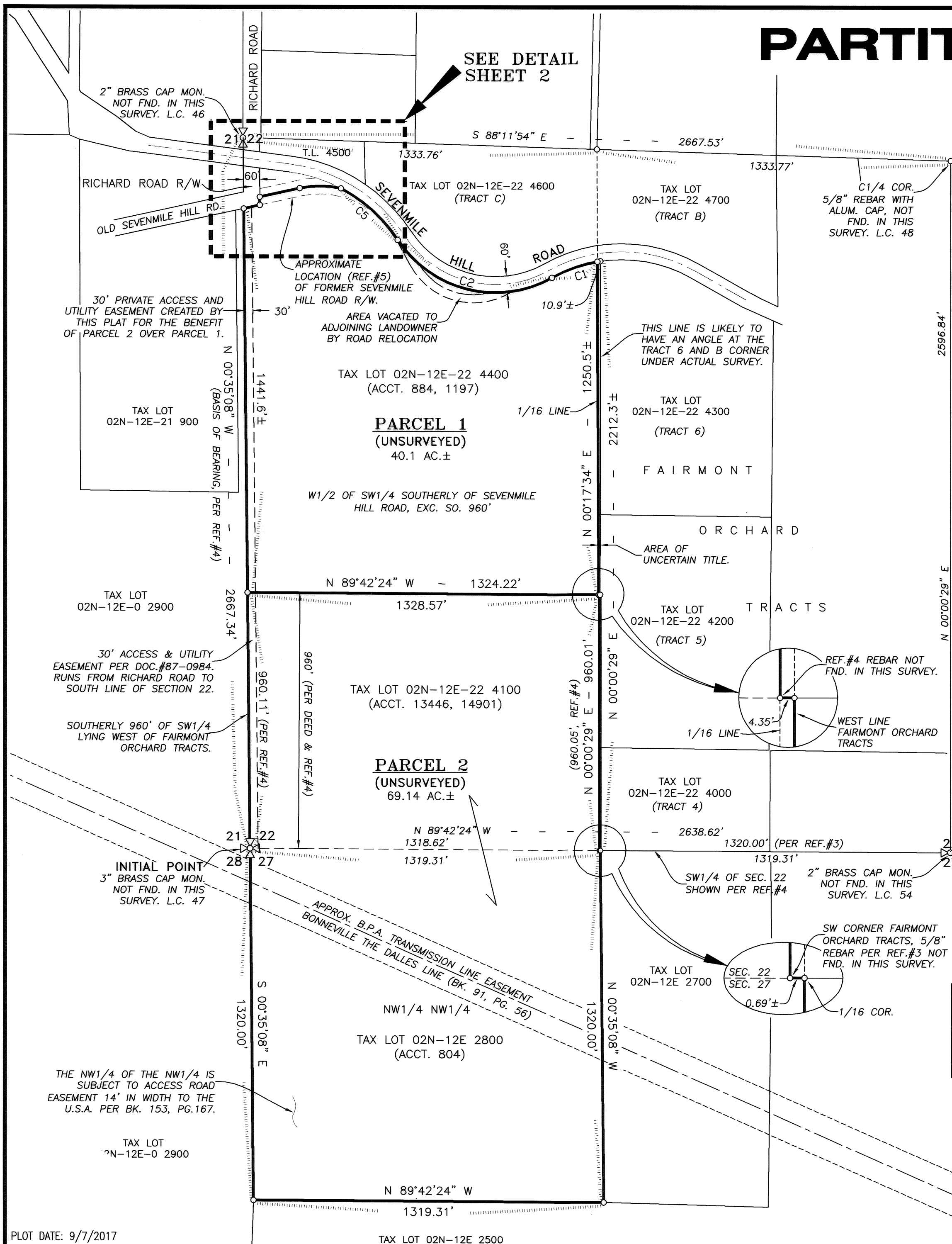
TENNESON ENGINEERING CORP.  
3775 CRATES WAY  
The Dalles, Oregon. 97058  
Ph. 541-296-9177  
FAX 541-296-6657



09/07/17  
REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 13, 1999  
BENJAMIN B. BESEDA  
50800

EXPIRES: 12/31/2017



PLOT DATE: 9/7/2017

K:\WORK\ORDERS\15100\15115\DRAWINGS\15115.Par.dwg



## LEGEND:

- o CALCULATED CORNERS, NOT SET.
- REF.# SURVEY REFERENCE NUMBER
- FND. FOUND
- CALC. CALCULATED
- ( ) RECORD SURVEY OR DEED CALL
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- (E) EXISTING
- ACCT ACCOUNT NUMBER
- BK/Pg BOOK/PAGE
- R/W RIGHT OF WAY
- L.C. LAND CORNER NUMBER

# PARTITION PLAT

TAX LOTS 02N-12E-22 4100 (ACCT. #14901, 13446) & 4400  
(ACCT. #884, 1197) AND 02N-12E 2800 (ACCT. #804)

IN THE WEST 1/2 OF THE SW1/4, SECTION 22  
AND IN THE NW1/4 OF THE NW1/4 SECTION 27,

TOWNSHIP 2 N., RANGE 12 E., W.M.

WASCO COUNTY, OREGON

SEPTEMBER 7, 2017

## WASCO COUNTY SURVEYOR'S OFFICE

Survey No. 19-062

Filed 9/8/2017

By BL

## RECORDING INFORMATION

Wasco County Official Records 2017-003560  
PLAT-PART  
Cntr=1 Stn=1 WASCO COUNTY 09/08/2017 01:46 PM  
This is a no fee document NO FEE



00083910201700035600020023  
I, Lisa Gambee, County Clerk for Wasco County,  
Oregon, certify that the instrument identified  
herein was recorded in the Clerk records.



Document Number 2017-003560

Plat Number 2017-0010

Slide Number D 152A

TAX LOT	EXISTING PROPERTY SIZE	PROPOSED PROPERTY SIZE
2N 12E 4400	40.61 AC.	40.1 AC.±
2N 12E 22 4100	29.16 AC.	69.14 AC.±
2N 12E 0 800	40.16 AC.	0

## NOTES:

- BASIS OF BEARING: BEARINGS BASED ON COUNTY SURVEY #8-147 (REFERENCE #4) BETWEEN THE SOUTHWEST CORNER AND WEST 1/4 CORNER OF SECTION 22.
- NO FIELD SURVEY WORK WAS COMPLETED FOR THIS PARTITION.
- ZONING: F-2(80) IN WASCO COUNTY. *Forest DB.*  
COMPREHENSIVE PLAN DESIGNATION: *EXCLUSIVE FARM USE* IN WASCO COUNTY; *ALSO EPD-8 (LOW ELEVATION WINTER RANGE)*
- PARCEL 1 CONTAINS AN EXISTING APPROVED ON-SITE SEWAGE DISPOSAL SYSTEM. PARCEL 2 HAS BEEN EVALUATED AND APPROVED FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM. THE APPROVAL IS ON FILE WITH THE NORTH CENTRAL PUBLIC HEALTH DISTRICT.
- SEPTIC EVALUATIONS HAVE BEEN PREVIOUSLY COMPLETED FOR EACH SINGLE FAMILY DWELLING AND ARE ON FILE WITH THE NORTH CENTRAL PUBLIC HEALTH DISTRICT.
- THE SUBJECT PROPERTY DEED DESCRIPTION ORIGINATED PRIOR TO THE SEVENMILE HILL ROAD RELOCATION IN 1989 SO THEREFORE REFERS TO THE ORIGINAL ROAD LOCATION. WE FIND NO RECORD OF CONVEYANCE OF THIS AREA TO THE SUBJECT PROPERTY.
- EASEMENTS OF RECORD SHOWN OR NOTED PER AMERITITLE STATUS OF RECORD TITLE REPORT COMPLETED UNDER TITLE NUMBER 187102, DATED AUGUST 17, 2017.
- THE WEST 1/2 OF THE SW1/4 OF SECTION 22 LYING SOUTHERLY OF SEVENMILE HILL ROAD IS SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP. PER DOCUMENT #87-1847. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- SECTION 22 SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP. PER DOCUMENT #90-1977. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- THE SOUTHERLY 960 FEET OF THE SW1/4 OF SECTION 22 LYING WESTERLY OF FAIRMONT ORCHARDS AND THE NW1/4 OF THE NW1/4 OF SECTION 27 SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP PER DOC. #96-3346. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- THE ORIGIN AND LOCATION OF THE RICHARD ROAD RIGHT OF WAY IN THE NW1/4 OF SECTION 22 IS UNCLEAR. IT IS SHOWN 60 FEET WIDE WITH A 1 FOOT OFFSET EAST FROM THE SECTION LINE AS SHOWN ON THE PLAT OF FLYBY NIGHT SUBDIVISION.

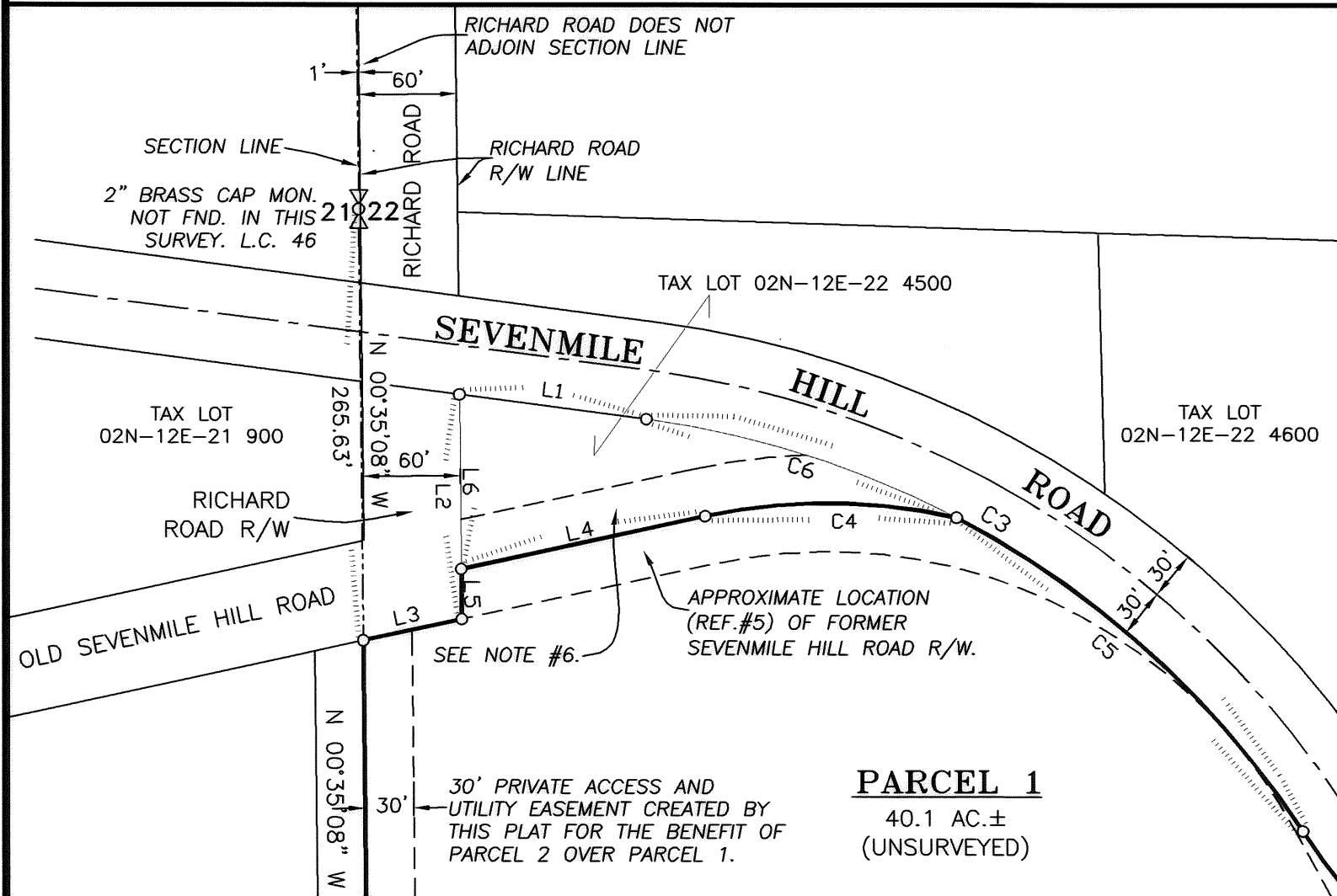
## OWNERS:

DAVID W. & JOLENE WILSON  
7100 SEVENMILE HILL ROAD  
THE DALLES, OREGON 97058

LINE	BEARING	DISTANCE
L1	N 82°31'43" W	117'±
L2	N 00°35'08" W	138.3'±
L3	N 77°45'00" E	62'±
L4	S 77°45'00" W	154.2'±
L5	N 00°35'08" W	30.6'±
L6	S 00°35'08" E	108'±

## REFERENCES:

- PLAT OF FAIRMONT ORCHARD TRACTS RECORDED AUGUST 3, 1911 SLIDE A-028
- SEVENMILE HILL ROAD AND "STATE" ROAD SECTIONS BY WASCO COUNTY ROAD DEPT. SUMMER 1989 C.S. #H-03-0
- SURVEY FOR LARRY BLACK BY BISHOP SURVEYING, INC. SEPTEMBER 14, 1984 C.S. #5-108
- RECORD OF SURVEY FOR DON HENDERSHOT BY WYEAST SURVEYS SEPTEMBER 7, 1993 C.S. #8-147



## DETAIL

SCALE: 1" = 100'

## NARRATIVE:

THE PURPOSE OF THIS SURVEY WAS TO PARTITION TAX LOTS 02N-12E-22 4100 AND 4400 AND 02N-12E 2800 INTO TWO LEGAL LOTS OF RECORD. THE SUBJECT PROPERTY LIES IN THE SOUTHWEST 1/4 OF SECTION 22 AND NORTHWEST 1/4 OF SECTION 27, TOWNSHIP 2 NORTH, RANGE 12 EAST, W.M. PRIOR TO COMPLETING THE MAPPING REQUIRED FOR THIS PROJECT, RESEARCH WAS MADE TO OBTAIN COPIES OF SURVEYS OR PLATS COMPLETED ON OR IN THE VICINITY OF THE SUBJECT PROPERTY. PRIOR SURVEYS UTILIZED AS A PART OF THE RESOLUTION SHOWN HEREON ARE LISTED AS REFERENCES. ALSO AS A PART OF THE RESEARCH FOR THIS PARTITION, A COPY OF THE CURRENT DEED AND A CURRENT TITLE REPORT FOR THE SUBJECT PROPERTY WAS OBTAINED.

THE SUBJECT PROPERTY WAS DIVIDED INTO TWO PARCELS AS SHOWN PER LANDOWNER'S DIRECTION AND IS CONSISTENT WITH THE WASCO COUNTY PLANNING DEPARTMENT NOTICE OF DECISION APPROVING THIS PARTITION. BOTH PARCELS ARE OVER 10 ACRES IN SIZE. THE MAPPING SHOWN HEREON IS PER DEED CALLS, ASSESSOR'S MAP, AND OTHER MAPS OF RECORD. THE SUBJECT PROPERTY AND PARTITION PARCELS BEING OVER 10 ACRES IN SIZE AND DESCRIBED BY ALIQUOT SECTIONAL SUBDIVISION, FIRM DEED CALLS, AND PUBLIC ROAD RIGHTS-OF-WAY WERE NOT SURVEYED.

EASEMENTS OF RECORD, AS INDICATED BY THE TITLE REPORT, ARE NOTED OR MAPPED. THIS PARTITION CREATES THE PRIVATE ACCESS AND UTILITY EASEMENT ALONG THE WEST LINE OF PARCEL 1 AS SHOWN HEREON. THE MAP ALSO NOTES THE POSSIBLE GAP BETWEEN THE EAST LINE OF PARCEL 1 AND THE WEST LINE OF FAIRMONT ORCHARD TRACTS. THE EAST LINE OF PARCEL 1 IS THE EAST LINE OF THE WEST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 22. THE PLAT OF FAIRMONT ORCHARDS IS NOT CLEAR IN WHETHER ITS WEST LINE IS ALSO THE WEST LINE OF THE EAST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 22. THIS POSSIBLE GAP IS CONSISTENT WITH THAT SHOWN ON REFERENCE #4. THIS LOCATION IS LABELED AS "AREA OF UNCERTAIN TITLE" ON THE FACE OF THE MAP.

NO FIELD WORK WAS CONDUCTED FOR THIS PARTITION AND NO MONUMENTS WERE SET.

## SURVEYOR'S CERTIFICATE:

I, BENJAMIN B. BESEDA, REGISTERED LAND SURVEYOR #50800 IN THE STATE OF OREGON, BEING FIRST DULY SWORN, DEPOSE AND SAY THAT I HAVE CORRECTLY EXECUTED, ACCORDING TO ORS CHAPTER 92 AND THE WASCO COUNTY LAND USE DEVELOPMENT ORDINANCE, A PARTITION PLAT LYING IN THE SOUTHWEST 1/4 OF SECTION 22 AND THE NORTHWEST 1/4 OF SECTION 27, TOWNSHIP 2 NORTH, RANGE 12 EAST, WILLAMETTE MERIDIAN, WASCO COUNTY, OREGON. THE INITIAL POINT FOR SAID PARTITION IS THE SOUTHWEST CORNER OF SAID SECTION 22. THE PLATTED PROPERTY IS DESCRIBED AS FOLLOWS:

### SECTION 22

THE SOUTHERLY 960 FEET OF THE SOUTHWEST 1/4 OF SAID SECTION 22 LYING WEST OF THE WEST LINE OF THE FAIRMONT ORCHARD TRACTS.

THE WEST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 22 LYING SOUTHERLY OF SEVENMILE HILL ROAD, EXCEPTING THEREFROM THE SOUTH 960 FEET THEREOF.

### SECTION 27

THE NORTHWEST 1/4 OF THE NORTHWEST 1/4.

CONTAINS 109.75 ACRES, MORE OR LESS.

## ENGINEER / SURVEYOR:

TENNESON ENGINEERING CORP.  
3775 CRATES WAY  
The Dalles, Oregon. 97058  
Ph. 541-296-9177  
FAX 541-296-6657



09/07/17  
REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 13, 1999  
BENJAMIN B. BESEDA  
50800

EXPIRES: 12/31/2017

SHEET 2 OF 2

W.O. #15115par

19-062



## **ATTACHMENT D – EXHIBIT 7**

*Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065

BEFORE THE LAND USE BOARD OF APPEALS  
OF THE STATE OF OREGON

SHEILA DOOLEY and JILL BARKER,  
*Petitioners,*

vs.

WASCO COUNTY,  
*Respondent,*

and

DAVID WILSON,  
*Intervenor-Respondent.*

LUBA No. 2019-065

FINAL OPINION  
AND ORDER

Appeal from Wasco County.

Mike J. Sargetakis, Portland, filed the petition for review and a reply brief, and argued on behalf of petitioners. With him on the brief was Oxbow Law Group.

Meredith J. Barnes, The Dalles, filed a response brief and argued on behalf of respondent. With her on the brief was Bradley V. Timmons and Timmons Law PC.

William H. Sumerfield, Hood River, filed a response brief and argued on behalf of intervenor-respondent.

RYAN, Board Member; ZAMUDIO, Board Chair; RUDD, Board Member, participated in the decision.

REMANDED

01/14/2020

1           You are entitled to judicial review of this Order. Judicial review is  
2   governed by the provisions of ORS 197.850.

**NATURE OF THE DECISION**

Petitioners appeal a decision by the board of county commissioners approving physically developed and irrevocably committed exceptions to Statewide Planning Goal 4 (Forest Lands), together with a comprehensive plan map amendment from Forest to Forest-Farm and a zone map amendment from Forest (F-2) (80) to Forest Farm (F-F) (10).

**MOTION TO INTERVENE**

David Wilson, the applicant below (intervenor) moves to intervene on the side of the respondent. No party opposes the motion and it is allowed.

**MOTION TO AMEND PETITION FOR REVIEW**

OAR 661-010-0030(4)(d) requires that each assignment of error state the standard of review. In its response brief, the county objected to petitioners' failure to comply with OAR 661-010-0030(4)(d) in their first, third and fourth assignments of error. Petitioners then moved to amend their petition pursuant to OAR 661-010-0030(6) to include sections stating the standard of review for those assignments of error.

We conclude that petitioners' failure to specifically state the standard of review in their first, third and fourth assignments of error is a technical violation that did not prejudice the substantial rights of any other participant in this appeal. OAR 661-010-0005. Accordingly, an amended petition for review is unnecessary and petitioners' motion is denied.

1   **FACTS**

2           The subject property is approximately 40 acres and was created pursuant  
3   to a partition approved in 2017. The property slopes from approximately six  
4   percent on the north to approximately 10 percent on the south. Record 20. The  
5   property includes a single-family dwelling and an accessory structure on the  
6   western half of the property, both of which are served by a driveway running  
7   along the western property line; a second dwelling that is no longer used as a  
8   dwelling that was served by a driveway running through the center of the  
9   property; a pump house, a barn and two wells. Record 18. The property contains  
10   two soil types, 49C and 50D, which are both Class IV soils in 4A, subclass A.  
11   The site index for both soil types is 70, which has a 20 to 49 cubic feet per acre  
12   per year potential yield for Ponderosa Pine. Record 19, 1331. The property  
13   includes primarily Oregon White Oak trees and Ponderosa Pine, as well as a few  
14   Douglas fir trees. Record 20. The remaining unforested portion of the property is  
15   grass. An aerial image indicates several acres planted in crops on the western half  
16   of the property. Record 20.

17           The subject property is adjacent to Seven Mile Hill Road.<sup>1</sup> To the north of  
18   Seven Mile Hill Road and to the east of the subject property are lots of  
19   approximately five acres in size and zoned Rural-Residential (R-R) (5), R-R (10)

---

<sup>1</sup> A vacant 0.7-acre property owned by the county and zoned F-2 separates part of the subject property from Seven Mile Hill Road. Record 24.

1 and F-F (10) that are part of larger subdivisions that largely pre-date zoning.<sup>2</sup> To  
2 the south of the subject property is a 69-acre parcel zoned Forest F-2 (80) (F-2)  
3 that is owned by intervenor and that includes a single family dwelling and  
4 accessory structures. A portion of that 69-acre parcel is currently in farm use.  
5 Record 20. To the south of that 69-acre parcel for approximately five miles is that  
6 is zoned F-2 and managed for forestry or grazing. Record 25.

7 To the west of the subject property lies a split-zoned 16.3-acre property  
8 with 5 acres zoned F-F (10), and the remaining approximately 11 acres zoned F-  
9 2, and a 439-acre parcel zoned F-2 and managed for commercial forestry. All of  
10 the parcels that are immediately adjacent to west, east and south of the subject  
11 property possess similar soil types and slopes as the subject property.

12 Intervenor applied for an exception to Statewide Planning Goal 4 (Forest  
13 Lands) and a concurrent comprehensive plan amendment from Forest to Forest-  
14 Farm and a zone map amendment from F-2 to F-F (10). The F-2 zone is a forest  
15 resource zone. The F-F (10) zone is a non-resource zone. Wasco County Land  
16 Use and Development Ordinance 3.221. The board of county commissioners  
17 approved the application, and this appeal followed.

---

<sup>2</sup> Two subdivisions were platted in 1911 and 1912. One subdivision was  
platted in 1979. Record 24.

1   **FIRST, SECOND AND THIRD ASSIGNMENTS OF ERROR**

2           Because the subject property is designated “Forest,” approval of the  
3   comprehensive plan amendment and zone change required the board of  
4   commissioners to approve an exception to Goal 4 under Goal 2 and OAR chapter  
5   660, division 4. The board of commissioners approved both an irrevocably  
6   committed exception and a physically developed exception. Petitioners’ first,  
7   second, and third assignments of error contain largely overlapping and repetitive  
8   arguments that challenge the county’s irrevocably committed exception, and for  
9   that reason we address those assignments of error together.

10          **A.   Introduction**

11          An irrevocably committed exception may be approved where “[t]he land  
12   subject to the exception is irrevocably committed as described by Land  
13   Conservation and Development Commission rule to uses not allowed by the  
14   applicable goal because existing adjacent uses and other relevant factors make  
15   uses allowed by the applicable goal impracticable[.]” ORS 197.732(2)(b); OAR  
16   660-004-0028(1). Under OAR 660-004-0028(2), whether land is irrevocably  
17   committed “depends on the relationship between the exception area and the lands  
18   adjacent to it,” considering the characteristics of the exception area, adjacent  
19   lands, the relationship between the two, and other relevant factors.<sup>3</sup> OAR 660-

---

<sup>3</sup> OAR 660-004-0028(2) provides:



1 004-0028(6) requires that the local government’s findings consider a miscellany  
2 of factors, including existing adjacent uses; existing public facilities; parcel size  
3 and ownership patterns in the area; neighborhood and regional characteristics;  
4 natural or man-made features separating the exception area from adjacent  
5 resource land; and other relevant factors, in order to reach its ultimate conclusion  
6 that the property is or is not irrevocably committed.<sup>4</sup> The local government need

---

“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- “(a) The characteristics of the exception area;
- “(b) The characteristics of the adjacent lands;
- “(c) The relationship between the exception area and the lands adjacent to it; and
- “(d) The other relevant factors set forth in OAR 660-004-0028(6).”

<sup>4</sup> OAR 660-004-0028(6) provides:

- “(6) Findings of fact for a committed exception shall address the following factors:
  - “(a) Existing adjacent uses;
  - “(b) Existing public facilities and services (water and sewer lines, etc.);
  - “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

---

“(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the goals were made at the time of partitioning or subdivision. Past land divisions made without application of the goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors makes unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created and uses approved pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for the subject parcels or land adjoining those parcels.

“(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are

1 not demonstrate that every use allowed by the applicable goal is “impossible,”  
2 but must demonstrate that, as relevant here, “[p]ropagation or harvesting of a  
3 forest product” and “[f]orest operations or forest practices as specified in OAR  
4 660-006-0025(2)(a)” are impracticable. OAR 660-004-0028(3)(b)-(c).  
5 Committed exceptions “must be based on facts illustrating how past development  
6 has cast a mold for future uses.” *1000 Friends of Oregon v. LCDC (Curry Co.)*,  
7 301 Or 447, 501, 724 P2d 268 (1986) (quoting *Halvorson v. Lincoln Co.*, 14 Or  
8 LUBA 26, 31 (1985)).

9 ORS 197.732(6)(b) provides that LUBA “shall determine whether the  
10 local government’s findings and reasons demonstrate” that the standards of an

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developed, clustered in a large group or clustered  
around a road designed to serve these parcels.  
Small parcels in separate ownerships are not  
likely to be irrevocably committed if they stand  
alone amidst larger farm or forest operations, or  
are buffered from such operations;

“(d) Neighborhood and regional characteristics;

“(e) Natural or man-made features or other impediments  
separating the exception area from adjacent resource  
land. Such features or impediments include but are not  
limited to roads, watercourses, utility lines, easements,  
or rights-of-way that effectively impede practicable  
resource use of all or part of the exception area;

“(f) Physical development according to OAR 660-004-  
0025; and

“(g) Other relevant factors.”

1 irrevocably committed exception “have or have not been met[.]” Contrary to the  
2 county’s argument in its response brief, we owe no deference to the local  
3 governing body’s decision or any interpretation of the relevant statutes and rules.  
4 *Kenagy v. Benton County*, 115 Or App 131, 838 P2d 1076, *rev den*, 315 Or 271  
5 (1992). Our usual tripartite approach for reviewing decisions adopting  
6 irrevocably committed exceptions is to (1) resolve any contentions that the  
7 findings fail to address issues relevant under OAR 660-004-0028 or rely on  
8 factors that are not properly considered under OAR 660-004-0028, (2) consider  
9 any arguments that particular findings are not supported by substantial evidence  
10 in the record, and (3) determine whether the findings that are relevant and  
11 supported by substantial evidence are sufficient to demonstrate compliance with  
12 the standards of ORS 197.732(2)(b) that uses allowed by the goal are  
13 impracticable. *1000 Friends of Oregon v. Columbia County*, 27 Or LUBA 474,  
14 476 (1994).

15       **B.     Characteristics of and Uses on Adjacent Lands (OAR 660-004-**  
16               **0028(2), (6)(a))**

17       Petitioners argue that the county’s findings addressing OAR 660-004-  
18 0028(2)(b) and (c) inadequately describe the characteristics of adjacent lands and  
19 the relationship of the subject property to adjacent lands by focusing too much  
20 attention on the adjacent lands to the east and north of Seven Mile Hill Road that  
21 are developed with residences, with only a cursory discussion of the existing  
22 forest zoning and timber production occurring on the properties to the south and

1 the west of the subject property. Petitioners argue that the findings fail to  
2 adequately address the existing forest uses on resource lands adjacent to the  
3 property, and fail to adequately describe “[p]arcel size and ownership patterns of  
4 the exception area and adjacent lands \* \* \* [and] how the existing development  
5 pattern came about” as required by OAR 660-004-0028(6)(c)(A).

6 We agree with petitioners. While the findings appear adequate to describe  
7 some of the characteristics of lands adjacent to the subject property by identifying  
8 existing uses and zoning, as required by OAR 660-004-0028(2)(b), those findings  
9 also spend considerable ink discussing subdivided property located almost a mile  
10 away from the subject property (the “Fletcher Tract”), for reasons that are not  
11 apparent. Record 25-26. We agree with petitioners that the findings the county  
12 adopted are not adequate to describe the relationship of the subject property to  
13 adjacent lands as required by OAR 660-004-0028(2)(c). First, in describing the  
14 relationship of the subject property to adjacent lands, the findings conclude that  
15 because the subject 40-acre property is the only parcel zoned F-2 that fronts on  
16 Seven Mile Hill Road “[t]his creates a unique situation where the subject parcel  
17 is enclosed on three of its sides by residentially-zoned properties, most of which  
18 are used for residential purposes. If the subject parcel was used for forestry  
19 operation it could be potentially disruptive to this residential community.”<sup>5</sup>

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<sup>5</sup> In a different finding, the county characterizes the subject property as being  
“enclosed on three of its sides by existing residential development.” Record 28.  
That statement is more accurate than the quoted statement that the subject

1 Record 26. The findings do not address at all the relationship of the subject  
2 property to the adjacent approximately 450 acres of F-2 zoned lands located to  
3 the west of the subject property that are in timber production and/or that possess  
4 soils suitable for forestry production, or the approximately 2,000 acres of  
5 resource land that are in forest use located immediately south of intervenor's 69-  
6 acre adjacent F-2 parcel to the south of the subject property, or the potential for  
7 resources use of the property in conjunction with the adjacent F-2 zoned  
8 properties.

9 Second, the mere existence of residential uses near a property proposed for  
10 an irrevocably committed exception does not demonstrate that such property is  
11 necessarily committed to nonresource use. *Prentice v. LCDC*, 71 Or App 394,  
12 403-04, 692 P2d 642 (1984). The findings explain that most of the residential  
13 subdivisions adjacent to and nearby the subject property pre-dated planning and  
14 zoning laws, but do not explain why the existence of those pre-existing residential  
15 uses means that the subject property is irrevocably committed to nonresource use.

16 **C. Impracticability of Forest Uses (OAR 660-004-0028(3))**

17 In their third assignment of error, petitioners argue that the county's  
18 findings are inadequate to explain why the uses listed in OAR 660-004-0028(3)  
19 are impracticable. OAR 660-004-0028(3) provides in relevant part that

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property is enclosed on three of its sides by "residentially zoned properties," which the record demonstrates is not accurate, because, although they contain residences, the properties to the west and south of the subject property are zoned F-2, a Goal 4 resource zone. Record 26.

1 “For exceptions to Goals 3 or 4, local governments are required to  
2 demonstrate that only the following uses or activities are  
3 impracticable:

4 “(a) Farm use as defined in ORS 215.203;

5 “(b) Propagation or harvesting of a forest product as specified in  
6 OAR 660-033-0120; and

7 “(c) Forest operations or forest practices as specified in OAR 660-  
8 006-0025(2)(a).”<sup>6</sup>

9 The county found that

10 “the current level of residential development has increased to the  
11 point that *commercial resource use* has become impracticable. The  
12 exception area is surrounded on three sides by existing residential  
13 development, with the potential for additional residential  
14 development in the future. Conflicts caused by the proximity of  
15 residential neighbors on three sides require added expense related to  
16 fire protection, fencing and general control of the area, and prevent  
17 the use of spraying to control insects and vegetation that competes  
18 with commercial tree species. Further conflicts with residences arise  
19 because of the noise associated with commercial operations and the  
20 safety risks of logging near residential property.

21 “The steps that would need to be taken to efficiently and effectively  
22 manage timber production in the area makes such uses  
23 impracticable.” Record 28 (emphasis added).

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<sup>6</sup> Forest operations or forest practices specified in OAR 660-006-0025(2)(a)  
are:

“Forest operations or forest practices including, but not limited to,  
reforestation of forest land, road construction and maintenance,  
harvesting of a forest tree species, application of chemicals, and  
disposal of slash[.]”



1 The county's findings emphasize the potential conflicts that resource use of the  
2 subject property would produce with adjacent and nearby existing residential  
3 uses from fire protection requirements, fencing and spraying. First, petitioners  
4 argue that commercial viability is not the measure of practicability. Petition for  
5 Review 25. Second, in their second assignment of error, petitioners argue that the  
6 county's findings are not supported by substantial evidence where the undisputed  
7 evidence shows the subject property contains merchantable tree species in its  
8 southern portion and contains soil types that are capable of supporting Ponderosa  
9 Pines (20-49 cubic feet per year). Record 19; Record 1331. Petitioners argue that  
10 given the undisputed evidence that the soil types on the property support  
11 Ponderosa Pines, the county's findings are inadequate to explain why the  
12 remaining open portion of the subject property could not be planted and uses for  
13 forestry purposes.

14 We agree with petitioners. The correct standard is not whether commercial  
15 forestry operations are practicable on the subject property, and the county must  
16 consider forest operations that are smaller in scale and generate less revenue than  
17 commercial forestry operations. *Friends of Yamhill County v. Yamhill County*, 38  
18 Or LUBA 62, 75 (2000). Further, as the staff report explains, the state and county  
19 recognize parcels as small as two acres as eligible for forest tax deferral. Record  
20 1345.

21 Moreover, the county's findings, quoted above, focus on alleged conflicts  
22 with nearby residential uses from conducting commercial forestry on the

1 property, but do not consider whether forest operations that are smaller in scale  
2 would create similar conflicts that render forest use of the property impracticable.  
3 We also agree with petitioners that given the soil types on the property, the  
4 county's findings do not establish that forest use of the property is impracticable  
5 or explain why trees could not be planted on the property. Finally, we agree with  
6 petitioners that the county's finding that conflicts with residential uses resulting  
7 from spraying are not a basis to find that resource use of the subject property is  
8 impracticable. *Prentice*, 71 Or App at 403 (conflicts resulting from odors, noise,  
9 spraying and dust are a consequence of rural life and are not sufficient in  
10 themselves to justify an irrevocably committed exception).

11 The first, second and third assignments of error are sustained.

#### 12 **FOURTH ASSIGNMENT OF ERROR**

13 The board of county commissioners approved a physically developed  
14 exception and in the alternative, an irrevocably committed exception. In the  
15 fourth assignment of error, petitioners challenge the county's conclusion that a  
16 physically developed exception was justified.

17 Under OAR 660-004-0025(1), in order to approve a physically developed  
18 exception, the local government must establish that "the land subject to the  
19 exception is physically developed *to the extent that it is no longer available for*  
20 *uses allowed by the applicable goal.*" OAR 660-004-0025(1) (emphasis added).  
21 OAR 660-004-0025(2) provides guidance for local governments in determining

1 whether land has been physically developed with uses other than those allowed  
2 by a goal:

3 “Whether land has been physically developed with uses not allowed  
4 by an applicable goal, will depend on the situation at the site of the  
5 exception. The exact nature and extent of the areas found to be  
6 physically developed shall be clearly set forth in the justification for  
7 the exception. The specific area(s) must be shown on a map or  
8 otherwise described and keyed to the appropriate findings of fact.  
9 The findings of fact shall identify the extent and location of the  
10 existing physical development on the land and can include  
11 information on structures, roads, sewer and water facilities, and  
12 utility facilities. Uses allowed by the applicable goal(s) to which an  
13 exception is being taken shall not be used to justify a physically  
14 developed exception.” OAR 660-004-0025(2).

15 The county relied on the two dwellings, accessory structures, well, and driveways  
16 to conclude that the property meets the requirements for adoption of a “physically  
17 developed” exception to Goal 4:

18 “The development pattern that exists on this property makes forestry  
19 uses impractical. These include the current home and outbuildings  
20 located halfway up the property on the western side after an  
21 approximately 1000 [foot] driveway, the old farmhouse in the center  
22 after a 400 [foot] driveway and the old barn another 240 [feet]  
23 further south, within 450 [feet] of the rear property line. The latter  
24 two more than half bisects the property contributing to the  
25 physically developed nature of the subject parcel. The property is  
26 also serviced by two wells, and a pump house located in the north  
27 central portion of the parcel, approximately 190 feet south of the  
28 road. Due to these physical developments, and the impracticality of  
29 conducting forestry uses around them, a physically developed  
30 exception would apply.” Record 20.

1 In the fourth assignment of error, petitioners argue that the county’s  
2 findings in support of a physically developed exception to Goal 4 are inadequate  
3 and that the county improperly construed OAR 660-004-0025 when it concluded  
4 that development of approximately 12 percent of the property means that it is  
5 “physically developed to the extent that it is no longer available for uses allowed  
6 by the applicable goal.” Petition for Review 29. Petitioners also assert that the  
7 county’s findings are not supported by evidence in the whole record, and that the  
8 evidence in the record supports a determination that the property is available for  
9 uses allowed by Goal 4, including the growing of Ponderosa Pines. Petitioners  
10 point to evidence that all of the development on the property combined totals  
11 approximately 12 percent of the property, while more than 87 percent of the  
12 property is undeveloped. Petitioners also point out that the soil types on the  
13 property are capable of supporting Ponderosa Pine at a volume of 57.2 cubic feet  
14 per acre per year. Record 711, 1331. Therefore, petitioners argue, the county  
15 erred in concluding that a physically developed exception was justified. Finally,  
16 petitioners argue that the county erred in relying on the two driveways existing  
17 on the property because “[u]ses allowed by the applicable goal(s) to which an  
18 exception is being taken shall not be used to justify a physically developed  
19 exception,” and roads are allowed under Goal 4 as accessory to forest uses. OAR  
20 660-004-0025(2).

21 Intervenor responds that managing the subject property for commercial  
22 forestry would require “extensive” fire buffers along the eastern and northern

1 borders that are adjacent to developed residential areas and around the existing  
2 dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points  
3 out that “two strings” of overhead power lines are located on the property, and  
4 that forestry uses would require a buffer from those lines. *Id.* We understand  
5 intervenor to argue that such extensive buffers mean that the property is  
6 “physically developed to the extent it is no longer available” for forestry uses.

7 The standard for approving a physically developed exception is  
8 demanding. *Sandgren v. Clackamas County*, 29 Or LUBA 454, 457 (1995). We  
9 agree with petitioners that the county’s findings are inadequate to explain why  
10 the property is developed to such an extent that it is no longer available for  
11 forestry uses. The findings conclude, with reference to the existing development  
12 on the property, that “forestry uses [are] impractical.” Record 20. Impracticality  
13 is relevant to an irrevocably committed exception. However, impracticality is not  
14 the standard for a physically developed exception. Instead, the county is required  
15 to determine that the property is “physically developed *to the extent that it is no*  
16 *longer available*” for forestry uses. ORS 197.732(2)(a) (emphasis added).<sup>7</sup> A

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<sup>7</sup> ORS 197.732 provides, in part:

“(2) A local government may adopt an exception to a goal if:

“(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal;

1 conclusion that forestry uses are “impractical” due to approximately 12 percent  
2 of the property containing structures or other development is not responsive to  
3 the standard. Finally, we agree with petitioners that the county’s findings are  
4 inadequate where they fail to explain why the two driveways on the property  
5 should be considered as physically developed, when roads are uses allowed by  
6 Goal 4.

7 Further, we agree with petitioners that the county’s decision is not  
8 supported by substantial evidence in the record, where the evidence in the record  
9 is that the property has available at least 87 percent of its area for forestry.  
10 Intervenor does not attempt to quantify the amount of buffer that would be  
11 required to conduct forestry uses or quantify the amount by which that buffer  
12 would decrease the amount of property available for forestry uses to such an  
13 extent that the property “is no longer available for forestry uses.” We conclude  
14 that the county’s findings in support of its approval of a physically developed  
15 exception are not supported by substantial evidence in the record.

16 The fourth assignment of error is sustained.

17 **DISPOSITION**

18 ORS 197.732(6)(b) provides that LUBA:

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“(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable[.]”

1 “shall determine whether the local government’s findings and  
2 reasons demonstrate that the [exception standards of OAR 660-004-  
3 0028] have or have not been met.”

4 We conclude that the findings do not demonstrate that the property is physically  
5 developed to such an extent that it is no longer available for resource use, and  
6 that the county’s findings regarding the physically developed exception are not  
7 supported by substantial evidence in the record. We also conclude that the  
8 findings do not demonstrate that the property is irrevocably committed to non-  
9 resource uses. Because we conclude that the findings to support a conclusion that  
10 the property is irrevocably committed to non-resource use are inadequate to  
11 satisfy the relevant criteria, we do not address petitioners’ substantial evidence  
12 arguments under those criteria. *DLCD v. Columbia County*, 15 Or LUBA 302,  
13 305 (1987).

14 Petitioners argue that we should reverse, rather than remand the county’s  
15 decision. OAR 661-010-0071(1)(c) provides that this Board shall reverse a land  
16 use decision when “[t]he decision violates a provision of applicable law and is  
17 prohibited as a matter of law.” In addition, OAR 661-010-0071(2)(a) provides  
18 that this Board shall remand a land use decision for further proceedings when  
19 “[t]he findings are insufficient to support the decision[.]”

20 If the county had approved only a physically developed exception, we  
21 would likely agree with petitioners that reversal is the appropriate remedy  
22 because the evidence in the record demonstrates that approximately 90 percent  
23 of the property is undeveloped and available for forest uses. With regard to the



1 irrevocably committed exception, petitioners may be correct that, under the  
2 circumstances described in the application, and when the correct standards are  
3 applied by the county, it is extremely unlikely that intervenor will be able show  
4 the property is irrevocably committed to nonresource uses. However, we cannot  
5 say at this point that the county's decision is prohibited as a matter of law.

6       The county's decision is remanded.

## **ATTACHMENT D – EXHIBIT 8**

“Soil Assessment Submittal Form” and “Soil Assessment Release Form”



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD

## Soils Assessment Submittal Form



### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

### Property Information

Person who requested soils assessment: David Wilson  
 Mailing address: 7100 1 Mile Hill Rd The Dalles Or 97058  
 Email address: none Telephone number: 541-492-3230  
 Property owner (if different): \_\_\_\_\_  
 Property address (if different): 7000 1 Mile Hill Rd The Dalles Or 97058  
 County: Wasco Township: 2N Range: 12E Section: 22  
 Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13  
 Comprehensive Plan designation: \_\_\_\_\_ Zone: EEU  
 Proposed land use action: Plan Amendment Zone Change To RR10

The soils professional must submit an electronic copy of the soils assessment together with this form to Timothy Murphy, Farm and Forest Lands Specialist, at the above address. The person requesting the soils assessment or the property owner must submit a check for a non-refundable administrative fee of \$625 made out to the Department of Land Conservation and Development, to Timothy Murphy, at the same address.

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews or field checks will accompany the soils assessments.

The department and the Land Conservation and Development Commission will not be held liable for non-performance or information that is contained in soils assessments, or for negative reviews, field checks or audits of soils assessments. For the protection of the department and commission, we ask that you read and sign the following authorization and disclaimer:

*I hereby expressly give my consent, should I be notified by the department that the submitted soils assessment for my property is selected for a review and field check, to authorize timely*



access to my property by a DLCD-contracted soils professional to perform a field check to corroborate the information provided in the submitted soils assessment. I understand that failure to authorize access to the property may result in a negative review.

I hereby waive my right to pursue a claim for relief or cause of action alleging injury from the content of soils assessments or from any negative reviews, field checks or audits conducted by the department and any and all soils professionals used by the department under OAR 660-033-0030(5) and (9). I hold these entities harmless and release them from liability for any injury or damage that may occur in conjunction with the submitted soils assessment.

In exchange for the department's review of this submittal under the soils assessment program, I expressly agree to forever waive and give up all claims, suits, actions, proceedings, losses, damages, liabilities, awards and costs of every kind and description, including any and all federal and state claims, reasonable attorney's fees, and expenses at trial (collectively "claims") which I have or may have a right to bring against any agency, department, the state, or their agents, officials or employees arising out of or related to my participation and performance in the soil assessment program, including but not limited to claims for mistake or negligence of the department, the state of Oregon, and their officers, employees and agents. I further agree that the provisions of this Liability Waiver and Release from Federal and State Claims shall be effective and binding upon my heirs, executors, administrators, successors, assigns, beneficiaries, or delegates and shall inure to the benefit of the department, the State of Oregon, and their officers, employees and agents.

David Wilson David Wilson  
Person who requested soils assessment

1/15/21  
Date

\_\_\_\_\_  
Property owner (if different)

\_\_\_\_\_  
Date

In addition to agreeing to the above, I hereby certify that the attached soils assessment that I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department.

[Signature]

\_\_\_\_\_  
Soils professional

1/10/21  
Date

\* Must be from the posted list of qualified soils professionals at: <http://www.oregon.gov/LCD/pages/soilsassessment.aspx>



Soils Assessment Submittal Form 2 of 2





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soils Assessment Release Form

### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

Date of submittal of soils assessment to department: Jan 23, 2021

### Property Information

Person who requested soils assessment: David Wilson

Mailing address: 7100 7 Mile Hill Rd The Dalles Or 97058

Email address: none Telephone number: 541-490-3230

Property owner (if different):

Property address (if different): 7000 7 mile Hill Rd The Dalles Or 97058

County: Wasco Township: 2N Range: 12E Section: 22

Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13

Comprehensive Plan designation: \_\_\_\_\_ Zone: FFA

Proposed land use action: Plan Amendment zone change to RR10

If you would like the soils assessment for the subject property to be released to a County planning department for its consideration in a land use proceeding, please sign this form and send it to Timothy Murphy at the above address, or email to: [timothy.murphy@state.or.us](mailto:timothy.murphy@state.or.us).

I hereby request that the Department of Land Conservation and Development release the soils assessment submitted to the department on the above date regarding the above-described property to the Wasco County Planning Department, as well as any department notifications of deficiencies. I understand that any and all previous soils assessments applying to this property produced under this rule, as well as any department notifications of deficiencies in such soils assessments, will also be released to the local government.

David Wilson

Person who requested soils assessment

1/15/21  
Date

Property owner (if different)

Date

## **ATTACHMENT D – EXHIBIT 9**

“Soil Assessment Completeness Review”



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

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Salem, Oregon 97301-2540

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## Soil Assessment Completeness Review

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030.

Hilary Foote  
DLCD Farm Forest Specialist  
March 29, 2001

The department will consider soil assessments under OAR 660-033-0030 to be complete if they meet the following standards:

(1) General information, to include:

- (a) Title of the report; Wildon – Order 1 Soil Survey
- (b) Person making request for soils assessment; David Wilson
- (c) Names of soil scientist/classifier conducting the field work and preparer of the report, along with their certification numbers; Gary Kitzrow, CPSC/CPSS #1741
- (d) Land use case file number (if available); n/a
- (e) County in which the assessment was conducted; Wasco
- (f) Location of the project site, including the township, range, section and tax lot numbers; Township 2N Range 12E Section 23 Taxlot 4400, Wasco County, Oregon
- (g) Present zoning designation; EFU
- (h) Current land use; unknown
- (i) Parcel acreage: 40.13 ; evaluated: 40.13 ,and
- (j) A description of the purpose of the assessment. Zone Change

(2) Previous Mapping or Background: The soil scientist/classifier shall provide a copy of the applicable and most current National Cooperative Soil Survey map(s) provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey, with the area of investigation outlined on the map(s). The scale of the map(s) shall be identified and a list of the map units under investigation shall be listed. The applicable



interpretations and minor components (inclusions) for the map units for which the investigation is being made shall also be provided. NRCS mapped soils include: Wamic loam, 5 to 12 percent north slopes (capability class 4e), Wamic loam, 12 to 20 percent slopes (capability class 4e) and Wamic-Skyline complex, 2 to 20 percent slopes (capability class 4e (Wamic components) and 7s (skyline components)). See pages 8-9.

(3) Methods Used by Soil Scientist/Classifier: The soil scientist/classifier shall describe the methodologies used for the preparation of the report and shall include the following:

- (a) The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted
- (b) The date(s) of the field investigation; December 18-19, 2020
- (c) The methods used for observations (backhoe, auger, shovel, etc.) and methods used for documentation (for slope, color, pH, etc.); Backhoe, field texturing, munsell chart comparison, soil pH, field assessment, etc as described on page 1.
- (d) The number and location of borings either shown on an aerial photograph base map of the parcel or provided in a table with latitude and longitude coordinates. In conducting Order 1 soil surveys, the scale of the base maps used for the survey needs to be large enough to enable the identification of polygons of soil map units as consociation map units. Soil map units identified as a complex, association, or undifferentiated group should be avoided as this defeats the purpose of an Order 1 survey. If, however, the soils are so intermingled that they cannot be mapped at a reasonable scale so as to identify consociation map unit polygons, then there should be sufficient sampling and documentation of the complex to demonstrate this soil component distribution. A percentage of each member of the complex will be used in determining area of extent and the reported percentages will be based on this sampling and its documentation, including soil profile descriptions, boring locations and, where useful, photographs. 23 locations. Coordinates listed on page 1 and mapped on page 10
- (e) Geomorphic and vegetation correlations supporting the interpretation of land capability classes of soils that differ from those in the official soil survey information; and Described on page 2.
- (f) A notation of any limitations encountered during the field investigation, such as soil depth, drainage, slope or inaccessibility. No limitations noted (page 2).

(4) Results, Findings, and Decisions: The soils report shall describe how the level of order of survey used in this investigation differs from that used by NRCS in the original soil survey. The soils report shall also include:

- (a) An overview of the geology or geologic setting, describing sources of parent material, bedrock and related factors; Described on page 2
- (b) A description of the landforms and topography, confirming the relationship of landforms to soil mapping units; Described on pages 2 and 3
- (c) A description of on-site and adjacent hydrology, including surface and subsurface features, intermittent versus perennial, floodplain and floodways and other related information; Described on page 3.
- (d) A description of the revised soil mapping units with their range of characteristics, explaining how and why they differ from NRCS soil mapping. The soils report shall include a summary of soil variability incorporating significance of preceding weather (above or below average), where known and crops and natural vegetation present; and Described on page 3
- (e) A tabulation of all previous and revised soil mapping units complete with their acreages and land capability classification. Pages 3, 8, 9 and 13

(5) Summary or Conclusion: The soils report shall contain a section reiterating the purpose of the investigation, explaining the significance of the revised soil mapping and describing any other significant issues related to the report's purpose. Page 3

(6) References: This section may list any manuals or publications utilized or referenced by the report. Page 3

(7) Attachments: Other informational materials provided as attachments, such as maps, figures or appendices shall include the following and shall be printed on 8 ½ x 11" wherever possible:

- (a) Vicinity map at a scale of 1:48,000 or smaller showing the project location; Map included on page 11
- (b) The NRCS soils map generated from Web Soil Survey at a scale of 1:20,000 or larger outlining the project site; Map included on page 7
- (c) Site condition map (aerial photo) at a scale of 1:5,000 or larger outlining the project site and showing the location of site investigations (borings) and other relevant features; Map included on page 10
- (d) Topography map at a scale of 1:24,000 or larger outlining the project site; Map included on page 11
- (e) Assessor's map at a scale of 1:5,000 or larger outlining the project site; Map included on page 12
- (f) Revised soils map of the project site at a scale of 1:5,000 or larger; Map included on page 13

- (g) Soil profile descriptions and site observation notes; and Pages 14-36
  - (h) Representative soil profile descriptions of any soil type identified in the project area that is not described or identified in the published soil survey for the area mapped. Page 37
- (8) Soils reports shall be submitted electronically to the department to hilary.foote@state.or.us, accompanied by a Soils Assessment Submittal Form. Payment of a non-refundable administrative fee of \$625 should be sent by check.

## **ATTACHMENT D – EXHIBIT 10**

Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS)  
(License # 1741), Principal Soil Taxonomist.



Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## "Wilson - Order 1 Soil Survey" Inquiry

3 messages

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: kitzrowga@gmail.com

Fri, Nov 19, 2021 at 6:00 AM

Mr. Kitzrow,

My name is Daniel Dougherty, Senior Planner with the Wasco County Planning Department. I've been assigned to review your Order 1 soil survey for Mr. David Wilson regarding a particular land use application he has pending before our Planning Commission. It's been extremely interesting learning about soil classification, order types, soil complexes, and series; however, I've hit a wall regarding analysis of your survey, and I'm hoping you can help me if you have time.

As you provided in your survey, Mr. Wilson's property (Location: 2N 12E 22 4400) contains Skyline, Wamic, Bodell and Infrastructure mapping units. I have to make findings regarding the woodland suitability (tree types & cubic ft. per acre) of each particular soil mapping unit found on his property. To do this, I'm using the USDA-STS Soil Interpretation Records (1983) "Green Sheets". The Green Sheets provide specific data regarding the 1982 USDA "Soil Survey of Wasco County, Oregon, Northern Part".

The problem I'm running into is that two of the three soil mapping units you discovered aren't explicitly found in the USDA Order 3 survey or Green Sheets. Those soil mapping units being 51D Skyline (monotaxa) and 51C Skyline (monotaxa). The Green Sheets & USDA Survey do provide for a 51D Wamic-Skyline Complex. I'm hoping you can clarify whether or not the 51D Wamic-Skyline Complex is in fact the 51D Skyline (monotaxa) and/or 51C Skyline (monotaxa). I've scoured the internet to try and find information on 51D & 51C units, but everything keeps pointing me back to 51D Wamic-Skyline Complex.

Any help you might provide is greatly appreciated.

Respectfully,

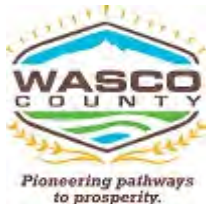
Daniel

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058



### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

**Email is still the best way to reach me!** Please view our [website](http://www.co.wasco.or.us/departments/planning/index.php) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

---

**Gary Kitzrow** <kitzrowga@gmail.com>  
To: daniel@co.wasco.or.us

Fri, Nov 26, 2021 at 12:09 PM

Skyline units on my report are MONOTAXA units meaning one soil per delineation. Wamic soils are NOT found within those mapping units except as an *inclusion*. Order I Soil Surveys (such as the current one) separates out soil "Complexes" into their component parts. Order I Soil Surveys are Site Specific Soil Surveys with a high degree of confidence in the final delineations correlated. I have mapped over 1 million acres of soils in the USA and in 2 foreign countries. I use the same USDA-protocols in all jurisdictions I have published Soil Survey Reports in (8) states. The goal of Order I Soil Surveys is to make every soil mapping unit a monotaxa element.

The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a *Non-Commercial Forest Soil*. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

I hope this helps,

Gary A. Kitzrow, Master of Science  
Principal Soil Classifier/Soil Scientist  
Degreed forester  
GSEA

[Quoted text hidden]

---

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: Gary Kitzrow <kitzrowga@gmail.com>

Fri, Nov 26, 2021 at 9:45 PM

Good evening,

Thank you for the additional information and clarification.

I hope you had a great Thanksgiving.

Respectfully,

Daniel

[Quoted text hidden]

## **ATTACHMENT D – EXHIBIT 11**

“Wilson – Order 1 Soil Survey”



Wilson- Order 1 Soil Survey Report

RE: OAR 660-033-0030

1). General Information

- a). Order 1 Soil Survey Report—Wilson Property, Oregon
- b). David Wilson
- c). Gary A. Kitzrow, M.S., CPSC/CPSS # 1741, Master of Science
- d). None
- e). Wasco
- f). RE: T2N R12E Sec. 23C TL# 4400
- g). EFU
- h). Zone change
- i). 40.13 Ac./40.13 acres
- j). complete a site-specific soil survey for the above parcel to determine if a preponderance of the property is comprised of generally unsuited soils. The goal is to secure a Plan Amendment Zone Change.

2). Enclosed

- a). Scale of enclosed USDA-NRCS Soil maps: 1:3170;—USDA Soil Legend: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs.
- a). We completed a total of 23 descriptions for the 40.13-acre study site.
- b). December 18-19, 2020
- c). A Backhoe was used to excavate the study area Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing.
- d). Enclosed is a map showing all description locations.
  - 1). 45.63857' N -121.31456' W
  - 2). 45.63825' N -121.31395' W
  - 3). 45.63832' N -121.31380' W
  - 4). 45.63857' N -121.31344' W
  - 5). 45.63876' N -121.31392' W
  - 6). 45.63891' N -121.31370' W
  - 7). 45.64031' N -121.31458' W
  - 8). 45.63857' N -121.31456' W
  - 9). 45.64071' N -121.31207' W
  - 10). 45.64030' N -121.31235' W
  - 11). 45.64063' N -121.31125' W
  - 12). 45.64030' N -121.31113' W
  - 13). 45.64003' N -121.31100' W
  - 14). 45.63979' N -121.31075' W
  - 15). 45.63871' N -121.31071' W
  - 16). 45.63897' N -121.31229' W
  - 17). 45.63804' N -121.31140' W
  - 18). 45.63827' N -121.31133' W
  - 19). 45.63889' N -121.30940' W
  - 20). 45.63926' N -121.30998' W
  - 21). 45.63980' N -121.30980' W
  - 22). 45.64031' N -121.30998' W
  - 23). 45.63926' N -121.30991' W

Pg. 2 T2N R12E Sec. 23C TL# 4400

e). There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related.

Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present.

(f). No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

#### (4) Results, Findings and Decisions:

- (a) The bedrock geology for this land base is basalt mixed with areas in the southwest portion of the property exhibiting a paralithic contact with and without a duripan which all occur at less than 20". Little direct hard rock is noted in this area transitioning from definable soil. Soil development is generally a function of the presence or absence of ejected ash moving into or out from the subject study area. The basalt itself yields very immature, shallow soils when soils erode *from* the site hence the Class 7 (Bodell and Skyline). Conversely, where soil accumulates via erosion (central area and central northern areas), soils deepen up, Soil Capability Class gets better and Wamic soils become dominant. The Wamic soils are more of a function of accretion NOT soil removal but basalt is a common thread underlying all areas on this parcel. Lithic verses paralithic geologic contacts are important on this subject property. Where paralithic contacts are present (SW ¼ and some SE ¼ ) of the ownership, soils shallow-up and the bedrock becomes a more dominant portion of the land capability.
- (b) The landforms present on this study site include planar to planar concave, non-colluvial lava plains and basins with local microsites. In the bottomland area (mid northern property) some mixed alluvium and terrace remnants may be present but are truncated and ill-defined. The soils we found strongly correlate to these landforms. Rolling convex



Pg. 3 T2N R12E Sec. 23C TL# 4400

areas in the northwest ¼ (north of the developed infrastructure areas) are classified as indistinct uplands showing suited Wamic soils throughout. Contiguous areas due south exhibit ancient infrastructure dating back to the 1980s. The eastern 1/3 of the survey area shows harder bedrock and much rock in the soil profile as a function of the more sharply overt convex slopes some of which face west and northwest. These eastern areas show landforms which are much more dissected and abbreviated as compared with area in the western 1/3. The soils reflect these contrasting landforms. Much of the eastern 1/3 of the ownership exhibits harsh-growing conditions.

- (c) No natural drainageways are confirmed within the parcel. The nearest drainageway is about 2 miles southeast and 4 miles due east.
- (d) Our Order I Soil Survey confirms Skyline, Wamic, Bodell and Infrastructure are the only soil mapping units confirmed on the subject property. Presence or absence of a paralithic geologic contact combined with landscape position principally govern the soil series and mapping units present. The subject property is complex and diverse. Shallow Bodell and Skyline soils are consistently present but are spread out throughout the ownership. Wamic soils are found where ash has eroded from surrounding low hillslopes.
- (e) Previous USDA Survey: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs. GSEA: Final Order I Soil Survey Mapping units: See attached Soil Map.

(5) Summary and Conclusions:

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% ( 20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

References: Official Soil Series Descriptions USDA NRCS-Wasco County: Bodell, Wamic and Skyline Soil Series

Soil Survey Report, Soil Survey, Wasco County

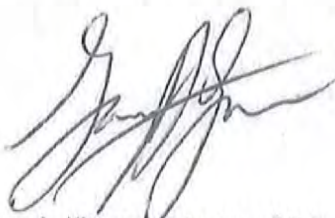
Soil Survey Manual, USDA

(6) Attachments:

- (a) Vicinity Map
- (b) NRCS Soil Map for property
- (c) Site Condition map
- (d) Topography map outlining the subject property
- (e) Assessor's map outlining the study parcel
- (f) Revised Order I Soil Map
- (g) Soil Profile descriptions: Wamic, Skyline and Bodell Soils
- (h) Representative Soil profile descriptions

Pg. 4 T2N R12E Sec. 23C TL# 4400

Please call with questions,



Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier, Certified Professional Soil Scientist #1741  
Principal Soil Taxonomist  
GROWING SOILS ENVIRONMENTAL ASSOCIATES





**Wilson**  
**T2N R12E Sec. 23C TL# 4400**  
**Vicinity Map**







United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

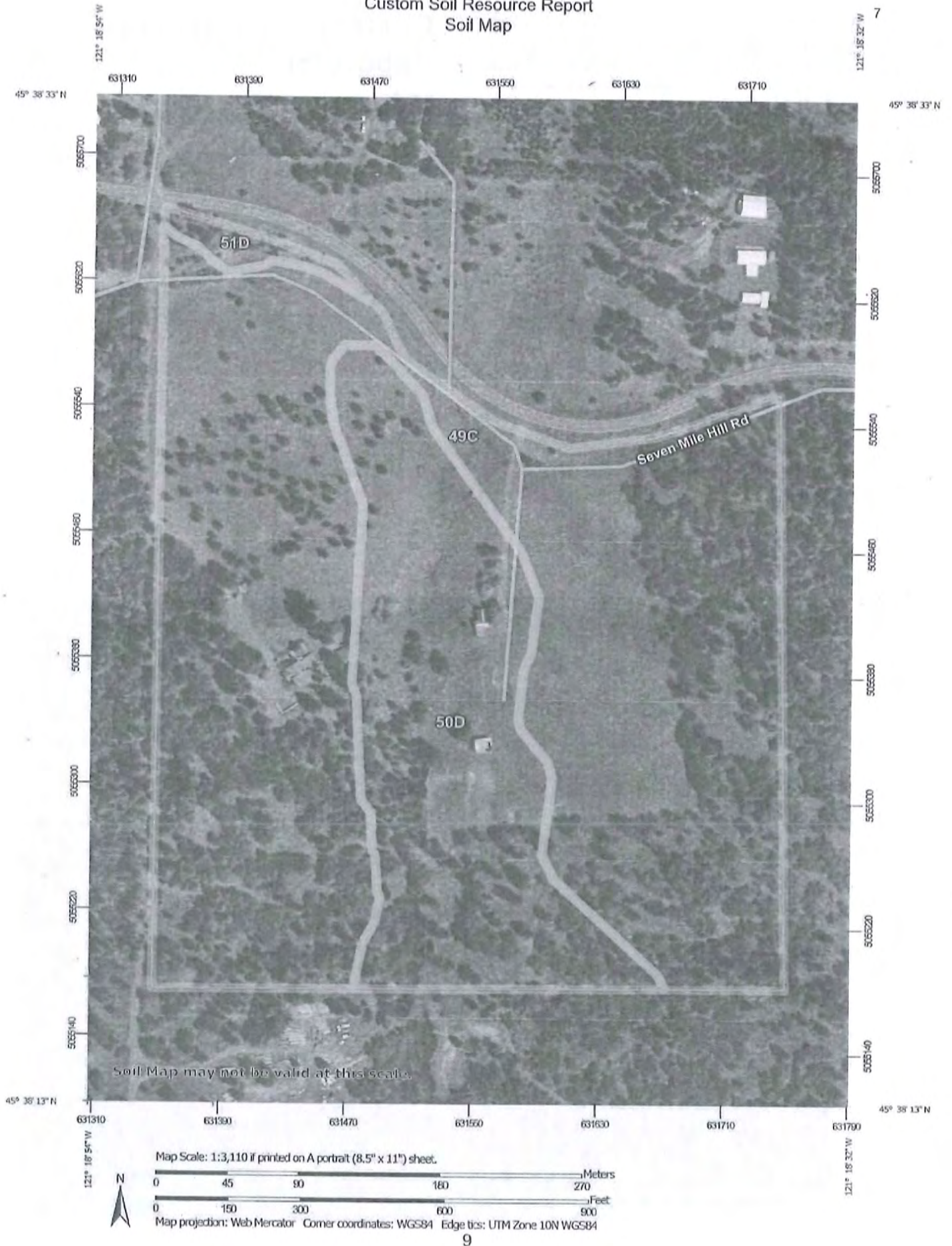
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

6

# Custom Soil Resource Report for Wasco County, Oregon, Northern Part



# Custom Soil Resource Report Soil Map





## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49C	Wamic loam 5 to 12 percent north slopes	28.6	72.0%
50D	Wamic loam, 12 to 20 percent slopes	10.7	26.8%
51D	Wamic-Skyline complex, 2 to 20 percent slopes	0.5	1.3%
<b>Totals for Area of Interest</b>		<b>39.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

- Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion.

### Report—Land Capability Classification

Land Capability Classification—Wasco County, Oregon, Northern Part				
Map unit symbol and name	Pct. of map unit	Component name	Land Capability Subclass	
			Nonirrigated	Irrigated
49C—Wamic loam 5 to 12 percent north slopes				
	90	Wamic, north	4e	—
50D—Wamic loam, 12 to 20 percent slopes				
	90	Wamic	4e	—
51D—Wamic-Skyline complex, 2 to 20 percent slopes				
	60	Wamic	4e	—
	20	Skyline	7s	—



Wilson

T2N R12E Sec. 23C TL# 4400

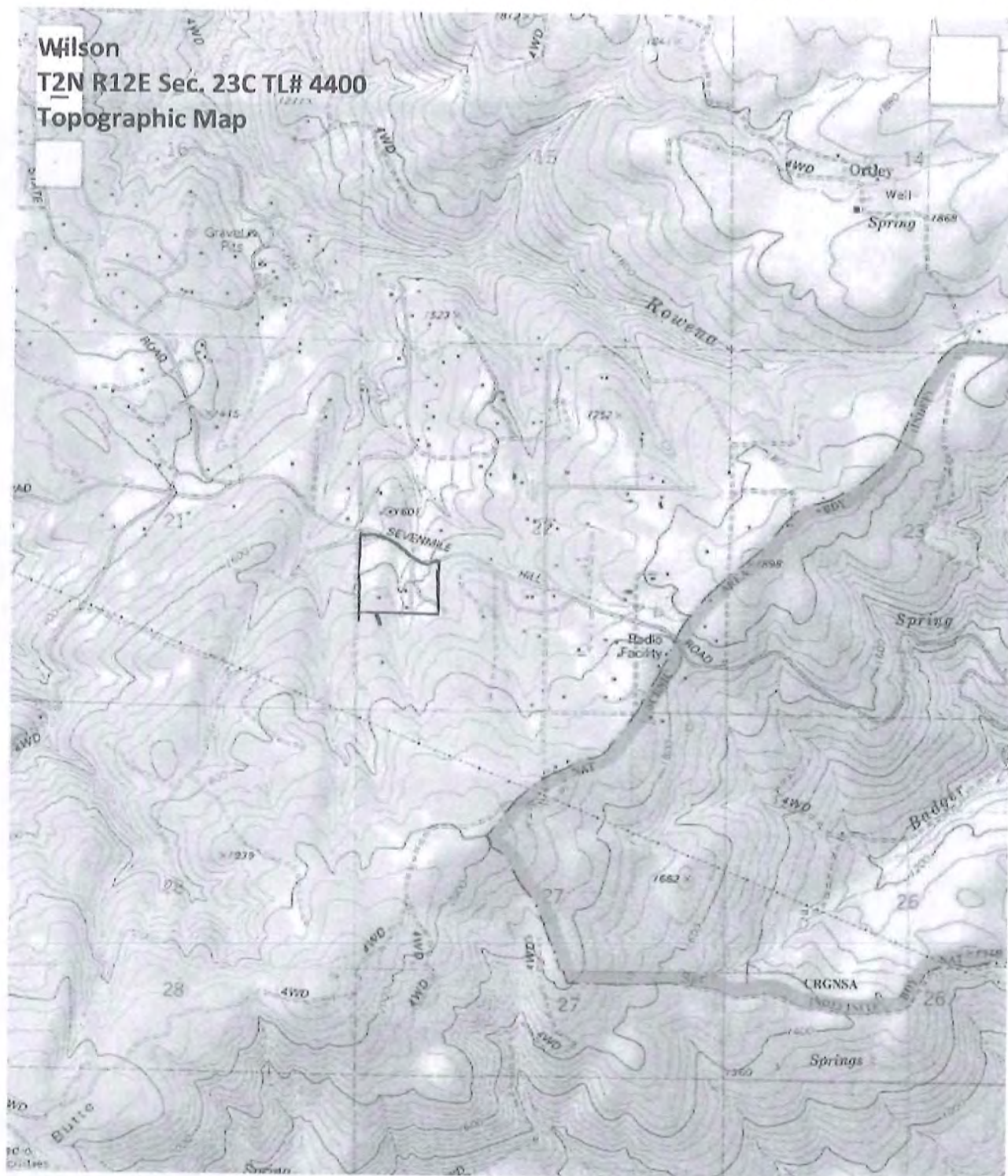
Site Control Map






## The Dalles Topo Map in Wasco County Oregon

11

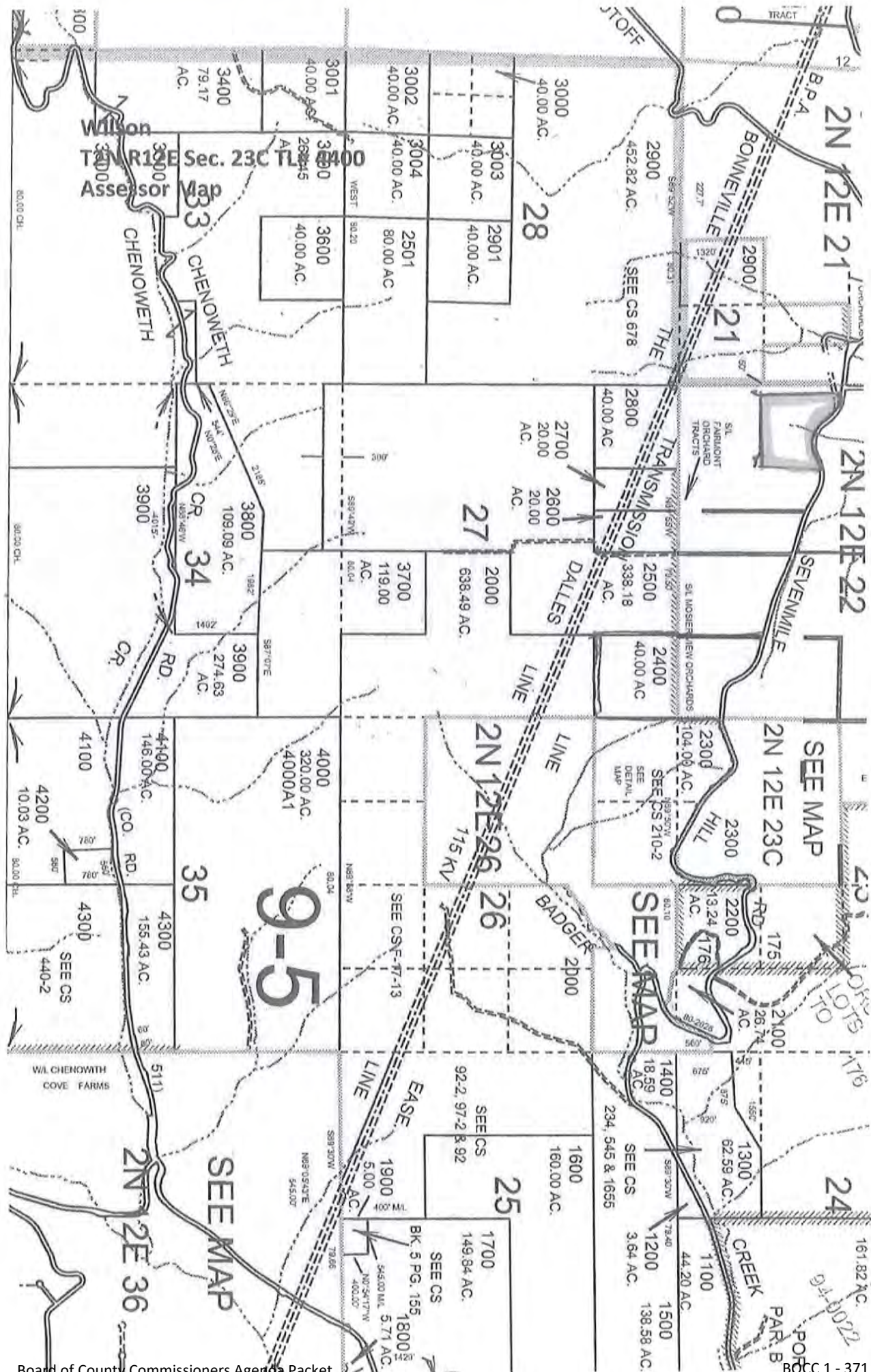


 [Print this map](#)

Map provided by TopoZone.com



2012-3

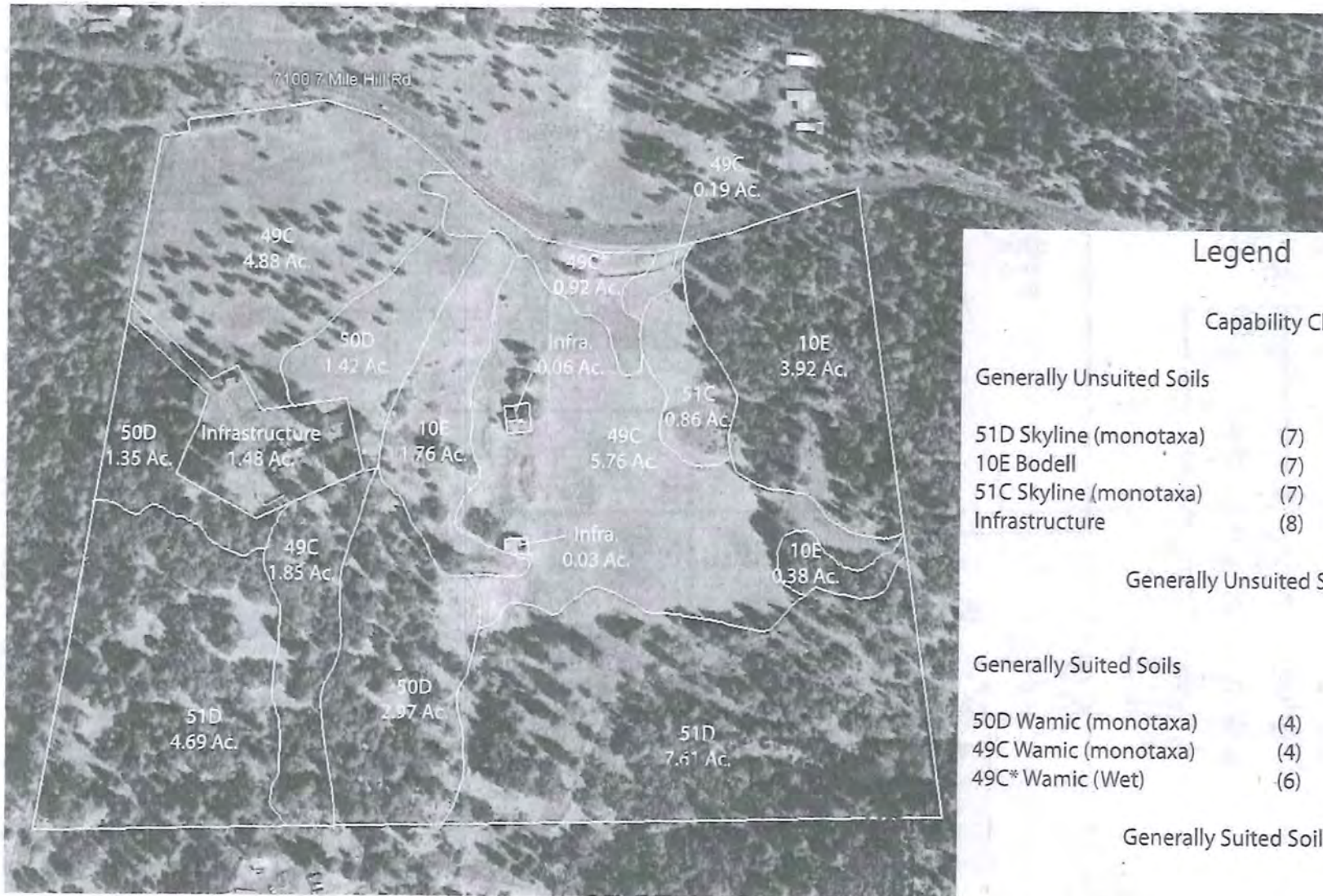




# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



### Legend

Capability Class    Acreage

#### Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

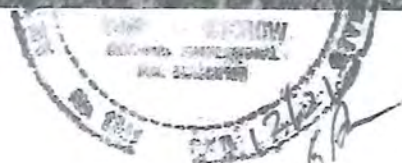
Generally Unsited Soils = 20.79 Acres

#### Generally Suited Soils

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Suited Soils = 19.34 Acres

Total Acres: 40.13 Acres  
Percentage of Generally Unsited Soils: 51.8%





# Growing Soils Environmental Associates

impermeable below 15" poor

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (1) Location SW extreme corner  
 GPS Coordinates see report  
 Slope 5 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees ~ HW

### BRIEF PROFILE DESCRIPTION

good roots to 15" then abrupt stop

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR	+	L	14	10	cm 1-15	yes 1 1/2	fr	+	+	x= mod
---	-----	------	---	---	----	----	---------	-----------	----	---	---	--------

BA	6-12	10YR	+	L	10	10	cm 1	yes 2 1/2	fi	+	+	x= mod
----	------	------	---	---	----	----	------	-----------	----	---	---	--------

CB	12-15	10YR	+	L	11	10	cm 1	yes 2 1/2	fi	+	+	x= mod sh
----	-------	------	---	---	----	----	------	-----------	----	---	---	-----------

2CR	15"											x= None
-----	-----	--	--	--	--	--	--	--	--	--	--	---------

consolidated Not cemented

unified description

Remarks poor soil below 15"

Basalt  
Diagnostic hor

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Loamy  
 Soil Drainage Class w Soil Erodibility Index + .29+ Series SKyline  
 Hydrologic Group D/K Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

15

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # 2 Location SW extreme corner Area  
 GPS Coordinates see report  
 Slope \_\_\_\_\_ Elevation \_\_\_\_\_ Landform uplands / hills / Plateau  
 Geology/Genesis ash over sediment  
 Vegetation HW trees, xerophyte

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-5	10YR 3/2	A	L	1x9	10	cm 12	yes 1 1/2	fr	A	A	x= mod
AB	5-6	10YR 1/1	A	L	1x10	10	cm 1	yes 1	fr	A	A	x= mod
BC	6-21	10YR 4/4	A	L	11	10	soft	yes 1	fr	A	A	x= mod
2CR	21"+				fractured + saprolitic						(1+)	x= A
					Sediments (Alkrent?)							

abrupt geologic contact

Remarks

⊕ Abbreviated  
⊖ Andic

⊕ Cemented  
⊕ Indurated

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Abiotic xeromorphic Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.7+ Series Skyline  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralitic contact  
 Flooding Potential A Wetland Conditions A

# Growing Soils Environmental Associates

16

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (3) Location SW corner  
 GPS Coordinates see report  
 Slope 16 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation —

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-4	10YR <sup>3/2</sup>	+	L	1571	10	yes 1 1/2	fr	+	+	+	mod
AB <sub>2</sub>	4-8	10YR <sup>4/3</sup>	+	L	1m83	12	yes 1 1/4	fi	+	+	+	mod
BC	8-25	10YR <sup>4/4</sup>	+	L	11	10	yes 1 1/4	fi	+	+	+	mod slow
2CR	25"				highly weathered					1+ x=	+	
Saprolite - { M o n s ~ 2 to 3 }												

Remarks

⊕ highly erodible  
 ⊕ Diagnostic hor.  
 ⊕ soft frags in Control Section

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" (2)

Classification — Family Loamy  
 Soil Drainage Class wd Soil Erodibility Index 130+ Series SKyline  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # (16) Location Western mid limits  
 GPS Coordinates see report  
 Slope 7 Elevation ~ Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees - hws & upland shrubs

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2	10YR	0	L	16	10	yes	1 1/2	fr	0	0	x= 1/2
AB	6-18	10YR	0	L	1m	10	yes	2 1/4	fi	0	0	x=
BW	8-24	10YR	0	L	1m	10	yes	2 1/4	fi	0	0	x=
2CR	(24)	10YR	0	L	1m	10	yes	2 1/4	fi	0	0	x=
X Paralic mic contact												
hardness at 2.5-3												
x=												

Remarks

Borderline  
skyline / warm

Capability Class 7/6 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification fine loamy, Andic Xerochrept Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 120 F Series SKYline / warm  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralimic contact  
 Flooding Potential 0 Wetland Conditions 0

freely drained

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzou  
 Stop # 5 Location NW 1/4 near access Rd  
 GPS Coordinates see enclosed report  
 Slope 7 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	A	L	1+fr	<15	yes	1"	fr	0	0	mod
BW <sub>1</sub>	6-17"	10YR 4/3	0	L	1m, f	<10	yes	1"	fr	0	0	mod
BW <sub>2</sub>	17-24"	10YR 4/3	0	L	"	10	yes	1"	fr	0	0	mod
BC	24-29"	10YR 5/4	0	L	"	12	yes	1 1/2"	fr	0	0	mod
R	29"	basalt (fractured)										X
		⊕ Lithic										X

Remarks

-AP  
BT but close  
mineral medial properties  
No low BD

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index  Series Wamak  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table A Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



## SOIL PROFILE DOCUMENTATION SHEET

East facing slope  
somewhat protected

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
Stop # 6 Location NW 1/4 - Above steeper drop off  
GPS Coordinates see enclosed report  
Slope 10% Elevation → Landform upland / low rolling hill / Basin  
Geology/Genesis residual / colluvium  
Vegetation monocots, scattered trees (open grown)  
Hardwoods

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-8	10YR 3/2	+	L	1m	9	cm 1	yes	1"	fr	+	mod
BW	8-16	10YR 4/3	+	L	1.5m	10	cm 1	yes	1"	fr	+	mod
BW	16-31	10YR 4/4	+	L	11	15	yes	2"	fr	+	+	mod
BC	31-37	10YR 4/4	+	HL	11	10	yes	2"	fr	+	+	mod
R	37"	basalt										X

Remarks

-AP  
-BT

HL = ~ 28-30" clay

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification mesic Xerochrepts Family Fi-Isamy  
Soil Drainage Class WD Soil Erodibility Index → Series Wamuk  
Hydrologic Group A Depth to Mottles + Effective Rooting Depth →  
Depth Current Water Table + Est Depth Seasonal High Water Table +  
Runoff Potential mod due to basalt rock  
Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

20

1D slope" north of house (SOD)

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # 7 Location West central Edge  
 GPS Coordinates see report  
 Slope 7 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees - conifers + HW

### BRIEF PROFILE DESCRIPTION

DNA

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-6	10YR	A	L			cm			A	A	X= mol
AB	6-9	10YR	A	L			cm			A	A	X= mol
BW	9-30"	10YR	A	L			cm			A	A	X= mol
2CR	30"			Saprolitic							1+ X= A	
				Sediment							2+	
											X=	
											X=	

Remarks

to dent

Wanna

Capability Class 7/6 Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification fine loamy, mixed, mesic Typic xerochryps Family Loamy  
 Soil Drainage Class wp Soil Erodibility Index 24-26 Series SKYLINE/wm  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential A Wetland Conditions A



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

steep, dry  
East face slope

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzeron  
 Stop # 8 Location Worm control portion  
 GPS Coordinates see report  
 Slope 14 Elevation --- Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation V ferns Hardwoods (xerophytes) - Mostly open  
Monocots Shrubs

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-3	10YR 3/3	D	CB 1m9r	cm L	25	yes	11	f	0	0	x= mod
BC	3-11	10YR 4/3	D	CB 1c	cm L	30	yes	11	f	0	0	x= mod
BC	11-18	10YR 5/4	D	CB (mass)	cm L	35	yes	21	f	0	0	x= mod slow
R	18" +	Basalt / Geo. contact										x=
												x=
												x=

Remarks → A clay 2° To Din PM to basalt

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification --- Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index .27 Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/18/20 Preparer K. Tzrow  
 Stop # (9) Location mid property  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

1'6" surface Rock

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR	2/2	CB	1/yr	25	cm 1-2	yes	1 1/2"	0	0	x= mod
BC	6-12	10YR	4/3	9/1	1/yr	30	cm 4	yes	f	0	0	x= mod
BC	12-18	10YR	4/4	CB	"	35	yes	f	f	0	0	x= mod slow
R	18"	Basalt / Geo. contact								0	0	x=
												x=
												x=

Remarks

next to old house

skip microsit

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-Sk/le/2  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (10) Location mid south East Ave  
 GPS Coordinates see report  
 Slope 10 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees w/ Nat'l open area w/ forbes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR <sup>3/2</sup>	2-5	L	1C	cm	1	yes	1 1/2	(fr)	1-2	0 x=
Bw	* 6-14	10YR <sup>4/1</sup>	2-5	L	1C	cm	1	yes	1 1/2	fi	1-2	0 x=
Bw	14-30	10YR <sup>4/1</sup>	2-5	L	1C	cm	1	yes	1 1/2	fi	1-2	0 x=
2CR	30"										1+ x=	0
											2+	0
											x=	
											x=	

Remarks

Wanna on steep  
10' slope

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2"

Classification fine loamy mixed mestic Family Loamy

Soil Drainage Class wp Soil Erodibility Index .24-2 Series Skylark

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralitic contact

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

Clay content  $\bar{X} = 20-22\%$   
SOIL PROFILE DOCUMENTATION SHEET

Strong CC 7<sup>24</sup>

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # 11 Location SE corner of property  
GPS Coordinates see report  
Slope 11 Elevation --- Landform uplands / hills  
Geology/Genesis ash over sedimentary Andesite basalt  
Vegetation solid trees HW & a few conifers

284° Aspect

## BRIEF PROFILE DESCRIPTION

POOR SITE

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------	------------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-4	10YR	0	L	1+9/10	cm	1	yes	1 1/2" fr	0	0	X= mod
---	-----	------	---	---	--------	----	---	-----	-----------	---	---	--------

AB	4-6	7.5YR	0	L	1 f.m	cm	5	yes	1 1/2" fi	0	0	X= mod
----	-----	-------	---	---	-------	----	---	-----	-----------	---	---	--------

BC	6-5	7.5YR	0	L	11	5	yes	1" fi	0	0	X= mod slow
----	-----	-------	---	---	----	---	-----	-------	---	---	-------------

2CX vs 2CR	15				distinct	CR	X	X			1+ X= 2+	
------------	----	--	--	--	----------	----	---	---	--	--	----------	--

CR Mohr 2 to 3

Duration 15"  
No rooting Ability

Remarks

folded

Diagnostic

ARD = 19"

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification Entic Abruptic Durocherts Family Loamy  
Soil Drainage Class WD Soil Erodibility Index .24 Series SKyline  
Hydrologic Group D/C Depth to Mottles 0 Effective Rooting Depth <10"  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to shallow paralithic contact  
Flooding Potential 0 Wetland Conditions 0

BRE 22"



# Growing Soils Environmental Associates

25

Small Inclusion  
slope Area

Completed into

Transition between 49C &  
50D

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 12 Location South Central Area - 100' N of S. 1st  
 GPS Coordinates see enclosed report border  
 Slope 16 Elevation — Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuals only  
 Vegetation tree mixed monocots - 15% hardwoody  
≡ No v few cmh

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR 3/3	0	L			cm	1"	fr	0	0	x= mod
---	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>1</sub>	6-9	10YR 3/3	0	L			cm	1"	fi	0	0	x= mod
-----------------	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>2</sub>	9-15	7.5YR 5/4	0	9L			15	yes	1"	fi	0	0	x= mod
-----------------	------	-----------	---	----	--	--	----	-----	----	----	---	---	--------

BC	15-20	7.5YR 5/4	0	9L			15	yes	2"	fi	0	0	x= mod
----	-------	-----------	---	----	--	--	----	-----	----	----	---	---	--------

2R	20"	basalt										x= xstn
----	-----	--------	--	--	--	--	--	--	--	--	--	---------

R begins @ 50" & between 20 & 50" xstn perm to

Remarks

Borderline Wamic & SKyline

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification

Family Fi-Isamy

Soil Drainage Class WD Soil Erodibility Index

Series Wamic/Skyline

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

26

ARD=27" ~~mod~~ warm but a little shallow

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzeron  
 Stop # 13 Location SE Edge of hay field  
 GPS Coordinates see enclosed report  
 Slope 4-6 Elevation      Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual - basalt  
 Vegetation monocots

near steep "E" slope where there is a major soil change ??

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-5	10YR 3/2	+	L	1 fm	cm 6-2	yes	1"	fr	+	+	mod
BW <sub>1</sub>	5-14	10YR 4/3	+	L	1+ SBK	cm	yes	1"	fr	+	+	mod
BW <sub>2</sub>	14-20	10YR 5/4	+	9L	"	15	yes	1"	fr	+	+	mod
BC	20-28	7.5YR 5/6	+	19L	"	15	yes	1"	fr	+	+	mod
2CR	28-4	basalt - highly weathered - saprotic										

Even distribution from top to bottom  
 good moderately deep soils  
 possibly mod in upper 1"

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification Vtandic Xerochrepts Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth       
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rocks  
 Flooding Potential + Wetland Conditions +

(+) parallel contact



# Growing Soils Environmental Associates

27

Model B-1011

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 14 Location East Lincoln's near opening  
 GPS Coordinates see report  
 Slope 6-8 Elevation ↓ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes, dissected landscape = Floral Diversity

ARD = 22"

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-4	10YR 3/2	Δ	stony Hg	cm 1	25	yes	2 1/4	fr	Δ	Δ	x= mod
BC	4-17	10YR 3/4	Δ	CB	1 m	30	yes	2 1/4		Δ	Δ	x= mod
BC	17-24	10YR 3/1	Δ	CB	11	35	yes	2 1/4		Δ	Δ	x= mod to slow
* CR/R	21"	Basalt / Geo. contact									Δ	x= X
		Fractured large										x=
		Lithic contact boulders										x=

Remarks

Operational

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lithic, Abruptic Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25-30 Series Badel (10E)  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5 ft  
 Depth Current Water Table Δ Est Depth Seasonal High Water Table Δ  
 Runoff Potential mod due to rocky, shallow soils, dissected landscape  
 Flooding Potential Δ Wetland Conditions Δ



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzrow  
 Stop # 15 Location NE 1/4 ~ 80' west of prop. limits  
 GPS Coordinates see report  
 Slope 15° Elevation ~ Landform low hillslopes (west face)  
 Geology/Genesis resistant basalt  
 Vegetation Denise Hardwoods, Xerophytes, no monocots  
Balsam root

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	2	VCB	1M9	25	yes	24	fr	0	0	x= mod
BC	6-14	10YR 4/3	0	CB	1C	30	yes		fr	0	0	x= mod
BC	14-20	10YR 4/4	0	stony	(DNA)	35	yes			0	0	x= mod slow
R	20"	Basalt / Geo. contact									0	x=
												x=
												x=

Remarks

ARD = 18"

Diagnostic horizon

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification LD-Skeletal Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25 Series Bode  
 Hydrologic Group A Depth to Mottles 4 Effective Rooting Depth 25"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



highly skeletal :: CC 7 V Wt

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 16 Location NE Extreme corner  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR	D	VCB	L	25	yes	fr	fr	14	0	x= mod
BW	7-20	10YR	D	VCB	L	40	yes	fr	fr	14	0	x= mod
BC	20-25	10YR	D	VCB	L	35	yes	fr	fr	6	0	x= mod slow
R	25+										0	x=
												x=
												x=

Remarks

Strongly skeletal

ARD=25"

Overtly convex

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal, Andic Xerodry Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 27 Series Bode  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth 45"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

49C

Job Name Wilson Date 12/19/10 Preparer K. T. Zou  
 Stop # 17 Location SE 1/4 open way field  
 GPS Coordinates See Report  
 Slope 5 Elevation  Landform upland  
 Geology/Genesis residual basalt  
 Vegetation no trees; dead grasses + mums

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	7.5YR 3/2	L	1M gr	5	cm	yes 1/2"	fr	wk	0	0	x= total
BW	6-11	4/3	L	1C SBK	5	cm		fr	wk	0	0	x= total
BW	11-18	5/4	L	1M BLK	5			fr	0	0	0	x= total
BC	18-29		L	1C (BLK)	5		2"	UG	0	0	0	x= total
CR	29 1/4			saprolitic sediment								x=

Remarks geologic contact close by  
medial??

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" x2"

Classification Andic Xerochrepts Family fi lo  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wamuk  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth 10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential Low due to soil depth  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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hargh site

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzerow  
 Stop # 18 Location NE 1/4  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes microsite  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

Thin topsoil

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2	10YR	<input checked="" type="checkbox"/>	stony	L		25	yes	24	if	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> X= mod
BC	2-11	10YR	<input checked="" type="checkbox"/>	stony	L		30	yes	24	f	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> X= mod
BC	11-17	10YR	<input checked="" type="checkbox"/>	stony	L		35	yes	24	f	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> X= mod slow
17YR											<input checked="" type="checkbox"/> X=	
											<input checked="" type="checkbox"/> X=	
											<input checked="" type="checkbox"/> X=	

Remarks

Perched Hott  
table due to  
hard Rock

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 12af Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 24" Est Depth Seasonal High Water Table 20"  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential A Wetland Conditions A



# Growing Soils Environmental Associates

49<sup>32</sup>

Suited

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
 Stop # 19 Location Mud Property  
 GPS Coordinates see enclosed report  
 Slope 3 Elevation --- Landform upland / low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots only (slight depression nearby = localized relief)

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 2/6	0	L	1f, m	<15	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>	7-14	10YR 2/6	0	L	1m	SBK	yes	1"	fr	0	0	x= mod
BW <sub>2</sub>	14-21	7.5YR 5/4	0	L	1m, c	SBK	yes	1"	fr	0	0	x= mod
BW <sub>3</sub>	21-29	7.5YR 5/4	0	L	mass	(vs. SBK)	yes	1"	fr	0	0	x= mod
CR	29"	basalt fractured - X										X
R	>45"	borderline saprolitic										x=

Remarks

ARD 225 to 30"  
 Good Modest Wamuc  
 No Argillite but good cambic

Capability Class 4/6 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification \_\_\_\_\_ Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Wamuc  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth \_\_\_\_\_  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



Job Name Wilson / 7 Mile Hill Date 12/19/2 Preparer K. Tzeron  
Stop # 20 Location North end  
GPS Coordinates see report  
Slope 6-8 Elevation ↘ Landform Low hillslopes  
Geology/Genesis resistant basalt  
Vegetation Hardwoods, Xerophytes

<u>Horiz</u>	<u>Depth</u>	<u>Moist Color</u>	<u>Mott Clay%</u>	<u>Text</u>	<u>Struct</u>	<u>Frag</u>	<u>Ball Hold</u>	<u>Rib- bon</u>	<u>Con- sist</u>	<u>Andic Smear</u>	<u>Indur Cem</u>	<u>Sat Intake</u>
A 0-7'	10YR <sup>3/2</sup> /6	D	L	stony		25	yes	2H	f	e	e	x= mod 2?
BC 7-11'	10YR <sup>4/1</sup> /3	D	L	C.B.		30	yes		f	e	e	x= mod slow
BC 11-20'	10YR <sup>8/4</sup> /4	D	L	C.B.		35	yes		(Vf)	e	e	x= mod slow
CR 20'±	<u>Basalt / Ges. contact</u>									(in situ) x=		
Moh's hard ≈ 2.5-3												
can chip with tile spade x=												

Remarks

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Capability Class 7 Suitability = Gen. suited Gen. unsuited White

Classification \_\_\_\_\_ Family Lo-skeletal

Soil Drainage Class WD Soil Erodibility Index 24 Series Badel/SKX

Hydrologic Group A Depth to Mottles A Effective Rooting Depth 25"

Depth Current Water Table A Est Depth Seasonal High Water Table A

Runoff Potential mod due to rocky, shallow soils

Flooding Potential A Wetland Conditions A

**Wilson****T2N R12E Sec. 23C TL# 4400****Typifying Pedons****Wamic**

A 0-8" loam; 10YR 3/2; weakly smeary, low bulk density weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

Bw1 8-16" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

Bw2 16-26" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

BC 26-38" loam; 10YR 5/4; weak fine, coarse sub angular structure parting to blocky; firm; slightly sticky, non plastic; 5% cobbles; few fine roots; pH. 7.6

38"+ Paralithic contact, indurated but non-cemented basalt; non-calcareous

**Bodell**

A 0-5" stony loam, 10YR3/3, 20% gravels, 15% cobbles; friable, weak fine granular structure; few fibrous roots, non-sticky, non-plastic, clear wavy boundary pH=7.7

Bw 5-10" very cobbly loam, 10YR5/4, 10% gravels, 25% cobbles; friable consistence, weak fine, medium sub angular-blocky structure; no roots; slightly sticky, non- plastic, pH=7.9

BC 10-16" cobbly loam, 10YR5/4, 5% gravels, 25% cobbles; very firm consistence, weak medium subangular blocky structure; common interstitial and tubular pores; slightly-sticky, non- plastic, pH=7.9

16"+ hard, Massive Basalt; non-saprolitic, lithic

**Skyline**

A 0-3" loam; 10YR 3/2; non-smeary, weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

BC1 3-11" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

BC2 11-18" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

18"+ Paralithic contact, sedimentary origin



# Growing Soils Environmental Associates

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49C#

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
 Stop # 23 Location North central extreme  
 GPS Coordinates see enclosed report  
 Slope < 4 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-5	10YR <sup>3/2</sup>	0	L	1fM	cm L	yes	1 1/4	f	0	0	mod
BW	5-18	10YR <sup>2/4</sup>	0	L	1C	cm	yes	1 1/4	f	0	0	mod
BW	18-30	10YR <sup>5/6</sup>	0	L	1C	cm	yes	1 1/4	f	0	0	mod
B	30-35	10YR <sup>5/6</sup>	1F	L	1C	cm	yes	1 1/4	f	0	0	mod
CR	35	basalt - Saprolitic (Mottles = 3 or 2)										

Estimated  
 Remarks: Transient Water table  
not SBK

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = > 2" < 2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic wet  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

49C\* = wet phase

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzrow  
 Stop # 22 Location North central extreme limits  
 GPS Coordinates see enclosed report  
 Slope <2 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots isolated Pac Wet forbs

\* DTM = 35"

### BRIEF PROFILE DESCRIPTION

Lowest elevation  
in parcel +  
lowest landscape

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con-	Andic	Indur	Set
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2	+	L	1f m/c	cm	yes	1 1/4	f	+	+	mod
BW	7-14	10YR 3/3	+	L	1m c	cm	yes	2 1/4	f	+	+	mod
BW	14-30	10YR 5/4	+	HL	1c	cm	yes	2 1/4	f	+	+	mod slow
BC	30-35	10YR 1/1	+	HL	??	cm	yes	2 1/4	f	+	+	mod slow
CR	35"				basalt fracture							X
					about geo contact							16-2" / hr

Remarks Browner than upslope Areas  
no rock

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class MWD Soil Erodibility Index 128+ Series Wanuk Wet  
 Hydrologic Group A/A Depth to Mottles 10" Effective Rooting Depth <10"  
 Depth Current Water Table 50" Est Depth Seasonal High Water Table 40-50"  
 Runoff Potential mod due to basalt rock  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

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hydrology alteration area  
20 to 7 mile Hill Rd

Border de pression  
Area

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
Stop # 21 Location North Central extreme  
GPS Coordinates see enclosed report  
Slope 43 Elevation  Landform upland / Low rolling hill / Basin  
Geology/Genesis residuals + some colluvium  
Vegetation monocots, isolated Pac monocots

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A		10YR 3/2	L	16m	cm	1"	yes	1"	f	0	0	x= mod
BW <sub>1</sub>		10YR 3/2	L	5BK 10	cm	2"	yes	2"	f	0	0	x= mod
BW <sub>2</sub>		10YR 4/3	L	"	"	2"	yes	2"	f	0	0	x= mod
BC		22	(10) H	"	"	5	yes	1 3/4"	f	0	0	x= mod
R	55"	basalt weathered										

Remarks

254-  
inter pore  
locations

Highly erodible

Wet warm  
Hot fall

Capability Class 4/6 Suitability = Gen. suited, Gen. unsuited WHC = >2" x 2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index 27-35

Series Warm

Hydrologic Group A Depth to Mottles 38" Effective Rooting Depth

Depth Current Water Table 50" Est Depth Seasonal High Water Table 50" or less

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0 to 1

## **ATTACHMENT D – EXHIBIT 12**

“Soil Survey of Wasco County, Oregon, Northern Part”



This is a scanned version of the text of the original Soil Survey report of Wasco County, Oregon, Northern Part, issued March 1982. Original tables and maps were deleted. There may be references in the text that refer to a table that is not in this document.

Updated tables were generated from the NRCS National Soil Information System (NASIS). The soil map data has been digitized and may include some updated information. These are available from <http://soildatamart.nrcs.usda.gov>.

Please contact the State Soil Scientist, Natural Resources Conservation Service (formerly Soil Conservation Service) for additional information.

## SOIL SURVEY OF WASCO COUNTY, OREGON, NORTHERN PART

By George L. Green

Fieldwork by George L. Green, Terry A. Dallin, and Dal F. Ames,  
Soil Conservation Service

United States Department of Agriculture, Soil Conservation  
Service, in cooperation with the Oregon Agricultural Experiment  
Station

**WASCO COUNTY, NORTHERN PART**, is east of the Cascade Mountains in the north-central part of Oregon (see facing page). It occupies 559,730 acres.

The survey area is used mainly for farming. Sale of beef, wheat, and fruit is the principal source of farm income. Wheat is the main cash crop.

### *How This Survey Was Made*

Soil scientists made this survey to learn what kinds of soil are in Wasco County, Northern Part; where they are located; and how they can be used. The soil scientists went into the county knowing they likely would find many soils they had already seen and perhaps some they had not. They observed the steepness, length, and shape of slopes; the size and speed of streams; the kinds of native plants or crops; the kinds of rock; and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material that has not been changed much by leaching or by the action of plant roots.

The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. The soil phase is the category of soil classification most used in a local survey.

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or geographic feature near the place where a soil of that series was first observed and mapped. Chenoweth and Dufur, for example, are the names of two soil series. All the soils in the United States having the same series name have essentially the same characteristics affecting their behavior in the undisturbed landscape.

Soils of one series can differ in texture of the surface layer and in slope, stoniness, or some other characteristic that affects use of the soils by man. On the basis of such differences, a soil series is divided into phases. The name of a soil phase indicates a feature that affects management. For example, Condon silt loam, 1 to 7 percent slopes, is one of several phases within the Condon series.

After a guide for classifying and naming the soils had been worked out, the soil scientists drew the boundaries of the individual soils on aerial photographs. These photographs show woodlands, buildings, field borders, trees, and other details that help in drawing boundaries accurately. The soil map at the back of this publication was prepared from aerial photographs.

A mapping unit consists of all those areas shown on a soil map that are identified by the same symbol. On most maps detailed enough to be useful in planning the management of farms and fields, a mapping unit is nearly equivalent to a soil phase. It is not exactly equivalent because it is not practical to show on such a map all the small, scattered bits of soil of some other kind that have been seen within an area that is dominantly of a recognized soil phase.

Some mapping units are made up of soils of different series or of different phases within one series. Two such kinds of mapping units are shown on the soil map of Wasco County, Northern Part: soil complexes and soil associations.

A soil complex consists of areas of two or more soils, so intermingled or so small they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas. Generally, the name of a soil complex consists of the names of the dominant soils, joined by a hyphen. Bakeoven-Condon complex, 2 to 20 percent slopes, is an example.

A soil association is made up of two or more soils that could be delineated individually but that are shown as one unit because, for the purpose of the soil survey, there is little value in separating them. If there are two or more dominant series represented in the soil

association, the name ordinarily consists of the dominant soils joined by a hyphen. Bindle-Bins association, steep, is an example.

In most areas surveyed there are places where the soil is so stony, so shallow, so severely eroded, or so variable that it has not been classified by soil series. These places are shown on the soil map and are described in the survey, but they are called miscellaneous areas and are given descriptive names. Riverwash is a miscellaneous area.

Some of the mapping units in this survey area are broadly defined. These are indicated in the Index to Mapping Units and in the Guide to Mapping Units by an asterisk following the name of the mapping unit. The composition of these units is more variable than that of other units in the survey area, but mapping has been controlled well enough that interpretations can be made for the expected uses of the soil.

While a soil survey is in progress, soil scientists take soil samples needed for laboratory measurements and for engineering tests. Laboratory data from the same kind of soil in other places are also assembled. Data on yields of crops under defined practices are assembled from farm records and from field or plot experiments on the same kind of soil. Yields under defined management are estimated for all the soils.

Soil scientists observe how soils behave when used as a growing place for native and cultivated plants, and as material for structures, foundations for structures, or covering for structures. They relate this behavior to properties of the soils. For example, they observe that filter fields for onsite disposal of sewage fail on a given kind of soil, and they relate this to the slow permeability of the soil or to its high water table. They see that streets, road pavements, and foundations for houses are cracked on a particular soil, and they relate this failure to the high shrink-swell potential of the soil material. Thus, they use observation and knowledge of soil properties, together with available research data, to predict limitations or suitability of soils for present and potential uses.

After data have been collected and tested for the key, or benchmark, soils in a survey area, the soil scientists set up trial groups of soils. They test these groups by further study and by consultation with farmers, agronomists, engineers, and others. They then adjust the groups according to the results of their studies and consultation. Thus, the groups that are finally evolved reflect up-to-date knowledge of the soils and their behavior under current methods of use and management.

### **General Soil Map**

The general soil map at the back of this survey shows, in color, the soil associations in Wasco County, Northern Part. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

A map showing soil associations is useful to people who want a general idea of the soils in an area, who want to compare different parts of an area, or who want to know the location of large tracts that are suitable for a certain kind of land use. Such a map is a useful general guide in managing a watershed, a wooded tract, or a wildlife area, or in planning engineering works, recreational facilities, and community developments. It is not a suitable map for planning the management of a farm or field or for selecting the exact location of a road, building, or similar structure because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect their management.

The soil associations in Wasco County, Northern Part, are discussed in the following pages.

The soil associations in this survey area have been grouped into five general kinds of landscapes for broad interpretative purposes. Each of the broad groups and their included soil associations are described in the following pages. The terms for texture used in the title for several of the associations apply to the texture of the surface layer. For example, in the title of association 1, the words, silt loam and loam refer to the texture of the surface layer of the major soils named in the association. Terms used to express the dominant slope and depth of soil in the titles of the five major groups and the ten associations are defined in the Glossary. All the major soils in this survey area are well drained.

### **Deep, Moderately Sloping to Steep Soils on Uplands and Terraces**

These soils are on uplands and old terraces in the northern part of the survey area along the Columbia River and its tributaries.

#### ***1. Cherryhill-Chenoweth association***

##### ***Deep, moderately sloping to steep silt loam and loam soils***

This association consists of moderately sloping to steep soils on the sides of canyons and dissected terraces along Three Mile, Five Mile, Mill, Chenoweth, and Mosier Creeks. These soils formed in old alluvium and in colluvium weathered from consolidated and semiconsolidated tuffaceous sandstone. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, Oregon white oak, and ponderosa pine. Slopes range from 1 to 50 percent but are dominantly 7 to 35 percent. Elevation ranges from 200 to 1,200 feet. The average annual precipitation ranges from 14 to 20 inches, and the average annual air temperature ranges from 51° to 54° F. The frost-free period is 140 to 210 days at 32° and 170 to 250 days at 28°.

This association makes up about 3 percent of the survey area. It is about 62 percent Cherryhill soils, 26 percent Chenoweth soils, and 12 percent Van Horn, Wind River, Hesslan, Skyline, Tygh, Endersby, and Cumulic Haplaquolls soils and Rock outcrop-Xeropsamments.

Cherryhill soils have a surface layer of very dark

grayish brown silt loam and a subsoil of dark brown and dark yellowish brown silt loam, sandy clay loam, and loam. Effective rooting depth is 40 to 60 inches.

Chenoweth soils have a surface layer of very dark brown and very dark grayish brown loam and a subsoil of dark brown loam. Effective rooting depth is 60 inches or more.

This association is used for irrigated and dryfarmed fruit orchards that are mostly sweet cherries (fig. 1), for wildlife habitat, and for water supply. The wildlife is mainly upland birds and deer.

Runoff is mainly from the steep soils where vegetative cover is in poor condition or has been removed by cultivation. Sediment from runoff is moderate. Maintaining maximum cover in orchards and using conservation practices on dryfarmed cropland minimize the hazard of erosion.

### **Shallow to Deep, Nearly Level to Steep Soils on Uplands**

These soils are in the eastern part of the survey area in the Columbia District, Tygh Ridge, and Juniper Flat area.

They are well drained soils that formed mostly in loess, volcanic ash, and residuum weathered from basalt. Slopes range from 0 to 50 percent. Elevation ranges from 300 to 3,600 feet. The average annual precipitation ranges from 10 to 16 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 170 days at 32° and 150 to 210 days at 28°.



**Figure 1: Irrigated sweet cherries with permanent cover crop on Chenoweth loam, 1 to 7 percent slopes.**

The four soil associations in this group make up about 46 percent of the survey area.

### **2. Walla Walla-Dufur association**

#### *Deep, nearly level to steep silt loam soils*

This association consists of broad areas of soils that formed in loess on ridgetops and along major drainageways. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 300 to 2,000 feet. The average annual precipitation ranges from 12 to 14 inches, and the average annual air temperature ranges from 48° to 52° F. The frost-free period is 120 to 170 days at 32° and 150 to 210 days at 28°.

This association makes up about 13 percent of the survey area. It is about 58 percent Walla Walla soils, 24 percent Dufur soils, and 18 percent Duart, Anderly, Wato, Endersby, Hermiston, Pedigo, Licksillet, Nansene, and Wrentham soils and Riverwash.

Walla Walla soils have a surface layer of very dark brown silt loam and a subsoil of dark brown and brown silt loam. Effective rooting depth is 40 to 60 inches or more.

Dufur soils have a surface layer of very dark brown silt loam; a subsoil of dark brown, dark grayish brown, and dark yellowish brown silt loam; and a substratum of yellowish brown, moderately calcareous cobbly fine sandy loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for dryfarmed grain and pasture, wildlife habitat, and water supply. Farms are large, and water supplies for livestock are limited. The wildlife is mainly deer and upland birds.

Runoff is mainly from the moderately steep and steep soils, particularly in range where the grass is in poor condition and on summer fallow areas where vegetative protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using conservation practices on dryfarmed cropland minimize the hazard of erosion.

### **3. Condon-Cantala Bakeoven association**

#### *Shallow to deep, nearly level to steep silt loam and very cobbly loam soils*

The soils in this association formed in loess, volcanic ash, and residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,600 to 3,600 feet. The average annual precipitation ranges from 10 to 13 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

This association makes up about 19 percent of the survey area. It is about 44 percent Condon soils, 24 percent Cantala soils, 23 percent Bakeoven soils, and 9 percent Licksillet, Wrentham, and Hermiston soils.

Condon soils are moderately deep and nearly level to steep. They have a surface layer of very dark brown silt loam and a subsoil of dark brown and very dark grayish brown silt loam. Effective rooting depth is 20 to 40 inches.

Cantala soils are deep and nearly level to steep. They have a surface layer of very dark brown and very dark grayish brown silt loam, a subsoil of dark brown silt loam, and a substratum of dark brown loam. Effective rooting depth is 40 to 60 inches or more.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

This association is used for dryfarmed grain, range, and pasture; for wildlife habitat; and for water supply. Condon and Cantala soils are used for dryfarmed small grain. Bakeoven soils are used for grazing, mostly by cattle. Water supplies for livestock are limited. Springs and ponds are the main sources of water. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils and the steep Condon and Cantala soils. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on dryfarmed cropland minimize the hazard of erosion.

#### **4. Watama-Bakeoven-Wapinitia association**

*Shallow to deep, nearly level to steep silt loam and very cobbly loam soils*

This association consists of broad areas of soils on upland plateaus. These soils formed in loess, volcanic ash, and in residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,800 to 3,400 feet. The average annual precipitation ranges from 13 to 16 inches, and the average annual air temperature ranges from 48° to 50° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 7 percent of the survey area. It is about 39 percent Watama soils, 30 percent Bakeoven soils, 24 percent Wapinitia soils, and 7 percent Wamic, Hesslan, Maupin, and Wapinitia variant soils.

Watama soils are moderately deep and nearly level to steep. They have a surface layer of very dark brown and very dark grayish brown silt loam and a subsoil of dark brown loam and brown clay loam. Effective rooting depth is 20 to 40 inches.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

Wapinitia soils are deep and nearly level to steep. They have a surface layer of very dark brown silt loam, a subsoil of very dark brown silt loam and dark brown silty clay loam, and a substratum of dark yellowish brown fine sandy loam and dark brown clay loam. Effective rooting depth is 40 to 60 inches.

This association is used for dryfarmed grain, range, and pasture; for irrigated grain, hay, and pasture; for wildlife habitat; and for water supply. Bakeoven soils

are used for grazing, mostly by cattle. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils. Sediment from runoff is low to moderate. Maintaining maximum cover on range and using soil- and water-conserving practices on cropland minimize the hazard of erosion.

#### **5. Maupin Bakeoven association**

*Shallow and moderately deep, nearly level to moderately steep loam and very cobbly loam soils*

This association consists of broad areas of soils on upland plateaus. These soils formed in loess, volcanic ash, and residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and juniper. Elevation ranges from 1,600 to 3,400 feet. The average annual precipitation ranges from 10 to 12 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 7 percent of the survey area. It is about 65 percent Maupin soils, 29 percent Bakeoven soils, and 6 percent Licksillet, Hesslan, Sherar, and Maupin variant soils and Rock outcrop-Rubble land complex.

Maupin soils are moderately deep and nearly level or gently sloping. They have a surface layer of very dark grayish brown loam and a subsoil of dark brown loam. Effective rooting depth is 20 to 40 inches.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

This association is used for dryfarmed grain, range, and pasture; for irrigated grain, hay, and pasture; for wildlife habitat; and for water supply. Bakeoven soils are used for grazing, mostly by cattle. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils. Sediment from runoff is low to moderate. Maintaining maximum cover on range and using soil- and water-conserving practices on cropland minimize the hazard of soil erosion.

#### **Shallow and Moderately Deep, Moderately Steep to Very Steep Soils on Uplands**

These soils are on uplands in the eastern part of the survey area along the Deschutes River, Fifteenmile Creek, and their tributaries.

#### **6. Licksillet-Wrentham association**

*Shallow and moderately deep, moderately steep to very steep silt loam, very stony loam, and extremely stony loam soils*

This association consists of soils on the sides of canyons along Fifteenmile Creek and the Columbia and Deschutes Rivers and soils on ridgetops (fig. 2). These



**Figure 2: Typical area of the Licksillet-Wrentham association. The south-facing soil is Licksillet extremely stony loam, 40 to 70 percent slopes (mostly in right background), and the north-facing soil is Wrentham-Rock outcrop complex, 35 to 70 percent slopes (mostly in left background in areas of shadow). Bakeoven-Condon complex, 2 to 20 percent slopes, is on ridgetops.**

soils formed in loess and in colluvium weathered from basalt. The vegetation is bunchgrasses, forbs, and shrubs. Slopes range from 15 to 70 percent. The average annual precipitation ranges from 10 to 13 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 150 days at 32° and 150 to 210 days at 28°.

This association makes up about 18 percent of the survey area. It is about 59 percent Licksillet soils, 17 percent Wrentham soils, and 24 percent Bakeoven, Anderly, Condon, Maupin, Watama, Warden, Nansene, Sherar, and Sinamox soils and Rock outcrop-Rubble land complex and Riverwash.

Licksillet soils have a surface layer of very dark grayish brown extremely stony loam and a subsoil of dark brown very stony heavy loam and dark yellowish brown have gravelly heavy loam. Effective rooting depth is 12 to 20 inches.

Wrentham soils have a surface layer of very dark brown silt loam and a subsoil of dark brown very cobbly silty clay loam and silt loam. Effective rooting depth is 20 to 40 inches.

This association is used for range, wildlife habitat, and water supply. Ranches are large, and water supplies for livestock are limited. Springs and ponds are the main sources of water. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Licksillet soils, particularly in areas of range where the grass is in poor condition. Sediment from runoff is low to moderate. Maintaining maximum cover on range minimizes the hazard of erosion.

#### **Moderately Deep and Deep, Nearly Level to Very Steep Soils on Uplands of Tygh Valley**

This group of soils is in the southeastern part of the survey area. The major soils are on uplands bordering White River and Tygh Creek in the Tygh Valley area.

#### **7. Sherar-Sinamox association**

*Moderately deep and deep, nearly level to very steep cobbly loam and silt loam soils*

This association consists of soils on upland plateaus. These soils formed in loess and gravelly colluvium. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,500 to 2,500 feet. The average annual precipitation ranges from 10 to 12 inches, and the average annual air temperature is 48° to 52° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 2 percent of the

survey area. It is about 46 percent Sherar soils, 26 percent Sinamox soils, and 28 percent Licksillet, Bakeoven, Maupin, Pedigo, Quincy, and Tygh soils and Riverwash.

Sherar soils have a surface layer of very dark grayish brown cobbly loam and a subsoil of dark brown clay and gravelly clay. Effective rooting depth is 20 to 40 inches.

Sinamox soils have a surface layer of black and very dark grayish brown silt loam, a subsoil of dark brown silt loam, and a substratum of dark yellowish brown silty clay and brown gravelly clay loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for dryfarmed grain and pasture, irrigated hay and pasture, wildlife habitat, and water supply. The wildlife is mainly deer and upland birds.

Runoff is mainly from the steep and very steep soils, particularly in areas of range where the grass is in poor condition and in areas of summer fallow where vegetation protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on armed cropland minimize the hazard of erosion.

### **Shallow to Deep, Nearly Level to Very Steep Soils on Foot Slopes of the Cascade Mountains**

This group of soils is in the western part of the survey area. They are loam, stony loam, gravelly loam, and very cobbly loam soils that formed in loess, volcanic ash, and in colluvium weathered from andesite and sandstone sediment. Slopes range from 1 to 70 percent. Elevation ranges from 500 to 3,600 feet. The average annual precipitation ranges from 14 to 30 inches, and the average annual air temperature ranges from 42° to 50° F. The frost-free period is 50 to 150 days at 32° and 90 to 200 days at 28°.

The three associations in this group make up about 31 percent of the survey area.

#### **8. Hesslan-Skyline-Frailey association**

*Shallow to deep, nearly level to very steep stony loam, very cobbly loam, and loam soils*

This association consists of soils on the sides of canyons along Fivemile, Fifteen Mile, and Mill Creeks and their tributaries and soils on ridgetops, side slopes, and bottom lands along streams. These soils formed in loess, in volcanic ash, and in colluvium weathered from sediment and sandstone. Vegetation is bunchgrasses, forbs, shrubs, Oregon white oak, ponderosa pine, and Douglas-fir. Elevation ranges from 500 to 3,500 feet. The average annual precipitation ranges from 14 to 30 inches, and the average annual air temperature ranges from 45° to 49° F. The frost-free period is 100 to 140 days at 32° and 120 to 160 days at 28°.

This association makes up about 9 percent of the survey area. It is about 45 percent Hesslan soils, 16 percent Skyline soils, 15 percent Frailey soils, and 24 percent Bald, Bodell, Ketchly, Wamic, and Tygh soils and Rock outcrop-Xeropsamments and Riverwash.

Hesslan soils have a surface layer of very dark grayish brown stony loam and a subsoil of dark brown loam and cobbly loam. Effective rooting depth is 20 to 40 inches.

Skyline soils have a surface layer of very dark grayish brown very cobbly loam and cobbly loam and a subsoil of dark brown gravelly loam. Effective rooting depth is 12 to 20 inches.

Frailey soils have a surface layer of very dark grayish brown loam, a subsoil of dark brown loam, and a substratum of brown loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for range, pasture, woodland, wildlife habitat, and water supply. The wildlife is mainly deer and upland birds.

Runoff is mainly from the very steep soils, particularly in areas of range where the grass is in poor condition and in logged-over areas where vegetative cover is sparse. Sediment from runoff is moderate or high. Maintaining maximum cover on range and using soil- and water-conserving practices on logged areas minimize the hazard of erosion.

#### **9. Wamic Hesslan association**

*Moderately deep and deep, nearly level to very steep loam and stony loam soils*

This association consists of soils that formed in loess, in volcanic ash, and in colluvium weathered from sandstone. In uncultivated areas, the vegetation is bunchgrass, forbs, shrubs, Oregon white oak, and ponderosa pine. Elevation ranges from 1,000 to 3,600 feet. The average annual precipitation ranges from 14 to 20 inches, and the average annual air temperature ranges from 46° to 50° F. The frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

This association makes up about 18 percent of the survey area. It is about 77 percent Wamic soils, 13 percent Hesslan soils, and 10 percent Bakeoven, Bald, Bodell, Frailey, Ketchly, Tygh, and Watama soils and Riverwash.

Wamic soils have a surface layer of very dark grayish brown loam, a subsoil of dark brown loam, and a substratum of dark brown heavy loam. Effective rooting depth is 40 to 60 inches or more.

Hesslan soils have a surface layer of very dark grayish brown stony loam and a subsoil of dark brown loam and cobbly loam. Effective rooting depth is 20 to 40 inches.

This association is used for dryfarmed grain and pasture; irrigated grain, hay, and pasture; wildlife habitat; and water supply. Farms are large, and water supplies for livestock are limited. The wildlife is mainly deer and upland birds.

Runoff is mainly from areas of range where the grass is in poor condition and from areas of summer fallow where vegetation protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on armed cropland minimize the hazard of erosion.



## **10. Ketchly-Bins association**

### ***Deep, nearly level to very steep loam and gravelly loam soils***

This association consists of soils that formed in loess, in volcanic ash, and in colluvium weathered from andesite. Vegetation is shrubs, Douglas-fir, grand fir, and ponderosa pine. Elevation ranges from 1,100 to 3,600 feet. The average annual precipitation ranges from 25 to 30 inches, and the average annual air temperature ranges from 42° to 45° F. The frost-free period is 50 to 120 days at 32° and 90 to 140 days at 28°.

This association makes up about 4 percent of the survey area. It is about 57 percent Ketchly soils, 23 percent Bins soils, and 20 percent Bindle, Bald, Bodell, Wamic, Frailey, and Hesslan soils and Riverwash.

Ketchly soils have a surface layer of very dark grayish brown or dark brown loam and a subsoil of brown heavy loam. Effective rooting depth is 40 to 60 inches or more.

Bins soils have a surface layer of dark brown gravelly loam and a subsoil of dark brown loam and gravelly loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for woodland, wildlife habitat, and water supply. The wildlife is mainly deer, elk, bear, and upland birds.

Runoff is mainly from the steep and very steep soils, particularly in recently logged areas. Sediment from runoff is low to moderate. Maintaining maximum cover on logging roads and skid trails and using soil- and water-conserving practices on logged areas minimize the hazard of erosion.

## ***Descriptions of the Soils***

In this section the soil series and mapping units in Wasco County, Northern Part, are described. Each soil series is described in detail, and then each mapping unit in that series is briefly described. Unless it is noted otherwise, what is stated about the soil series holds true for the mapping units in that series. Thus, to get full information about any one mapping unit, it is necessary to read both the description of the mapping unit and the description of the soil series to which it belongs.

An important part of the description of each soil series is the soil profile, that is, the sequence of layers from the surface downward to rock or other underlying material. Each series contains two descriptions of this profile. The first is brief and in terms familiar to the layman. The second is much more detailed and is for those who need to make thorough and precise studies of soils. Color terms are for moist soil unless otherwise stated. The profile described in the series is representative of one of the mapping units in that series. If profile of a soil in a given mapping unit is different from the one described as representative of the series, these differences are stated in the description of the mapping unit or they are apparent in the name of the mapping unit, or both.

As mentioned in the section "How This Survey Was Made," not all mapping units are members of a soil series. Cumulic Haplaquolls, for example, do not belong to a soil series; nevertheless, they are listed in alphabetic order along with the soil series.

Preceding the name of each mapping unit is the symbol that identifies the mapping unit on the detailed soil map. Listed at the end of the description of each mapping unit are the capability unit and range site in which the mapping unit has been placed. The pages on which each capability unit, range site, woodland group and windbreak group are described can be found by referring to the "Guide to Mapping Units" at the back of this survey.

The acreage and proportionate extent of each mapping unit are shown in table 1. Many of the terms used in describing soils can be found in the Glossary at the end of this survey, and more detailed information about the terminology and methods of soil mapping can be obtained from the Soil Survey Manual (11).

## **Anderly Series**

The Anderly series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 3 to 35 percent. Elevation is 300 to 2,000 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 50° to 52° F, and the frost-free period is 150 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 14 inches thick. The upper 15 inches of the subsoil is dark brown silt loam, and the lower 8 inches is brown silt loam. Basalt bedrock is at a depth of about 37 inches. The profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Anderly silt loam, 12 to 20 percent slopes, 500 feet east of a road in the NW1/4NW1/4NE1/4 section 32, T. 1 N., R. 15 E.:

Ap-0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots many very fine irregular pores; neutral; abrupt clear boundary.

A1-7 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; slightly hard, friable slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear wavy boundary.

B21-14 to 29 inches; dark brown (10YR 3/3) silt loam brown (10YR 5/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B22-29 to 37 inches brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic struc-

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

ture; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; neutral; abrupt wavy boundary.

IIR-37 inches; basalt bedrock.

The A horizon is very dark grayish brown or very dark brown when moist. The B2 horizon is grayish brown, brown, or pale brown when dry and dark brown or brown when moist. There is no lime accumulation in most places. Few basalt fragments, 1/8 to 1/2 inch in diameter, are throughout the profile. Depth to bedrock is 20 to 40 inches.

**1C-Anderly silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 31, T. 1 N., R. 15 E. This soil is on broad ridgetops. Slopes average about 10 percent.

Included with this soil in mapping were areas of nearly level Anderly and Walla Walla soils that make up as much as 10 percent of the unit. Also included were Bakeoven and Licksillet soils that make up as much as 5 percent.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**1D-Anderly silt loam, 12 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 32, T. 1 N., R. 15 E. This soil is in long, narrow areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of

Walla Walla, Bakeoven, and Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-7 ; Rolling Hills range site.

**1E-Anderly silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4SE1/4 section 29, T. 1 N., R. 15 E. This soil is in long, narrow areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Bakeoven, and Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is high. Capability subclass VIe; Droughty South Exposure range site.

#### **Bakeoven Series**

The Bakeoven series consists of well drained soils formed on uplands in a thin layer of loess and the underlying residuum weathered from basalt. Slopes are 2 to 20 percent. Elevation is 1,600 to 3,600 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 110 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is dark

brown very cobbly loam about 3 inches thick. The subsoil is dark brown very cobbly loam and very cobbly clay loam about 6 inches thick. Basalt bedrock is at a depth of about 9 inches. The profile is neutral.

Permeability is moderately slow, and the available water capacity is .15 to .7 inches. Water-supplying capacity is less than 2.5 inches. Effective rooting depth is 4 to 1 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Bakeoven very cobbly loam, 2 to 20 percent slopes, 100 feet southeast of a road in the SE1/4SE1/4NE1/4 section 16, T. 3 S., R. 14 E.:

A1-0 to 3 inches; dark brown (7.5YR 3/2) very cobbly loam, brown (10YR 5/3) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 30 percent pebbles, 25 percent cobbles and 5 percent stones; neutral; abrupt smooth boundary.

B1-3 to 6 inches; dark brown (7.5YR 3/3) very cobbly loam, brown (7.5YR 4/4) dry; weak fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 30 percent pebbles, 30 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

B2-6 to 9 inches; dark brown (10YR 3/3) very cobbly clay loam, brown (7.5YR 4/4) dry; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common fine roots; common very fine tubular pores; 30 percent pebbles, 50 percent cobbles, and 10 percent stones; neutral; abrupt wavy boundary.

III-9 inches; basalt bedrock.

The A horizon is brown or grayish brown when dry and dark brown or very dark grayish brown when moist. It is very cobbly loam, very stony loam, or extremely stony loam. The B2 horizon is brown, dark brown, or yellowish brown when dry and dark brown or dark yellowish brown when moist. The B horizon is 50 to 90 percent rock fragments. Depth to bedrock is 4 to 12 inches.

**2D-Bakeoven very cobbly loam, 2 to 20 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 16, T. 3 S., R. 14 E. This soil is in long, narrow areas between Condon soils on ridgetops and Lickskillet soils on south-facing canyon slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Condon, Maupin, Wapinitia, Watama, and Lickskillet soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is moderate. Capability subclass VII; Scabland range site.

**3D-Bakeoven-Condon complex, 2 to 20 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 15, T. 3 S., R. 14 E. This complex is about 50 to 85 percent Bakeoven very cobbly loam; 2 to 20 percent slopes, and 10 to 35 percent a Condor silt loam that has 2 to 20 percent slopes. The Bakeoven soil has the profile described as representative of the series. It is on ridgetops or side slopes in areas of scabland between and around areas of the Condon soil. The Condon soil is generally on ridgetops or side slope, in circular or elongated mounds.

Included with this complex in mapping were areas of a Lickskillet very stony loam and shallow stony soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Condon soil in Rolling Hills range site.

**4C-Bakeoven-Maupin complex, 0 to 12 percent slopes.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 2, T. 5 S., R. 13 E. This complex is about 50 to 85 percent a Bakeoven very stony loam and 10 to 35 percent a Maupin loam (fig. 3). It is on upland plateaus. The Bakeoven soil is in areas of scabland between and around areas of the Maupin soil. The Maupin soil commonly is on circular or elongated mounds. The Bakeoven soil has a profile similar to the one described as representative of the Bakeoven series, but it is very stony.

Included with this complex in mapping were areas of Lickskillet soils that make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Maupin soil in Shrubby Rolling Hills range site.

**5C-Bakeoven-Watama complex, 0 to 12 percent slopes.** This complex is about 50 to 85 percent a Bakeoven very stony loam that has 2 to 12 percent slopes, and 10 to 35 percent a Watama silt loam that has 0 to 12 percent slopes. The Bakeoven soil is in areas of scabland between and around the Watama soil. The Watama soil is in circular mounds that have a convex surface. The soil near the center of the mound is deeper to bedrock than near the edges. Where the slope is more than 10 percent, the Watama soil commonly occurs as elongated mounds and the long axis is downslope. The mounds are 15 to 40 feet in diameter and about 25 feet apart. The Bakeoven soil has a profile similar to the one described as representative of the series, but it is very stony.

Included with this complex in mapping were areas of Lickskillet soils, shallow stony soils, and Rock outcrop. These soils make up as much as 15 percent of the unit.

Runoff is slow to medium, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Watama soil in Shrubby Rolling Hills range site.

## Bald Series

The Bald series consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 5 to 75 percent. Elevation is 200 to 3,000 feet. The vegetation is oak, pine, fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32° and 140 to 180 days at 28°.



**Figure 3: Bakeoven very stony loam, 0 to 12 percent slopes, is in the foreground. Maupin loam, 0 to 12 percent slopes, is on the round mounds in the background.**

In a representative profile the surface layer is dark brown cobbly loam and dark reddish brown gravelly loam about 12 inches thick. The subsoil is dark reddish brown and reddish brown very gravelly loam about 25 inches thick. Basalt bedrock is at a depth of about 37 inches. The surface layer is neutral, and the subsoil is slightly acid.

Permeability is moderate, and the available water capacity is 2 to 5 inches. Water-supplying capacity is 12 to 25 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, timber production, wildlife habitat, and water supply.

Representative profile of Bald cobbly loam, 5 to 45 percent slopes, in the SE1/4SE1/4NE1/4 section 36, T. 2 N., R. 11 E.:

O1-1/2 inch to 0; oak leaves, pine twigs, and needles.

A1-0 to 5 inches; dark brown (7.5YR 3/2) cobbly loam, reddish brown (5YR 4/3) dry; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; 20 percent pebbles, 20 percent cobbles; neutral; clear smooth boundary.

A12-5 to 12 inches; dark reddish brown (5YR 3/3) gravelly loam, reddish brown (5YR 4/4) dry; moderate fine granular structure; slightly hard, friable, slightly

sticky and slightly plastic; many very fine roots; many very fine tubular pores; 30 percent pebbles, 15 percent cobbles; neutral; gradual wavy boundary.

B21-12 to 21 inches; dark reddish brown (5YR 3/4) very gravelly heavy loam, reddish brown (5YR 5/4) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 35 percent pebbles, 25 percent cobbles; slightly acid; gradual wavy boundary.

B22-21 to 37 inches; reddish brown (5YR 4/4) very gravelly heavy loam, yellowish red (5YR 5/6) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 40 percent pebbles, 30 percent cobbles; slightly acid; abrupt wavy boundary.

IIR-37 inches; basalt bedrock, partly fractured.

The A horizon has fine or medium granular structure and is 15 to 45 percent rock fragments. The B2 horizon is loam, heavy loam, or light clay loam and is more than 35 percent cobbles and pebbles. It has weak to moderate, fine to medium, subangular blocky structure. Depth to bedrock is 20 to 40 inches.

**6E-Bald cobbly loam, 5 to 45 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 36, T. 2 N., R. 11 E. This soil is in irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bodell and Wamic soils. These soils make up about 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to severe. Capability subclass VIs; Pine-Douglas Fir-Sedge range site; woodland group 4f.

**7F-Bald very cobbly loam, 45 to 75 percent slopes.**

A representative mapping unit is in the NW1/4NW1/4NW1/4 section 18, T. 2 N., R. 13 E. This soil is in long, narrow areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer is more than 50 percent rock fragments.

Included with this soil in mapping were areas of Bodell and Wamic soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIIs; Oak-Pine Steep South range site; woodland group 4f.

**Bald Variant**

The Bald variant consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 45 to 75 percent. Elevation is 200 to 2,500 feet. The vegetation is Douglas-fir, bigleaf maple, forbs, and shrubs. The average annual precipitation is 22 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32°.

In a representative profile the surface layer is very dark grayish brown cobbly loam about 5 inches thick. The subsoil is dark brown cobbly loam, gravelly loam, and very gravelly loam about 35 inches thick. The substratum is brown very gravelly loam about 22 inches thick. The surface layer is slightly acid, and the subsoil and substratum are neutral.

Permeability is moderate, and the available water capacity is 4 to 8 inches. Water-supplying capacity is 16 to 20 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for woodland, wildlife habitat, and water supply.

Representative profile of Bald variant cobbly loam, 45 to 75 percent slopes, in the NE1/4SE1/4SE1/4 section 34, T. 3 N., R. 8 E.

O1-2 inches to 0; pine needles, twigs, and leaves.

A1-0 to 5 inches; very dark grayish brown (10YR 3/2) cobbly loam; grayish brown (10YR 5/2) dry; moderate fine granular structure; slightly hard, friable, slight (y) sticky and slightly plastic; many very fine roots; many very fine irregular pores; 10 percent pebbles, 15 percent cobbles; slightly acid; gradual wavy boundary.

B1-5 to 12 inches; dark brown (10YR 3/3) cobbly loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; 15 percent pebbles, 15 percent cobbles; neutral; gradual wavy boundary.

B21-12 to 23 inches; dark brown (7.5YR 3/3) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many medium fine and very fine roots; many very fine tubular pores;

30 percent pebbles, 10 percent cobbles; neutral; gradual wavy boundary.

B22-23 to 40 inches; dark brown (7.5YR 4/3) very gravelly loam, brown (10YR 6/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots many very fine tubular pores; 45 percent pebbles, 20 percent cobbles; neutral; gradual wavy boundary.

C1-40 to 62 inches; brown (7.5YR 4/4) very gravelly loam, light brown (10YR 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; common very fine tubular pores; 50 percent pebbles, 35 percent cobbles; neutral.

The A horizon is very dark grayish brown or dark reddish brown and is 25 to 50 percent rock fragments. The B horizon is dark brown or brown and is 50 to 80 percent rock fragments. It has weak or moderate structure. Depth to bedrock is 40 to 60 inches or more.

**8F-Bald variant cobbly loam, 45 to 75 percent slopes.** A representative mapping unit is in the NE1/4SE1/4SE1/4, section 34, T. 3 N., R. 8 E. This soil is in long areas and has north-facing slopes.

Included with this soil in mapping were areas of Bald, Bodell, and Bindle soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIIs; woodland group 2f.

**Bindle Series**

The Bindle series consists of well drained soils formed in loess, volcanic ash, and the underlying stony colluvium weathered from andesite on uplands. Slopes are 1 to 70 percent. Elevation is 2,500 to 3,500 feet. The vegetation is Douglas-fir, grand fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 50 to 100 days at 32° and 90 to 130 days at 28°.

In a representative profile the surface layer is dark brown gravelly loam about 6 inches thick. The upper 9 inches of the subsoil is dark brown gravelly loam, and the lower 7 inches is dark brown very gravelly heavy loam. Depth to highly fractured bedrock is 20 to 40 inches. The surface layer is neutral, and the subsoil and substratum are slightly acid to medium acid.

Permeability is moderate, and the available water capacity is 4 to 7 inches. Water-supplying capacity is 13 to 20 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for timber, wildlife habitat, and water supply.

Representative profile of Bindle gravelly loam in an area of Bindle-Bins association, steep, south of road in the NE1/4SW1/4 section 23, T. 1 N., R. 10 E.:

O1-1 1/2 inches to 0; fir twigs and needles.

A1-0 to 6 inches; dark brown (7.5YR 3/2) gravelly loam, brown (7.5YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few medium roots; many very fine irregular pores; 25 percent pebbles; slightly acid; clear smooth boundary.

B21-6 to 15 inches; dark brown (7.5YR 3/3) gravelly loam, brown (7.5YR 5/3) dry; moderate fine granular structure and moderate very fine subangular blocky

structure slightly hard, friable, slightly sticky and slightly plastic; many very fine and few medium roots; many very fine tubular pores; 25 percent pebbles, 10 percent cobbles; slightly acid; gradual wavy boundary.

B22-15 to 22 inches; dark brown (7.5YR 4/2) very gravelly heavy loam, brown (7.5YR 5/2) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine tubular pores; 35 percent pebbles, 15 percent cobbles; medium acid; gradual wavy boundary.

IIC-22 to 60 inches; highly fractured bedrock with horizontal s acing between cracks less than 4 inches; fines are too few to fill some of the interstices larger than 1 millimeter; fines are dark brown (7.5YR 4/4) loam, brown (7.5YR 5/4) dry; slightly hard, friable, slightly sticky and slightly plastic; many fine roots in fractures; many very fine irregular pores; 30 percent stones; 40 percent cobbles, and 15 percent pebbles; medium acid.

The A horizon is reddish brown or brown when dry and dark brown or dark reddish brown when moist. It is 20 to 40 percent pebbles and as much as 10 percent stones. The B horizon is reddish brown or brown when dry and dark reddish brown or dark brown when moist. It is 20 to 40 percent pebbles, 5 to 20 percent cobbles, and as much as 10 percent stones. Depth to highly fractured bedrock is 20 to 40 inches.

**9E-Bindle-Bins association, steep.** A representative mapping unit is in the NW1/4NW1/4 section 22, T. 1 N., R. 11 E. This association is about 55 percent a Bindle gravelly loam that has 1 to 30 percent slopes and 30 percent a Bins gravelly loam that has 1 to 30 percent slopes. The Bindle soil is on narrow ridges and the upper part of slopes capped with rock. The Bins soil is in irregularly shaped areas on broad ridgetops not capped by rock. Both soils have the profile described as representative of their respective series.

Included with this association in mapping were areas of very stony shallow soil, ashy soils, an Rock outcrop that make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Bindle soil in capability subclass VI; woodland group 3f. Bins soil in capability subclass VIe; woodland group 2o.

**9F-Bindle-Bins association, very steep.** A representative mapping unit is in the NE1/4SW1/4 section 23, T. 1 N., R. 10 E. This association is about 45 percent a Bindle gravelly loam that has 30 to 70 percent slopes and 40 percent a Bins gravelly loam that has 30 to 70 percent slopes. The Bindle soil is on the top and convex part of slopes in areas capped by rock. The Bins soil is on the middle and lower parts of slopes not capped by rock. The Bins soil has a profile similar to the one described as representative of the Bins series, but it contains more rock fragments.

Included with this association in mapping were areas of shallow very stony soils, Bold variant soils, and Rock outcrop that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Bindle soil in capability subclass VII; woodland group 3f; Bins soil in capability subclass VIIe; woodland group 2r.

## Bins Series

The Bins series consists of well drained soils formed

in loess, volcanic ash, and the underlying stony, moderately fine textured colluvium weathered from andesite on uplands. Slopes are 1 to 70 percent. Elevation is 1,100 to 3,600 feet. The vegetation is Douglas-fir, grand fir, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 50 to 100 days at 32° and 90 to 130 days at 28°.

In a representative profile the surface layer is dark brown gravelly loam about 8 inches thick. The subsoil is dark brown loam and gravelly loam about 28 inches thick. The substratum is dark brown cobbly clay loam about 24 inches thick. Basalt bedrock is at a depth of about 40 to more than 60 inches.

Permeability is moderately slow, and the available water capacity is 7 to 12 inches. Water-supply capacity is 17 to 20 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for timber, wildlife habitat, and water supply.

Representative profile of a Bins gravelly loam in an area of Bindle-Bins association, steep, in the SE1/4SW1/4SE1/4 section 15, T. 1 N., R. 11 E.:

O1-1 inch to 0; fir twigs and needles.

A1-0 to 8 inches; dark brown (7.5YR 3/2) gravelly loam, brown (7.5YR 5/2) dry; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; many very fine irregular pores; 25 percent fine pebbles; slightly acid; clear smooth boundary.

B1-8 to 12 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 5/3) dry; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles; slightly acid; gradual smooth boundary.

B21-12 to 25 inches; dark brown (7.5YR 4/3) gravelly loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; 15 percent pebbles, 10 percent cobbles; many very fine tubular pores; slightly acid; gradual wavy boundary.

B22-25 to 36 inches; dark brown (7.5YR 4/4) gravelly heavy loam, reddish brown (5YR 5/4) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic, common very fine roots; many very fine tubular pores; few thin clay films in pores; 20 percent pebbles, 5 percent cobbles; slightly acid; clear wavy boundary.

C-36 to 60 inches; dark brown (7.5YR 4/4) cobbly clay loam, reddish brown (5YR 5/4) dry; massive; slightly hard, friable, sticky and plastic; common very fine roots; common very fine and fine irregular pores; slightly acid.

The A horizon is dark reddish gray or brown when dry. It is 15 to 25 percent fine pebbles 1/8 to 1/2 inch in diameter and 0 to 15 percent cobbles and stones. The B horizon and C horizon are loam, heavy loam, or clay loam. They are 0 to 15 percent pebbles and 0 to 20 percent cobbles. Depth to bedrock is 40 to 60 inches or more. Bin soils are mapped only in association with Bindle soils in two mapping units. Refer to the Bindle series for a description of these mapping units.

## Bodell Series

The Bodell series consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 5 to 75 percent. Elevation is 200 to 2,500 feet. The



vegetation in bunchgrasses, forbs, shrubs, and scattered oak trees. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32° and 140 to 180 days at 28°.

In a representative profile the surface layer is dark brown cobbly loam about 5 inches thick. The upper 8 inches of the subsoil is dark brown very cobbly loam, and the lower 5 inches is dark brown very cobbly clay loam. Basalt bedrock is at a depth of about 18 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 1 inch to 1 inches. Water-supplying capacity is 4 to 7 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Bodell cobbly loam, 5 to 45 percent slopes, 100 feet north of road in the NW1/4SW1/4SW1/4 section 33, T. 2 N., R. 12 E.:

- A1-0 to 5 inches; dark brown (7.5YR 3/2) cobbly loam, brown (7.5YR 4/3) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 15 percent pebbles, 20 percent cobbles; neutral; abrupt smooth boundary.
- B21-5 to 13 inches; dark brown (7.5YR 3/3) very cobbly loam, brown (7.5YR 4/3) dry; weak medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular and irregular pores; 20 percent pebbles, 40 percent cobbles; neutral; clear smooth boundary.
- B22-13 to 18 inches; dark brown (7.5YR 3/3) very cobbly clay loam, brown (7.5YR 3/3) dry; weak fine subangular blocky structure; hard, firm, sticky and plastic; plentiful very fine roots; many very fine irregular and tubular pores; 60 percent cobbles, 10 percent stones; neutral; abrupt smooth boundary.
- IIR-18 inches; basalt bedrock.

The A horizon is brown, grayish brown, or dark grayish brown when dry and dark brown or very dark grayish brown when moist. It is 20 to 40 percent pebbles and 0 to 10 percent cobbles. The B2 horizon is brown or dark yellowish brown when dry and dark brown or dark yellowish brown when moist. It is very cobbly loam to very cobbly clay loam and is 18 to 30 percent clay. It is 50 to 70 percent rock fragments, mainly cobbles. Depth to bedrock is 12 to 20 inches.

#### **10E-Bodell cobbly loam, 5 to 45 percent slopes.**

A representative mapping unit is in the NW1/4SW1/4SW1/4 section 33, T. 2 N., R. 12 E. This soil is in irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bald, Ketchly, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to severe. Capability subclass VIIc; South Exposure range site.

**11F-Bodell very cobbly loam, 45 to 75 percent slopes.** A representative mapping unit is in the NE1/4NW1/4 section 14, T. 1 N., R. 12 E. This soil is in long, narrow areas and has south-facing slopes. This soil has a profile similar to the one described as represen-

tative of the series, but the surface layer is more than 50 percent rock fragments.

Included with this soil in mapping were areas of Bald, Ketchly, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIc; Steep South range site.

#### **Cantala Series**

The Cantala series consists of well drained soils formed in loess that has an appreciable content of volcanic ash overlying stratified alluvium on uplands. Slopes are 1 to 35 percent. Elevation is 1,600 to 3,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown silt loam about 18 inches thick. The subsoil is dark brown silt loam about 36 inches thick. The substratum is dark brown loam about 8 inches thick. The surface layer and subsoil are neutral, and the substratum is mildly alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Cantala silt loam, 1 to 7 percent slopes, 65 feet west of the county road in SE1/4SE1/4SE1/4 section 5, T. 2 S., R. 15 E.:

- Ap-0 to 8 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.
- A12-8 to 13 inches; very dark brown (10YR 2/2) silt loam grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- A13-13 to 18 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- B21-18 to 35 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- B22-35 to 54 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.
- IIC-54 to 62 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; hard, friable, nonsticky and nonplastic; few very fine and fine roots; many very fine tubular pores; many noncalcareous nodules 1/4

to 1 inch in diameter; few mycelia lime below a depth of 60 inches; mildly alkaline.

IIIR-62 inches; basalt bedrock.

The B2 horizon is silt loam and is 18 to 24 percent clay. It is less than 15 percent rock fragments coarser textured than very fine sand. It has weak or moderate structure. The C horizon is stratified sand or silt in some places.

**12B-Cantala silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 5, T. 2 S., R. 15 E. This soil is on broad ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile describes representative of the series.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3; Rolling Hills range site.

**12C-Cantala silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the SW1/4SW1/4SW1/4 section 34, T. 1 S., R. 14 E. This soil is on broad ridgetops in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIle-1; Rolling Hills range site.

**12D-Cantala silt loam, 12 to 20 percent slopes.**

A representative mapping unit is in the NE1/4NE1/4NE1/4 section 10, T. 2 S., R. 15 E. This soil is in long, broad areas and has north-facing slopes.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIle-4; Droughty North Exposure range site.

**12E-Cantala silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the SE1/4NE1/4NW1/4 section 1, T. 2 S., R. 14 E. This soil is in long, irregularly shaped areas and has north-facing slopes.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-3 ; North Exposure range site.

**Chenoweth Series**

The Chenoweth series consists of well drained soils formed in old alluvium on uplands. Slopes are 1 to 35 percent. Elevation is 200 to 950 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 51° to 54° F, and the frost-free period is 150 to 210 days at 32° and 185 to 250 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown loam about 22 inches thick. The subsoil is dark brown loam about 24 inches thick. The upper 9 inches of the substratum is brown loam, and the lower part is brown very fine

sandy loam to a depth of 60 inches or more. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 7.5 to 9.0 inches. Water-supplying capacity is 10 to 12 inches. Effective rooting depth is 60 inches or more.

These soils are used mostly for fruit orchards and some range.

Representative profile of Chenoweth loam, 1 to 7 percent slopes, 1/2 mile south of The Dalles city limits on Glen Cooper farm in the NE1/4SE1/4SW1/4 section 10, T. 1 N., R. 13 E.:

Ap1-0 to 5 inches; very dark brown (10YR 2/2) loam, grayish brown (10YR 5/2) dry; weak medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine irregular pores; neutral; abrupt smooth boundary.

Ap2-5 to 11 inches; very dark brown (10YR 2/2) loam, grayish brown (10YR 5/2) dry; weak thick platy and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; neutral; clear smooth boundary.

A3-11 to 22 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few noncalcareous nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

B21-22 to 34 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; many noncalcareous very dark grayish brown (10YR 3/2) nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

B22-34 to 46 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few noncalcareous nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

CI-46 to 55 inches; brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many fine and a few medium tubular pores; neutral; gradual smooth boundary.

C2-55 to 88 inches; brown (10YR 4/3) very fine sandy loam, pale brown (10YR 6/3) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many medium tubular pores; neutral.

The A horizon is loam or very fine sandy loam. The B2 horizon is silt loam, loam, or very fine sandy loam. It is as much as 18 percent clay and more than 15 percent particles coarser textured than very fine sand. The C horizon is loam or very fine sandy loam. It has iron staining and lime accumulations in places.

**13B-Chenoweth loam, 1 to 7 percent slopes.** A representative mapping unit is in the NW1/4SE1/4SW1/4 section 10, T. 1 N., R. 13 E. This soil is on ridgetops in broad areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**13C-Chenoweth loam, 7 to 12 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 22, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**13D-Chenoweth loam, 12 to 20 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4 section 14, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**13E-Chenoweth loam, 20 to 35 percent slopes.** A representative mapping unit is in the NE1/4NE1/4SW1/4 section 14, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

### Cherryhill Series

The Cherryhill series consists of well drained soils formed in old alluvium and the underlying colluvium weathered from consolidated and semiconsolidated tuffaceous sandstone on uplands. Slopes are 1 to 50 percent. Elevation is 500 to 1,200 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 51° to 53° F, and the frost-free period is 140 to 180 days at 32° and 170 to 220 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 11 inches thick. The upper 10 inches of the subsoil is dark brown silt loam and loam, and the lower 20 inches is dark yellowish brown heavy loam and sandy clay loam. Soft sandstone bedrock is at a depth of about 41 inches. The surface layer is slightly acid to neutral, and the subsoil is neutral to medium acid.

Permeability is moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 10 inches. Effective rooting depth is 40 to 60 inches.

These soils are used mostly for fruit orchards and some range and wildlife habitat.

Representative profile of Cherryhill silt loam, 1 to 7 percent slopes, 2 1/2 miles south of The Dalles city limits, 1,000 feet from Skyline road, 100 feet northeast of dirt road in the center of the line between sections 16 and 17, T. 1 N., R. 13 E.

Ap-0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine irregular pores; slightly acid; abrupt smooth boundary.

A12-6 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 3/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots many fine tubular pores; neutral; clear smooth boundary.

B11-11 to 17 inches dark brown (10YR 3/3) silt loam, brown (10YR 5/3) moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; few thin clay films in pores; few noncalcareous nodules 1/4 to 1 inch in diameter; neutral; clear smooth boundary.

B12-17 to 21 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few thin clay films in pores; few coarse fragments; slightly acid; abrupt smooth boundary.

B21t-21 to 28 inches; dark yellowish brown (10YR 3/4) heavy loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few roots; many fine tubular pores; common thick clay films on peels and in pores; medium acid; clear smooth boundary.

B22t-28 to 41 inches; dark yellowish brown (10YR 3/4) sandy clay loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few roots; many fine tubular pores; many thick clay films on peels; medium acid; abrupt smooth boundary.

IIC-41 inches; weathered tuffaceous sandstone, cobbles, and rock fragments; few clay films on fractured surfaces.

The A horizon is grayish brown or brown dry and very dark grayish brown or dark brown when moist. It is silt loam or loam. The B horizon is brown, yellowish brown, or pale brown when dry. It is loam, sandy clay loam, or clay loam. Depth to ripplable bedrock is 40 to 60 inches.

### 14B-Cherryhill silt loam, 1 to 7 percent slopes.

A representative mapping unit is in the center of the line between sections 16 and 17, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

### 14C-Cherryhill silt loam, 7 to 12 percent slopes.

A representative mapping unit is in the NE1/4SW1/4NW1/4 section 16, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is mod-

erate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**14D-Cherryhill silt loam, 12 to 20 percent slopes.**

A representative mapping unit is in the SE1/4SW1/4SW1/4 section 16, T. 1 N., R. 13 E. This soil is in irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IVe-1; Pine-Oak-Fescue range site.

**14E-Cherryhill silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the SW1/4SE1/4NW1/4 section 21, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

**14F-Cherryhill silt loam, 35 to 50 percent north slopes.** A representative mapping unit is in the SW1/4NW1/4NE1/4 section 7, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has north-facing slopes. It has a profile similar to the one described as representative of the series, but it contains more rock fragments.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used for range and wildlife habitat. Capability subclass IVe; Pine-Douglas Fir-Sedge range site.

**15F-Cherryhill silt loam, 35 to 50 percent south slopes.** A representative mapping unit is in the NE1/4NW1/4NE1/4 section 7, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but it has a thinner, lighter colored surface layer and has more and larger rock fragments.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used for range and wildlife habitat. Capability subclass VIe; Oak South Exposure range site.

**16D-Cherryhill-Rock outcrop complex, 3 to 25 percent slopes.** A representative mapping unit is in the NW1/4NE1/4SE1/4 section 9, T. 1 N., R. 13 E. This complex is about 50 to 85 percent a Cherryhill silt loam that has 3 to 25 percent slopes and 10 to 35 percent Rock outcrop. The Cherryhill soil has convex and concave slopes and is in upland between and around Rock outcrop. It has a profile similar to the one described as representative of the series, but it contains more rock fragments. Rock outcrop has convex and concave slopes and is in irregularly shaped areas of the uplands.

Included with this complex in mapping were areas of a soil similar to this Cherryhill soil, but it is 20 to

40 inches deep to bedrock and it makes up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for hay, pasture, and fruit orchards. Capability subclass VIe; Cherryhill soil in Pine-Oak-Fescue range site. Rock outcrop not in a range site.

**Condon Series**

The Condon series consists of well drained soils formed in loess and small amounts of volcanic ash over basalt bedrock on uplands. Slopes are 1 to 25 percent. Elevation is 1,600 to 3,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 13 inches thick. The upper 4 inches of the subsoil is very dark grayish brown silt loam, and the lower 10 inches is dark brown silt loam. Basalt bedrock is at a depth of about 27 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 7 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Condon silt loam, 1 to 7 percent slopes, 180 feet south of road in the NE1/4NW1/4NW1/4 section 28, T. 1 S., R. 15 E.:

Ap-0 to 9 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-9 to 13 inches; very dark brown (10YR 2/2) silt loam; grayish brown (10YR 5/2) dry; weak medium prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

B21-13 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B22-17 to 22 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak medium prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B3-22 to 27 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 2 percent 2- to 5-millimeter and 1 percent 5-millimeter to 3-inch pebbles; neutral; abrupt wavy boundary.

IIR-27 inches; basalt bedrock.

The A horizon is grayish brown or dark grayish brown when dry and very dark brown or very dark grayish brown when moist. The B horizon is very dark grayish brown, dark grayish brown, or dark brown when moist. It is

silt loam and is 18 to 24 percent clay and is less than 15 percent coarser textured than very fine sand. Depth to bedrock is 20 to 40 inches.

**17B-Condon silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4, section 28, T. 1 S., R. 15 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-5; Rolling Hills range site.

**17C-Condon silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4NW1/4 section 28, T. 1 S., R. 15 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**17D-Condon silt loam, 12 to 25 percent slopes.**

A representative mapping unit is in the NW1/4SE1/4SW1/4 section 28, T. 1 S., R. 15 E. This soil is in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Rolling Hills range site.

**18D-Condon-Bakeoven complex, 2 to 20 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SE1/4 section 25, T. 1 S., R. 15 E. This complex is about 50 to 85 percent a Condon silt loam and 10 to 35 percent a Bakeoven very cobbly loam. The London soil is on ridgetops or side slopes in circular or elongated mounds. The Bakeoven soil is on ridgetops or side slopes in areas of scabland between and around areas of the Condon soil.

Included with this complex in mapping were areas of Licksillet very stony loam and other shallow stony soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the erosion hazard is moderate. This complex is used for range, hay, pasture, and wildlife habitat. Capability subclass VIe; London soil in Rolling Hills range site; Bakeoven soil in Scabland range site.

## **Cumulic Haplaquolls**

**19A-Cumulic Haplaquolls, nearly level.** These soils are somewhat poorly drained or poorly drained silt loam, loam, sandy loam, clay loam, or clay. They formed in mixed alluvium along streams and on concave alluvial fans. The soils are in small, narrow, irregularly shaped areas along stream channels and in concave areas. Slopes are 0 to percent. Elevation is 100 to 1,000 feet. In uncultivated areas, the vegetation is sedges, bunchgrasses, shrubs, and forbs. The average

annual precipitation is 15 to 30 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 180 days at 32° and 180 to 210 days at 28°.

The surface layer, subsoil, and substratum are generally dark colored. Mottling is at a depth of 10 to 40 inches. Water-rounded pebbles or cobbles commonly form a thin stone line or layer in the lower part of the subsoil. The surface layer, subsoil, and substratum range from slightly acid to medium acid.

Permeability is moderate to slow, and the available water capacity and water-supplying capacity are variable. Effective rooting depth is 20 to 60 inches or more.

These soils are used for hay, pasture, and wildlife habitat.

Runoff is slow, and the hazard of erosion is slight. The soils are subject to overflow and in places are ponded during high precipitation. Capability unit IVw-1.

## **Duart Series**

The Duart series consists of well drained soils formed in a loess mantle that has an appreciable content of volcanic ash on uplands. Slopes are 1 to 55 percent. Elevation is 800 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 16 inches thick. The subsoil is brown silt loam about 17 inches thick. Semiconsolidated sandstone is at a depth of about 33 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 7 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Duart silt loam, 7 to 12 percent slopes, 190 feet north of road in the NW1/4NW1/4SW1/4 section 31, T. 1 N., R. 14 E.:

Ap-0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 3 percent rock fragments 2 millimeters to 1 inch in diameter; neutral; abrupt smooth boundary.

A12-8 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; percent rock fragments 2 millimeters to 1 inch in diameter; neutral; clear smooth boundary.

B21-16 to 26 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent non-

calcareous nodules 1/2 to 1 inch in diameter; neutral; clear smooth boundary.

B22-26 to 33 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak medium to fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; about 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/2 to 1 inch in diameter; neutral; clear wavy boundary.

IIC-33 to 39 inches; dark brown (10YR 3/3) semiconsolidated sandstone, pale brown (10YR 6/3) moist; extremely hard, extremely firm; no roots; few lime mycelia.

The A horizon is as much as 3 percent rock fragments 2 millimeters to 1 inch in size. The B horizon is dark brown or dark yellowish brown when moist. It is silt loam or loam. It is 16 to 18 percent clay, more than 15 percent particles coarser textured than very fine sand, and as much as 5 percent noncalcareous nodules 1/2 to 1 inch in diameter. Depth to ripplable semiconsolidated sandstone is 20 to 40 inches.

**20B-Duart silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 23, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-5; Rolling Hills range site.

**20C-Duart silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4NW1/4SW1/4 section 31, T. 1 N., R. 14 E. This soil is on ridgetops in long, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**20D-Duart silt loam, 12 to 25 percent slopes.** A representative mapping unit is in the SW1/4SE1/4NE1/4 section 36, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Rolling Hills range site.

**20E-Duart silt loam, 25 to 40 percent slopes.** A representative mapping unit is in the SW1/4SE1/4NE1/4 section 24, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty South Exposure range site.

**21E-Duart complex, 20 to 55 percent slopes.** A representative mapping unit is in the NW1/4NW1/4SE1/4 section 13, T. 1 S., R. 13 E. This complex is about 50 to 75 percent Duart silt loam, 25 to 40 percent slopes, and 20 to 35 percent shallow, very cobbly loam soils

that have slopes of 20 to 55 percent. The Duart soil is on upland slopes between the very cobbly loam soils. The very cobbly loam soils are on upland slopes in long, irregularly shaped areas extending up and down the slope between the Duart soils.

Included with this complex in mapping were areas of moderately deep cobbly loam soils that make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used mainly for range, pasture, and wildlife habitat. Capability subclass VIe; Droughty South Exposure range site.

## Dufur Series

The Dufur series consists of well drained soils formed in a loess mantle that has an appreciable content of volcanic ash over mixed alluvium and colluvium and sedimentary bedrock on uplands. Slopes are 1 to 40 percent. Elevation is 800 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 8 inches thick. The subsoil is very dark grayish brown, dark brown, and dark yellowish brown silt loam about 34 inches thick. The substratum is yellowish brown cobbly fine sandy loam about 19 inches thick. Semiconsolidated sedimentary bedrock is at a depth of about 61 inches. The surface layer is slightly acid, the subsoil is neutral to mildly alkaline and the substratum is moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Dufur silt loam, 1 to 7 percent slopes, 2 miles north of Dufur, 250 feet northeast of road on a broad ridgetop in the NW1/4SW1/4NW1/4 section 13, T. 1 S., R. 13 E.:

Apl-0 to 6 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

Ap2-6 to 8 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium platy structure; hard, firm, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; clear smooth boundary.

B1-8 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, able, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 3 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; clear wavy boundary.



B21-12 to 18 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 3 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; gradual smooth boundary.

B22-18 to 32 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 5 percent rock fragments 2 millimeters to 1 inch in diameter 5 to 10 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; mildly alkaline; gradual smooth boundary.

B3-32 to 42 inches; dark yellowish brown (10YR 4/4) silt loam, yellowish brown (10YR 5/4) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic many fine roots; common very fine tubular pores; 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; mildly alkaline; clear smooth boundary.

IICla-42 to 61 inches; yellowish brown (10YR 4/4) cobbly fine sandy loam light yellowish brown (10YR 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; moderately calcareous; moderately alkaline; clear wavy boundary.

IIIC2-61 inches; semiconsolidated sedimentary bedrock.

The A horizon is very dark brown or very dark grayish brown when moist. It is silt loam or loam and is 0 to 5 percent rock fragments as much as 1 inch in diameter. The B horizon is silt loam or loam. It is 12 to 18 percent clay, 18 to 22 inches percent particles coarser textured than very fine sand, and 0 to 5 percent rock fragments as much as 1 inch in diameter. Secondary lime is at a depth of 30 to 43 inches. Depth to bedrock is 40 to more than 60 inches.

**22B-Dufur silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SW1/4NE1/4NE1/4 section 24, T. 1 S., R. 13 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile described as representative of the series.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3; Rolling Hills range site.

**22C-Dufur silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 13, T. 1 S., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-1; Rolling Hills range site.

**22D-Dufur silt loam, 12 to 25 percent slopes.** A representative mapping unit is in the NW1/4NE1/4NE1/4 section 24, T. 1 S., R. 13 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Droughty North Exposure range site.

**22E-Dufur silt loam, 25 to 40 percent slopes.** A representative mapping unit is in the NE1/4NW1/4SW1/4 section 14, T. 1 S., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used mainly for range, hay, pasture, and wildlife habitat. Capability unit IVe-2; North Exposure range site.

## Dune Land

**23-Dune land.** A representative mapping unit is in the SW1/4SW1/4NE1/4 section 22, T. 2 N., R. 14 E. Dune land

consists of small areas where the wind has drifted sand into dunes. Slopes range from 5 to 25 percent. This miscellaneous area is in the extreme northern part of the survey area. Dunes advance in the direction of the prevailing westerly wind and bury adjacent soils.

Dune land is nearly devoid of vegetation and is not suitable for grazing. Improved perennial grasses or nursery-grown plants or clones of Volga wildrye, planted 20 inches apart in rows spaced 20 inches apart, stabilize the dunes. Capability subclass VIIIe; not placed in a range site.

## Endersby Series

The Endersby series consists of somewhat excessively drained soils formed in mixed alluvium, volcanic ash, and loess on bottom lands. Slopes are 0 to 3 percent. Elevation is 200 to 1,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 11 to 14 inches, the average annual air temperature is 49° to 53° F, and the frost-free period is 140 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The next layer is dark brown loam about 28 inches thick. Beneath this is dark brown fine sandy loam about 15 inches thick. Very gravelly sand is at a depth of about 53 inches. The material in the upper 24 inches is neutral, and is moderately alkaline in the lower 29 inches.

Permeability is moderately rapid, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Endersby loam, 150 feet south of Fifteen Mile Road in the SW1/4NE1/4SW1/4 section 25, T. 2 N., R. 14 E.:

Ap1-0 to 2 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak thin

platy structure; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

Ap2-2 to 10 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; neutral; abrupt wavy boundary.

AC-10 to 24 inches; dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic, few very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

C1-24 to 38 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; moderately alkaline; clear wavy boundary.

C2-38 to 53 inches dark brown (10YR 3/3) fine sandy loam, brown (10YR 5/3) dry; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; moderately alkaline; clear wavy boundary.

IIC3-53 to 60 inches; multicolored very gravelly sand; single grained; loose, nonsticky and nonplastic.

The A horizon is gray, grayish brown, dark gray, or dark grayish brown when dry and very dark gray, very dark grayish brown, or dark brown when moist. It is loam or fine sandy loam. It has weak fine angular or platy structure or is structureless. The AC horizon and C1 horizon are stratified in places with thin lenses ranging from silt to loamy sand. The content of pebbles in the upper 40 inches ranges from 0 to 15 percent. The content of rock fragments below a depth of 40 inches ranges from 50 to 80 percent.

**24-Endersby loam.** A representative mapping unit is in the SW1/4NE1/4SW1/4 section 25, T. 2 N., R. 14 E. This soil has slopes of 0 to 3 percent and is on alluvial bottoms in long, narrow areas.

Included with this soil in mapping were areas of Hermiston, Pedigo, and Tygh soils. These soils make up about 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3, nonirrigated and I-1, irrigated; Semi-Moist Bottom range site.

### Frailey Series

The Frailey series consists of well drained soils formed in volcanic ash, loess, and colluvium weathered from semiconsolidated sedimentary materials on uplands. Slopes are 3 to 70 percent. Elevation is 1,000 to 3,500 feet. The vegetation is oak, ponderosa pine, Douglas-fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 16 to 30 inches, the average annual air temperature is 45° to 49° F, and the frost-free period is 100 to 140 days at 32° and 120 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 4 inches thick. The subsoil is dark brown loam about 46 inches thick. The substratum is brown loam about 15 inches thick. The soil material throughout the profile is slightly acid.

Permeability is moderate, and the available water capacity is 5 to 10 inches. Water-supplying capacity is 10 to 15 inches. Effective rooting depth is 40 to 6 inches or more.

These soils are used for timber, range, wildlife habitat, and water supply.

Representative profile of Frailey loam, 30 to 70 percent slopes, about 50 feet north of road in the NE1/4NE1/4SW1/4, section 22, T. 2 N., R. 11 E.:

O1-2 inches to 0; fir needles, twigs, and partly decomposed material.

A1-0 to 4 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; 15 percent fine pebbles; slightly acid; clear smooth boundary.

B21-4 to 10 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky and weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots many very fine tubular pores 1 percent fine pebbles; slightly acid; clear smooth boundary.

B22-10 to 33 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; 10 percent fine pebbles 5 percent cobbles; slightly acid; clear smooth boundary.

B23-33 to 50 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine tubular pores; 10 percent cobbles, 5 percent pebbles; few thin clay films in pores; slightly acid; clear smooth boundary.

C-50 to 65 inches; brown (10YR 4/3) loam, light brownish gray (10YR 6/2) dry; massive; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; few very fine tubular pores; 10 percent cobbles, 5 percent pebbles; few thin clay films in pores; slightly acid. The A horizon is grayish brown or light brownish gray when dry and very dark grayish brown or dark brown when moist. The B horizon is loam. It is 5 to 20 percent rock fragments 2 millimeters to 3 inches in size and 0 to 15 percent cobbles. Depth to ripplable bedrock is 40 to 60 inches or more.

**25E-Frailey loam, 3 to 30 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 7, T. 2 S., R. 12 E. This soil is in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Hesslan, Ketchly, Skyline, and Wamic soils. These soils make up as much as 20 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Pine-Douglas-Fir Sedge range site; woodland group 30.

**25F-Frailey loam, 30 to 70 percent slopes.** A representative mapping unit is in the NE1/4NE1/4SW1/4 section 22, T. 2 N., R. 11 E. This soil is in long, narrow areas and has north-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Hesslan, Ketchly, Skyline, and Wamic soils. These soils make up as much as 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; woodland group 3r.

### Hermiston Series

The Hermiston series consists of well drained soils formed in alluvium derived from loess and volcanic ash on bottom lands. Slopes are 0 to 3 percent. Elevation is 800 to 2,600 feet. In uncultivated areas, the

vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 49° to 54° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 16 inches thick. The underlying material is very dark grayish brown and dark brown silt loam that extends to a depth of 60 inches or more. Depth to gravel and sand is 40 to 60 inches or more. The soil material throughout the profile is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 7.5 to 12.5 inches. Water-supplying capacity is 8 to 13 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for hay, pasture, small grain, range, and wildlife habitat.

Representative profile of a Hermiston silt loam in the SW1/4SE1/4NW1/4, section 32, T. 2 N., R. 15 E.:

Ap-0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; gradual wavy boundary.

A12-8 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; gradual wavy boundary.

AC-16 to 37 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure; slightly hard, firm, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; moderately calcareous; moderately alkaline; gradual wavy boundary.

C1ca-37 to 48 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; moderately calcareous with mycelial lime; mildly alkaline; gradual wavy boundary.

C2-48 to 60 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; neutral; abrupt smooth boundary.

The A horizon is dark grayish brown or grayish brown when dry and very dark brown or very dark grayish brown when moist. It is silt loam or loam. The C horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is silt loam or loam and has stratified layers of sand and gravel.

**26-Hermiston silt loam.** A representative mapping unit is in the SW1/4SE1/4NW1/4 section 32, T. 2 N., R. 15 E. This soil has slopes of 0 to 3 percent. It is, adjacent to streams in long, narrow strips that average about 100 yards wide.

Included with this soil in mapping were areas of Tygh, Endersby, Pedigo, and noncalcareous silt loam soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3, nonirrigated and I-I, irrigated-, Semi-Moist Bottom range site.

## Hesslan Series

The Hesslan series consists of well drained soils formed in loess, volcanic ash, and colluvium weathered from sandstone on uplands. Slopes are 5 to 70 percent. Elevation is 500 to 3,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, oak, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 45° to 49° F, and the frost-free period is 110 to 140 days at 32° and 140 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown stony loam about 9 inches thick. The upper 9 inches of the subsoil is dark brown loam, and the lower 5 inches is dark brown cobbly loam. Semiconsolidated sandstone is at a depth of about 23 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 5 to 7 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, timber, wildlife habitat, and water supply.

Representative profile of a Hesslan stony loam in an area of Skyline-Hesslan complex, 40 to 65 percent slopes, 500 feet north of the county road in the NW1/4SW1/4SE1/4 section 1, T. 1 S., R. 12 E.:

A11-0 to 3 inches; very dark grayish brown (10YR 3/2) stony loam, grayish brown (10YR 5/2) dry; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

A12-3 to inches; very dark grayish brown (10YR 3/2) stony loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

B1-9 to 18 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium sub angular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.

B2-18 to 23 inches; dark brown (10YR 4/3) cobbly loam, pale brown (10YR 6/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

IIC-23 to 30 inches; semiconsolidated sandstone; extremely hard.

The A horizon is grayish brown, dark grayish brown, or brown when dry and very dark grayish brown, very dark brown, or dark brown when moist. It is stony loam or cobbly loam. The content of rock fragments 2 millimeters to 10 inches in size ranges from 5 to 20 percent. The content of surface stones is 5 to 20 percent. The B horizon is grayish brown, brown, or pale brown when dry and very dark grayish brown or dark brown when moist. It is 5 to 30 percent rock fragments 2 millimeters to 10 inches in size. It has weak or moderate medium and fine subangular blocky structure. Depth to ripplable bedrock is 20 to 40 inches.

**27F-Hesslan complex, 30 to 70 percent slopes.**

A representative mapping unit is in the SW1/4NW1/4NW1/4 section 17, T. 1 S., R. 13 E. This complex is about 60 percent a Hesslan stony loam and 20 percent loam or cobbly loam soils that are 40 to 60 inches deep to bedrock. The Hesslan soil is on ridgetops and north-facing side slopes.

Included with this complex in mapping were areas of Wamic loam and Skyline very cobbly loam. These soils make up about 20 percent of the unit. Also included were outcroppings of sandstone.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for timber, range, wildlife habitat, and water supply. Capability subclass VIIc; Oak Steep North range site.

**28E-Hesslan-Skyline complex, 5 to 40 percent slopes.** A representative mapping unit is in the SW1/4SW1/4NW1/4 section 5, T. 1 S., R. 12 E. This complex is about 30 to 60 percent a Hesslan stony loam and 20 to 50 percent a Skyline very cobbly loam. The Hesslan soil has north-facing slopes, and the Skyline soil has south-facing slopes.

Included with this complex in mapping were areas of Frailey loam and Wamic loam. These soils make up about 20 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate. This complex is used for range, wildlife habitat, and water supply. Capability subclass VIIc; Oak Steep South range site.

### Ketchly Series

The Ketchly series consists of well drained soils formed in loess, volcanic ash, and colluvium weathered from andesite on uplands. Slopes are 3 to 65 percent. Elevation is 2,000 to 3,600 feet. The vegetation includes Douglas-fir, ponderosa pine, Oregon white oak, bunchgrasses, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 70 to 120 days at 32° and 100 to 140 days at 28°.

In a representative profile the surface layer is very dark grayish brown or dark brown loam about 11 inches thick. The subsoil is brown heavy loam about 31 inches thick. The substratum is very cobbly clay loam about 3 inches thick. Andesite bedrock is at a depth of 45 inches.

Permeability is moderately slow, and the available water capacity is 6 to 11 inches. Water-supplying capacity is 10 to 15 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for timber, water supply, and wildlife habitat.

Representative profile of Ketchly loam, 3 to 30 percent slopes, 175 feet south of road in the NE1/4NE1/4NW1/4 section 2, T. 1 N., R. 11 E.:

O1-1 inch to 0; fir needles and twigs, grass, and deciduous leaves.

All-0 to 6 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; 15 percent pebbles 1/8 to 1/2 inch in diameter; neutral; gradual smooth boundary.

A12-6 to 11 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry, weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; many very fine tubular pores; 15 percent pebbles 1/4 to 1/2 inch in diameter; neutral; clear smooth boundary.

B1-11 to 18 inches; brown (7.5YR 4/4) heavy loam, pale brown (10YR 6/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many fine and medium roots; many very fine tubular pores; 15 percent pebbles; neutral; gradual smooth boundary.

B21t-18 to 24 inches; brown (7.5YR 4/4) heavy loam, pale brown (10YR 6/3) dry; weak coarse subangular blocky structure very hard, friable, slightly sticky and slightly plastic; many fine roots; many very fine tubular pores; common thin clay films in pores; neutral; gradual smooth boundary.

B22t-24 to 42 inches; brown (7.5YR 4/4) heavy loam, light yellowish brown (10YR 6/4) dry; weak coarse subangular blocky structure; extremely hard, firm, sticky and plastic; few to common fine and medium roots; many very fine tubular pores; common thin clay films on peds and in pores; slightly acid; gradual wavy boundary.

IIC-42 to 45 inches; very cobbly clay loam; massive; extremely hard, very firm, sticky and plastic; common very fine pores.

IIIR-45 inches; andesite bedrock.

The B2t horizon is loam, heavy loam, or light clay loam and is 5 to 30 percent rock fragments. Depth to bedrock is 40 to 60 inches or more.

**29E-Ketchly loam, 3 to 30 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 2, T. 1 N., R. 14 E. This soil is on broad ridgetops. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bins, Bindle, Frailey, Bald, and shallow stony loam soils. These soils make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is moderate. Capability subclass VIe; woodland group 2o.

**29F-Ketchly loam, 30 to 65 percent slopes.** A representative mapping unit is in the NW1/4NE1/4 section 10, T. 1 N., R. 11 E. This soil has long and narrow slopes.

Included with this soil in mapping were areas of Bins, Bindle, and Bald soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; woodland group 2r.

### Licksillet Series

The Licksillet series consists of well drained soils formed in shallow, stony colluvium consisting of a mixture of loess, rock fragments, and residuum weathered from the underlying basalt on uplands. Slopes are 15 to 70 percent. Elevation is 200 to 3,600 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 210 days at 28°.

In a representative profile (fig. 4) the surface layer is very dark grayish brown extremely stony loam about



Figure 4: Profile of Lickskillet very stony loam, 15 to 40 percent slopes, which is underlain by bedrock at a depth of 12 inches.

4 inches thick. The upper 6 inches of the subsoil is dark brown very stony heavy loam, and the lower 6 inches is dark yellowish brown very gravelly heavy loam. Basalt bedrock is at a depth of about 16 inches. The surface layer is slightly acid, and the subsoil is neutral.

Permeability is moderate, and the available water capacity is 1 to 3 inches. Water-supplying capacity is 2 to 5 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Lickskillet extremely stony loam, 40 to 70 percent slopes, in the SE1/4NE1/4SW1/4, section 27, T. 2 S., R. 15 E.

A1--0 to 4 inches; very dark grayish brown (10YR 3/2) extremely stony loam, grayish brown (10YR 5/2) dry; weak thin platy structure parting to weak fine granular; slightly hard, friable, slight sticky and slightly plastic; many very fine roots; many very me irregular pores; 2 percent basalt pebbles; 10 percent cobbles and 25 percent stones; slightly acid; abrupt smooth boundary.

B1-4 to 10 inches; dark brown (10YR 3/3) very stony heavy loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many very fine roots; many very fine tubular pores; 30 percent basalt pebbles, 10 percent cobbles, and 20 percent stones; neutral; abrupt smooth boundary.

B2-10 to 16 inches; dark yellowish brown (10YR 3/4) very gravelly heavy loam, yellowish brown (10YR 5/4) dry; we medium prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; 40 percent basalt pebbles and 25 percent cobbles and stones; neutral; abrupt wavy boundary.

IIR-16 inches; basalt bedrock.

The A horizon is very dark brown, very dark grayish brown or dark brown when moist. It is loam, silt loam, or very fine sandy loam. In some places it is gravelly, very gravelly, cobbly, or very cobbly, and in others it is stony, very stony, or extremely stony. The B horizon is heavy silt loam, heavy loam, sandy clay loam, silty clay loam, or clay loam. In places clay films are in pores and some basalt fragments and extend into fractures in the bedrock. Depth to basalt bedrock is 12 to 20 inches.

**30E-Lickskillet very stony loam, 15 to 40 percent slopes.** A representative mapping unit is in the SE1/4NE1/4NE1/4 section 28, T. 2 S., R. 15 E. This soil is in broad, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer contains fewer stones.

Included with this soil in mapping were areas of Bakeoven, Condon, Walla Walla, and Wrentham soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VII; Droughty South Exposure range site.

**31F-Lickskillet extremely stony loam, 40 to 70 percent slopes.** A representative mapping unit is in the SE1/4NE1/4SW1/4 section 27, T. 2 S., R. 15 E. This soil is in long, broad, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven, Condon, Walla Walla, and Wrentham soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VII; Droughty Steep South range site.

## Maupin Series

The Maupin series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 12 percent. Elevation is 1,600 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The subsoil is dark brown loam about 15 inches thick. The upper 6 inches of the substratum is dark brown loam. An indurated hardpan is at a depth of about 31 inches.

The surface layer is neutral and the subsoil is neutral to mildly alkaline.

Permeability is moderate, and the available water capacity is 3 to 7 inches. Water-supplying capacity is 7.5 to 8.5 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, irrigated crops, range, and wildlife habitat.

Representative profile of Maupin loam, 0 to 5 percent slopes, 35 feet south of State Highway 216 in the NW1/4SW1/4SW1/4 section 2, T. 5 S., R. 13 E.:

Ap1-0 to 6 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

Ap2-6 to 10 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

B2-10 to 20 inches dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak medium prismatic structure parting to moderate medium subangular blocky; hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; few nodules; neutral; abrupt wavy boundary.

B3ca-20 to 25 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; few nodules; lime in mycelium form; weakly calcareous; mildly alkaline; clear wavy boundary.

C1ca-25 to 31 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; hard, friable, slightly plastic; many very fine tubular pores; common nodules; 5 percent fragments 2 millimeters to 3 inches in size; lime in mycelium form; moderately calcareous; moderately alkaline; abrupt wavy boundary.

Csicam-31 to 37 inches; dark brown (10YR 4/3) and pale brown (10YR 6/3) dry duripan; platy; very firm; indurated silica laminar capping nearly continuous; strongly calcareous.

IIR-37 inches; fractured bedrock.

The A horizon is very dark grayish brown or dark brown when moist. The B horizon is brown or pale brown when dry. The C1 horizon is brown or pale brown when dry. The control section is 18 to 22 percent clay, is more than 15 percent material coarser textured than very fine sand, and is 2 to 5 percent fragments 2 millimeters to 3 inches in diameter. Depth to the hardpan is 20 to 40 inches, and depth to bedrock is 22 to 45 inches.

**32A-Maupin loam, 0 to 5 percent slopes.** A representative mapping unit is in the NW1/4SW1/4SW1/4 section 2, T. 5 S., R. 13 E. This soil is on ridgetops in long, broad, narrow areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven soils and Maupin variant soils that have 0 to 3 percent slopes. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit Ile-3, nonirrigated and Ile-2, irrigated; Shrubby Rolling Hills range site.

**32B-Maupin loam, 5 to 12 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NE1/4

section 18, T. 4 S., R. 14 E. This soil is on ridgetops in long, broad, narrow areas.

Included with this soil in mapping were areas of soils covered with 15 to 50 percent stones and boulders. These soils make up less than 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit Ile-5; Shrubby Rolling Hills range site.

### Maupin Variant

The Maupin variant consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 3 percent. Elevation is 1,600 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The subsoil is dark brown and brown loam about 25 inches thick. The substratum is dark brown loam about 16 inches thick. Basalt bedrock is at a depth of about 51 inches. The surface layer is neutral and the subsoil is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 7.5 to 10 inches. Effective rooting depth is 40 to 60 inches or more.

This soil is used for dryfarmed small grain, hay, pasture, irrigated crops, range, and wildlife habitat.

Representative profile of Maupin variant loam, 50 feet north of State Highway 216 in the NW1/4NE1/4SW1/4 section 9, T. 4 S., R. 13 E.

Ap1-0 to 4 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

Ap2-4 to 10 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

B2-10 to 20 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent round nodules; neutral; abrupt wavy boundary.

B3ca-20 to 35 inches; brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; weak medium subangular block structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 10 percent nodules; moderately calcareous; moderately alkaline; clear wavy

C1ca-35 to 43 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 10 percent nodules; moderately calcareous; moderately alkaline; abrupt wavy boundary.

C2sica-43 to 51 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; massive; weakly cemented; very hard, firm, slightly sticky and slightly



plastic; few very fine roots; many very fine tubular pores; 10 percent nodules; strongly calcareous; moderately alkaline; abrupt wavy boundary.

IIR-51 inches; basalt bedrock with a thin indurated capping.

The A horizon is loam or silt loam. The B horizon is loam or heavy loam. Depth to bedrock is 40 to 60 inches or more.

**33-Maupin variant loam.** A representative mapping unit is in the NW1/4NE1/4SW1/4 section 9, T. 4 S., R. 13 E. This soil is on uplands. Slopes average about 2 percent.

Included with this soil in mapping were areas of Maupin and Bakeoven soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIE-3, nonirrigated and IIE-2, irrigated; Shrubby Rolling Hills range site.

## Nansene Series

The Nansene series consists of well drained soils formed in loess on uplands. Slopes are 35 to 70 percent. Elevation is 300 to 1,500 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 11 to 13 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 140 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 22 inches thick. The subsoil is dark brown silt loam about 10 inches thick. The upper 20 inches of the substratum is dark brown silt loam, and the lower 10 inches is grayish brown silt loam. Basalt bedrock is at a depth of about 62 inches. The surface layer and subsoil are neutral, and the substratum is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 11 inches. Water-supplying capacity is 8 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for range and wildlife habitat.

Representative profile of Nansene silt loam, 35 to 70 percent slopes, in NW1/4NW1/4NE1/4 section 29, T. 1 N., R. 15 E.

A11-0 to 4 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak thin platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

A12-4 to 14 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral; clear smooth boundary.

A13-14 to 22 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine to medium tubular pores; neutral; gradual smooth boundary.

B2-22 to 82 inches; dark brown (10YR 3/3) coarse silt loam, dark brown (10YR 4/8) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral; gradual smooth boundary.

C1-32 to 52 inches; dark brown. (10YR 3/8) coarse silt loam, brown (10YR 5/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine tubular pores; neutral; gradual smooth boundary.

C2ca-52 to 62 inches; grayish brown (10YR 5/2) silt loam, light brownish gray (106/2) moist; massive; slightly hard to hard, friable, slightly sticky and slightly plastic; few very fine roots; 5 percent fragments 1/16 inch in diameter; calcareous nodules; moderately calcareous; disseminated and segregated lime; moderately alkaline.

IIR-62 inches; basalt bedrock.

The A horizon is dark grayish brown or dark brown when dry. The B horizon is dark brown or dark grayish brown when dry and moist. The C horizon is dark brown to grayish brown when moist. Clay content of the soil is 10 to 18 percent. The soil is less than 5 percent fragments 1 inch or less in diameter. Rock is exposed on as much as 10 percent of the surface layer in places. Depth to basalt bedrock is 40 to 60 inches or more.

## 34F-Nansene silt loam, 35 to 70 percent slopes

A representative mapping unit is in the NW1/4NW1/4NE1/4, section 29, T. 1 N., R. 15 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping are areas of Walla Walla, Licksillet, and Wrentham soils and Rock outcrop that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Steep North range site.

## Pedigo Series

The Pedigo series consists of somewhat poorly drained soils formed in alluvium derived from loess and volcanic ash on bottom lands. Slopes are 0 to 3 percent. Elevation is 200 to 2,700 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 50° to 53° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.

In a representative profile the surface and subsurface layers are black silt loam to a depth of 40 inches. The upper 9 inches of the underlying material is very dark gray silt loam, and below this is dark grayish brown loam to a depth of 60 inches or more. The soil material in the profile is moderately alkaline to neutral.

Permeability is moderate, and the available water capacity is 10 to 11 inches. Water-supplying capacity is 9 to 13 inches. Effective rooting depth is more than 60 inches.

These soils are used for hay, pasture, dryfarmed small grain, range, and wildlife habitat.

Representative profile of Pedigo silt loam in the SE1/4NW1/4 section 21, T. 1 S., R. 13 E.:

Ap-0 to 8 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; moderately calcareous; moderately alkaline; abrupt smooth boundary.

A12-8 to 21 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak coarse structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; weakly calcareous; moderately alkaline; abrupt smooth boundary.

AC-21 to 40 inches; black (10YR 2/1) silt loam, yellowish brown (10YR 5/2) dry; massive; hard, friable, slight sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; clear smooth boundary.

C1-40 to 49 inches; very dark gray (10YR 3/1) silt loam, light brownish gray (10YR 6/2) y; massive; hard, friable, slightly sticky and slightly plastic; few roots; many fine and few medium tubular pores; neutral; clear smooth boundary.

C2-49 to 60 inches; dark grayish brown (10YR 4/2) loam; massive; hard, friable, slightly sticky and slightly plastic; few roots; many fine and few medium tubular pores; neutral.

The A horizon is dark grayish brown or dark brown when dry and very dark brown, dark grayish brown, black, or very dark grayish brown when moist. It is silt loam, coarse silt loam, or loam and is moderately calcareous to strongly calcareous. The AC horizon is light gray, light brownish gray, or grayish brown when dry and very dark gray, very dark grayish brown, or black when moist. It is coarse silt loam, silt loam, or silty clay loam.

**35-Pedigo silt loam.** A representative mapping unit is in the SE1/4NW1/4 section 21, T. 1 S., R. 13 E. This soil is in long, narrow areas on alluvial bottom lands adjacent to streams. Slopes are 0 to 3 percent.

Included with this soil in mapping are areas of Hermiston, Endersby, and Tygh soils.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIw-1; Alkaline Bottom range site.

### Quincy Series

The Quincy series consists of soils formed in sandy alluvium from mixed material on bottom lands. Slopes are 0 to 3 percent. Elevation is 1,400 to 1,500 feet. In uncultivated areas, the vegetation is cottonwoods, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark gray loamy fine sand about 6 inches thick. The underlying material to a depth of 35 inches is very dark grayish brown sand, the next 9 inches is dark gray fine sand, and below this to a depth of 60 inches or more is dark gray very fine sand. The surface layer is medium acid, and the underlying material is slightly acid to neutral.

Permeability is rapid, and the available water capacity is 3 to 6 inches. Water-supplying water-supplying capacity is variable and depends upon the depth to the water table. Effective rooting depth is 40 to 60 inches.

This soil is used for irrigated hay and pasture, crops, range, and wildlife habitat.

Representative profile of Quincy loamy fine sand, wet, in the NW1/4SW1/4NW1/4, section 12, T. 4 S., R. 13 E.

Ap-0 to 6 inches; very dark gray (10YR 3/1) loamy fine sand, gray (10YR 5/1) dry; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; medium acid; clear smooth boundary.

C1-6 to 41 inches; very dark grayish brown (10YR 3/2) sand, grayish brown (10YR 5/2) dry; single grained; loose; many very fine roots; 10 percent very fine pebbles; slightly acid; clear wavy boundary.

C2-41 to 50 inches; dark gray (10YR 4/1) fine sand, gray (10YR 5/1) dry; single grained; loose; common fine roots; common dark brown (7.5YR 4/4) moist, mottles; slightly acid; clear wavy boundary.

C3-50 to 60 inches; dark gray (10YR 4/1) very fine sand, gray (10YR 6/1) dry; single grained; loose; very few roots; neutral.

The A horizon is gray or grayish brown when dry and very dark gray or very dark grayish brown when moist. It is loamy fine sand or loamy sand and is as much as 20 percent coarse fragments 2 to 10 millimeters in size. The C1 horizon is gray to grayish brown when dry. It is loamy sand or sand and is 10 to 20 percent pebbles. The C2 horizon is gray or light gray when dry and has common to many dark brown mottles. It is sand or very fine sand.

Quincy soils are excessively drained or somewhat excessively drained. However, this Quincy soil is on bottom land and remains wetter throughout the year than is normal for the Quincy series because of a water table at a depth of 40 to 60 inches.

**36-Quincy loamy fine sand, wet.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 12, T. 4 S., R. 13 E. This soil is on bottom lands along major streams. Slopes are 0 to 3 percent.

Included with this soil in mapping were areas of Endersby, Tygh, and Pedigo soils. These soils make up as much as 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Depth to a water table is 40 to 60 inches in spring and early in summer. Some areas are subject to overflow. Capability unit IIIw-1; Semi-Moist Bottom range site.

### Riverwash

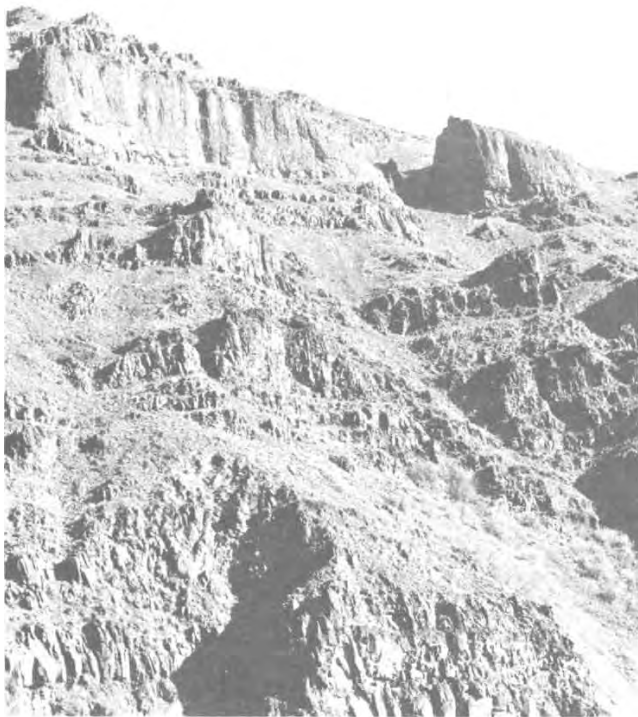
37--Riverwash. A representative mapping unit is in the NE1/4SW1/4NW1/4 section 11, T. 4 S., R. 13 E. Riverwash is in narrow, irregularly shaped strips in the bends of stream channels along the Columbia and Deschutes Rivers and along drainageways in the survey area. It is 2 to 10 feet above the normal waterline. The strips are 40 to 200 yards wide. Riverwash consists of well-rounded sand, gravel, stones and boulders, chiefly basalt. The surface layer generally is uneven. This area has little or no vegetation.

Riverwash is subject to overflow when the water is high and is extremely droughty when the water is low. During each overflow, new deposits are received and some material is removed. Adjacent river sandbars are included in the unit.

Riverwash is used for wildlife habitat and as a source of sand and gravel. Capability subclass VIIIw; not placed in a range site.

### Rock Outcrop

**38-Rock outcrop-Rubble land complex.** A representative mapping unit is in the NW1/4NE1/4, section 17, T. 3 S., R. 15 E. This complex is about 65 to 75 percent Rock outcrop and 20 to 30 percent Rubble land. It is on uplands in basalt outcrop and rubble (fig. 5) . Elevation is 200 to 3,600 feet. Rock outcrop-Rubble land complex has little or no vegetation except on included soils. The average annual precipitation is 10 to 22 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 70 to 210 days.



**Figure 5: Area of Rock outcrop-Rubble land complex. Slopes are 30 to 100 percent.**

This complex is severely eroded. The almost perpendicular basalt cliffs are as much as 500 feet high and have stony or bouldery foot slopes. Slopes are 30 to 100 percent.

Included with this complex in mapping were areas of Wrentham, Nansene, Licksillet, and Wyeth soils. These soils make up as much as 15 percent of the unit.

This complex is used mainly for wildlife habitat and water supply. Capability subclass VIIIs; not placed in a range site.

**39-Rock outcrop-Xeropsamments complex.** A representative mapping unit is in the NW1/4NW1/4SW1/4 section 2, T. 2 N., R. 11 E. This complex is along the Columbia River. These areas were previously part of the Columbia River channel but are now terraces above the river. Stream action has scoured holes in the basalt lava beds and deposited sand and water-worn gravel. Numerous large and small outcrops of bedrock protrude from a few inches to as much as 15 feet above the soil and make up 50 to 75 percent of the complex. The soil consists mostly of sandy water-laid and windlaid material 5 to more than 60 inches deep. It is light colored and contains little organic matter. The root zone is shallow, and the water-supplying capacity and natural fertility are low. The principal concerns are wind erosion and fire. The complex is not subject to overflow. Slopes are 0 to 30 percent.

This complex is poorly suited to grazing. Large areas are idle because they are not readily accessible to live-

stock. In the northwestern part of the survey area, some drought-resistant woody species occur. Capability subclass VIIIs; not placed in a range site.

### Sherar Series

The Sherar series consists of well drained soils formed in loess and gravelly colluvium on uplands. Slopes are 5 to 70 percent. Elevation is 1,500 to 2,500 feet. The vegetation is bunchgrasses forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown cobbly loam and clay loam about 9 inches thick. The upper 9 inches of the subsoil is dark brown clay, and the lower 11 inches is dark brown gravelly clay. The upper 6 inches of the substratum is dark brown very gravelly clay. Rippable bedrock is at a depth of about 35 inches. The soil material throughout the profile is neutral.

Permeability is slow, and the available water capacity is 2 to 6 inches. Water-supplying capacity is 2 to 5 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range and wildlife habitat.

Representative profile of Sherar cobbly loam, 5 to 45 percent slopes, 35 feet upslope from road in the NW1/4NE1/4SW1/4 section 29, T. 3 S., R. 14 E.:

A11-0 to 3 inches; very dark grayish brown (10YR 3/2) cobbly loam; grayish brown (10YR 5/2) dry; moderate thin platy and weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent cobbles and 5 percent pebbles; neutral; abrupt smooth boundary.

A12-3 to 9 inches; very dark grayish brown (10YR 3/2) clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; 10 percent cobbles and 5 percent pebbles; neutral; abrupt smooth boundary.

IIB2t-9 to 18 inches dark brown (7.5YR 3/3) clay, dark brown (7.5YR 4/4) dry; weak medium prismatic structure parting to strong medium subangular blocky; extremely hard, very firm, very sticky and very plastic; few roots; many very fine tubular pores; common thin clay films; 10 percent cobbles and 5 percent pebbles neutral; clear wavy boundary.

IIB3t-18 to 29 inches; dark brown (7.5YR 4/3) gravelly clay, dark brown (7.5YR 4/4) dry; weak medium subangular blocky structure; extremely hard, firm, sticky and plastic; few roots; common very fine tubular pores; common thin clay films; 30 percent pebbles and 5 percent cobbles neutral; clear wavy

IIC1-29 to 35 inches; dark brown (7.5YR 4/3) very gravelly clay, dark brown (7.5YR 4/4) moist; massive; extremely hard, v firm, very sticky and very plastic 45 percent pebbles and percent cobbles; neutral; clear wavy boundary.

IIIC2-35 to 50 inches; dark brown (10YR 4/3) moist; very cobbly semi-consolidated extremely hard breccia.

The A horizon is very dark grayish brown or dark brown when moist. It is cobbly loam, cobbly clay loam, or clay loam and is 5 to 10 percent pebbles and 10 to 25 percent cobbles. The B horizon is dark brown or yellowish brown when dry and dark brown or brown when moist. It is clay or gravelly clay. It is 40 to 50 percent clay, 5

to 30 percent pebbles, and 10 to 20 percent cobbles. Depth to rippable bedrock is 20 to 40 inches.

**40E-Sherar cobbly loam, 5 to 45 percent slopes.**

A representative mapping unit is in the NW1/4NE1/4SE1/4 section 29, T. 3 S., R. 14 E. This soil is in broad, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Sinamox soils that make up as much as 1 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate to severe. Capability subclass VIe; Shrubby South Exposure range site.

**41F-Sherar very cobbly loam, 45 to 70 percent slopes.** A representative mapping unit is in the SE1/4NE1/4SW1/4 section 1, T. 4 S., R. 14 E. This soil is in long, broad, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer is very cobbly.

Included with this soil in mapping were areas of Sinamox soils that make up as much as 2 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Droughty Steep South range site.

**Sinamox Series**

The Sinamox series consists of well drained soils formed in loess and gravelly colluvium on uplands. Slopes are 1 to 70 percent. Elevation is 1,600 to 2,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is black and very dark grayish brown silt loam about 24 inches thick. The subsoil is dark brown silt loam about 9 inches thick. The upper 16 inches of the substratum is brown gravelly clay loam, and the lower 14 inches is dark yellowish brown silty clay. Rippable bedrock is at a depth of about 63 inches. The soil material in the profile is neutral to a depth of 49 inches and moderately alkaline below that depth.

Permeability is moderately slow, and the available water capacity is 5 to 11 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Sinamox silt loam, 45 to 70 percent slopes, in SW1/4SW1/4SW1/4, section 12, T. 4 S., R. 13 E.:

A11-0 to 3 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak medium platy and weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-3 to 9 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak fine granular and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

A3-9 to 24 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 4/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B2-24 to 33 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

IIC1-33 to 49 inches; brown (10YR 4/3) gravelly clay loam pale brown (10YR 6/3) dry; massive; hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; 25 percent pebbles; neutral; clear wavy boundary.

IIIC2ca-49 to 63 inches; dark yellowish brown (10YR 4/4) silty clay, light yellowish brown (10YR 6/4) moist; massive; extremely hard, very firm, sticky and very plastic; 10 percent pebbles; moderately alkaline; weakly calcareous; abrupt wavy boundary.

IVC3-63 to 70 inches; dark brown (10YR 4/3) moist; semiconsolidated very cobbly breccia.

The A horizon is very dark grayish brown or grayish brown when dry and very dark grayish brown, very dark brown or black when moist. The B horizon is dark brown or brown when dry and very dark grayish brown or dark brown when moist. It is silt loam and is 13 to 22 percent clay. Depth to rippable bedrock is 40 to 60 inches or more.

**42B-Sinamox silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SE1/4 section 28, T. 3 S., R. 14 E. This soil is on ridgetops in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Sherar soils that make up about 5 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-3; Shrubby Rolling Hills range site.

**42C-Sinamox silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NE1/4SW1/4SE1/4, section 6, T. 4 S., R. 14 E. This soil is on ridgetops in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Sherar soils that make up about 6 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Shrubby Rolling Hills range site.

**42D-Sinamox silt loam, 12 to 20 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 32, T. 3 S., R. 14 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping were areas of Sherar soils that make up about 6 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-7; Shrubby Rolling Hills range site.

**42E-Sinamox silt loam, 20 to 45 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4SW1/4 section 36, T. 8 S., R. 13 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping were areas of

Sherar soils that make up as much as 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty North Exposure range site.

**42F-Sinamox silt loam, 45 to 70 percent slopes.**

A representative mapping unit is in the SW1/4SW1/4SW1/4 section 12, T. 4: ., R. 13 E. This soil is in long, narrow areas and has north-facing slopes. It has a profile described as representative of the series.

Included with this soil in mapping were areas of Sherar soils that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Steep North range site.

**Skyline Series**

The Skyline series consists of well drained soils formed in loess, volcanic ash, and colluvium over bedrock on uplands. Slopes are 5 to 70 percent. Elevation is 500 to 3,500 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 47° to 49° F, and the frost-free period is 110 to 140 days at 32° and 140 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown very cobbly loam and cobbly loam about 9 inches thick. The subsoil is dark brown gravelly loam about 5 inches thick. Sandstone bedrock is at a depth of about 16 inches. The soil material in the profile is neutral.

Permeability is moderate, and the available water capacity is 1 to 3 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range and wildlife habitat.

Representative profile of a Skyline very cobbly loam in an area of Skyline-Hesslan complex, 40 to 65 percent slopes, 1,000 feet north of the county road in the NE1/4NE1/4NW1/4 section 26, T. 1 S., R. 12 E.:

A1-0 to 2 inches; very dark grayish brown (10YR 3/2) very cobbly loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent fine and medium pebbles; 20 percent cobbles, and 10 percent stones; neutral; abrupt smooth boundary.

A3-2 to 9 inches; very dark grayish brown (10YR 3/2) cobbly loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent fine pebbles and 16 percent cobbles; neutral; clear smooth boundary.

B2-9 to 14 inches; dark brown (10YR 3/3) gravelly loam, brown (10YR 4/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 15 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

IIC-14 to 16 inches; semiconsolidated sandstone bedrock,

The A horizon is grayish brown, brown, or dark grayish brown when dry and very dark grayish brown or dark brown when moist. It is cobbly loam or very cobbly loam and is 20 to 40 percent rock fragments 2 millimeters to 10 inches in size. The content of surface stones is 5 to 20

percent. The B horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is cobbly loam to cobbly heavy loam and is 10 to 30 percent rock fragments 2 millimeters to 10 inches in size. It has weak to moderate, medium, subangular blocky structure. The soil is 12 to 20 inches deep to semiconsolidated sandstone bedrock.

**43F-Skyline-Hesslan complex, 40 to 65 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 26, T. 1 S., R. 12 E. This complex is about 50 to 70 percent a Skyline very cobbly loam and 10 to 30 percent a Hesslan stony loam. The Skyline soil has south-facing slopes, and the Hesslan soil has north-facing side slopes. The soils have the profiles described as representative of their respective series.

Included with this complex in mapping were areas of Frailey loam and Wamic loam. These soils make up about 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for range and wildlife habitat. Capability subclass VIIIs; Oak Steep South range site.

**Tygh Series**

The Tygh series consists of somewhat poorly drained soils on bottom lands. They formed in alluvium derived from volcanic ash, loess, and weathered sedimentary rocks. Slopes are 0 to 3 percent. Elevation is 200 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 130 to 150 days at 32° and 150 to 180 days at 28°.

In a representative profile the surface layer is very dark brown fine sandy loam about 10 inches thick. The upper 20 inches of the underlying material is dark grayish brown fine sandy loam, the next 11 inches is dark gray sandy loam, the next 5 inches is gray and dark gray loamy sand, and below this is gray to dark gray very gravelly sand to a depth of 60 inches or more. The soil material throughout the profile is neutral.

Permeability is moderately rapid, and the available water capacity is 4 to 8 inches. These soils are subject to seasonal flooding. Effective rooting depth is 40 to 60 inches.

These soils are used for dryfarmed and irrigated small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Tygh fine sandy loam, 200 feet north of Fifteen Mile Creek in the NE1/4NW1/4SW1/4, section 33, T. 1 S., R. 13 E.:

Ap-0 to 10 inches; very dark brown (10YR 2/2) fine sandy loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many very fine irregular pores; 2 percent gravel; neutral; abrupt smooth boundary.

C1-10 to 17 inches; dark grayish brown (10YR 4/2) fine sandy loam, light brownish y (10YR 4/2) dry; common prominent fine reddish brown 5YR 4/4 mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; neutral; clear wavy boundary.

C2-17 to 30 inches; dark grayish brown (10YR 4/2) fine sandy loam, gray (10YR 6/1) dry; many prominent reddish brown (5YR 4/4) mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; neutral; clear wavy boundary.

C3-30 to 41 inches; dark gray (10YR 4/1) sandy loam, gray (10YR 6/1) dry; common medium prominent reddish brown (5YR 4/4) mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; few black (10YR 2/1) manganese stains; neutral; clear wavy boundary.

C4-41 to 46 inches; gray and dark gray (10YR 5/1-4/1) loamy sand, light gray (10YR 7/1) dry; common large prominent reddish brown (5YR 4/4) mottles; single grained; loose, nonsticky and nonplastic; few very fine roots; common very fine tubular pores; 5 percent gravel; neutral; clear wavy boundary.

IIC5-46 to 60 inches; gray to dark gray (10YR 5/1-4/1) very gravelly sand, light gray (10YR 7/1) dry; common large prominent reddish brown (5YR 4/4) mottles; single grained; loose, nonsticky and nonplastic; few very fine roots; few very fine irregular pores; 75 percent pebbles and 5 percent cobbles; neutral.

The A horizon is fine sandy loam or very fine sandy loam. It has weak fine granular structure or is single grained. The C horizon is fine sandy loam, silt loam, or loam and has thin lenses that range from silt to medium gravel. Common to many, fine to medium, dark brown or reddish brown when moist mottles are below a depth of 10 inches. They increase in size and number with depth.

**44-Tygh fine sandy loam.** A representative mapping unit is in the NE1/4NW1/4SW1/4 section 33, T. 1 S., R. 13 E. This soil is adjacent to streams in long strips that are about 100 to 150 feet wide. Slopes are 0 to 3 percent.

Included with this soil in mapping were areas of

Endersby, Hermiston, and Pedigo soils and cobbly soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. The hazard of streambank erosion is severe (fig. 6). Capability unit IIIw-1; Semi-Moist Bottom range site.

#### Van Horn Series

The Van Horn series consists of well drained soils formed in stratified old alluvial deposits on uplands. Slopes are 0 to 35 percent. Elevation is 100 to 850 feet. In uncultivated areas, the vegetation is Douglas-fir, ponderosa pine, forbs, and shrubs. The average annual precipitation is 20 to 25 inches, the average annual air temperature is 49 to 52 F, and the frost-free period is 150 to 180 days at 32° and 180 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown and dark brown loam about 11 inches thick. The subsoil is dark brown loam and clay loam about 38 inches thick. The substratum is dark brown loam 11 inches or more thick. The soil material in the profile is slightly acid or neutral.

Permeability is moderate, and the available water capacity is 8 to 9 inches. Water-supplying capacity is 12 to 15 inches. Effective rooting depth is more than 60 inches.

These soils are used mostly for fruit orchards, hay, pasture, and wildlife habitat and for some range.

Representative profile of Van Horn loam, 8 to 12 percent slopes, in the NE1/4SW1/4NW1/4 section 18, T. 2N., R. 11 E.:

A1p-0 to 5 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak medium granular structure; slightly hard, very friable, slightly sticky

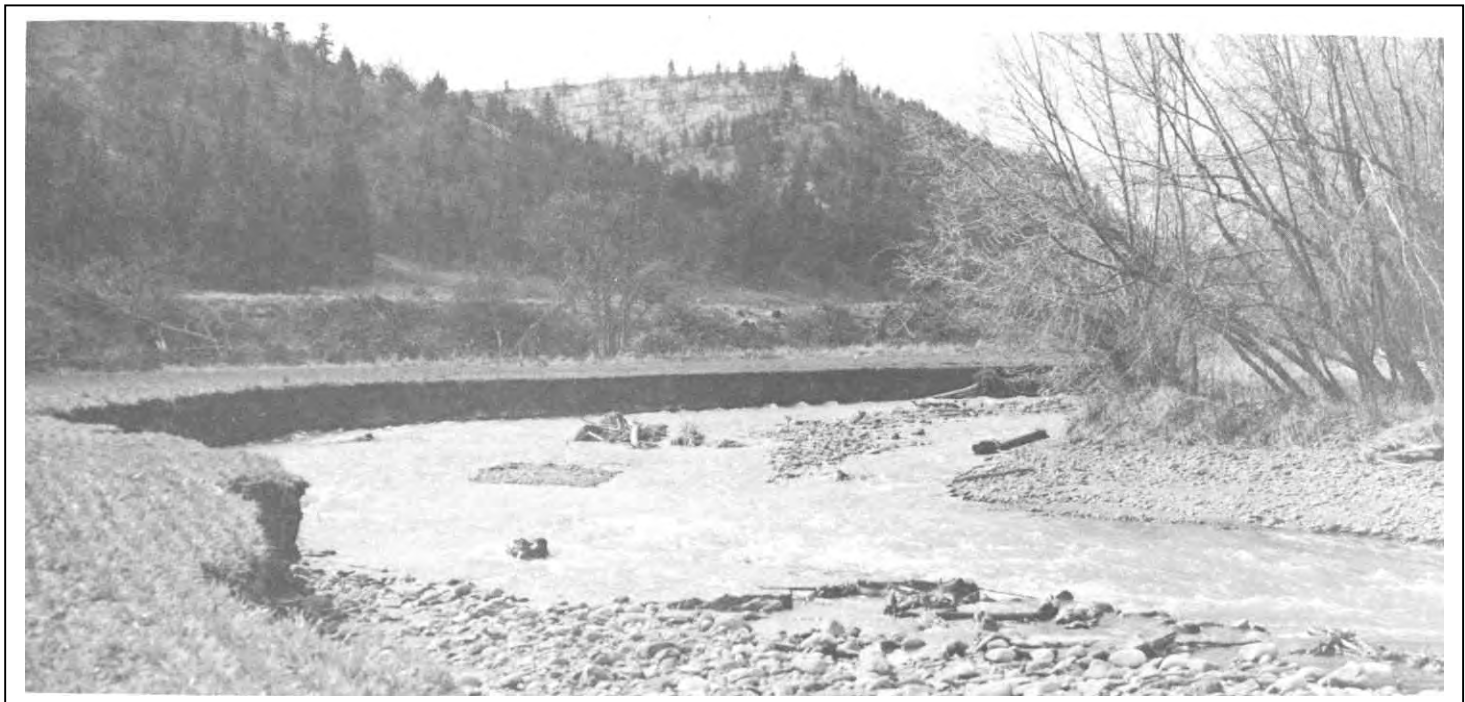


Figure 6.-Streambank erosion on Tygh fine sandy loam.



and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

A12-5 to 11 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; clear smooth boundary.

B1-11 to 21 inches; dark brown (10YR 3/3) loam, grayish brown (10YR 5/3) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; slightly acid; clear smooth boundary.

B21t-21 to 33 inches; dark brown (10YR 3/3) heavy loam, brown (10YR 6/3) dry; moderate medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; few thin clay films on ped faces and common moderately thick clay films in pores; many gray (10YR 7/2) sand coatings on peds; slightly acid; gradual smooth boundary.

B22t-33 to 49 inches; dark brown (10YR 3/3) clay loam, pale brown (10YR 6/3) dry; moderate medium subangular blocky structure; very hard, firm, sticky and slightly plastic; few very fine roots; many very fine tubular pores; few thin clay films on ped faces and common thin clay films in pores; many gray (10YR 7/2) sand coatings on peds; neutral; gradual smooth boundary.

C-49 to 60 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral.

The A horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is very fine sandy loam, fine sandy loam, or loam. The B2 horizon is light brownish gray, pale brown, brown, or yellowish brown when dry and dark brown, dark yellowish brown, or dark grayish brown when moist. It is clay loam, sandy clay loam, or heavy loam and is 22 to 35 percent clay.

**45B-Van Horn loam, 0 to 8 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NW1/4 section 7, T. 2 N., R. 12 E. This soil is in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**45C-Van Horn loam, 8 to 12 percent slopes.** A representative mapping unit is in the NE1/4SW1/4NW1/4 section 18, T. 2 N., R. 11 E. This soil is in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**45D-Van Horn loam, 12 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NW1/4 section 7, T. 2 N., R. 12 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**45E-Van Horn loam, 20 to 35 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SW1/4, section 6, T. 2 N., R. 12 E. This soil is in narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

## Walla Walla Series

The Walla Walla series consists of well drained soils formed in loess on uplands. Slopes are 3 to 60 percent. Elevation is 300 to 2,000 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 49° to 62° F, and the frost-free period is 160 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 13 inches thick. The subsoil is dark brown and brown silt loam about 18 inches thick. The substratum is dark yellowish brown silt loam to a depth of 82 inches or more. The surface layer is slightly acid and neutral, the subsoil is neutral, and the substratum is neutral and mildly alkaline.

Permeability is moderate, and the available water capacity is 7 to 12 inches. Water-supplying capacity is 8 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Walla Walla silt loam, 12 to 20 percent north slopes, about 600 feet north of the line between sections 12 and 13 in the SE1/4SW1/4SW1/4, section 12, T. 1 N., R. 14 E.:

Ap-0 to 7 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak thin platy structure parting to weak fine granular; soft to slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

A12-7 to 13 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

B1-13 to 20 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to very weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine pores; neutral; clear smooth boundary.

B2-20 to 31 inches; brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to very weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; gradual smooth boundary.

C11-31 to 44 inches; dark yellowish brown (10YR 3/4) silt loam, pale brown (10YR 6/3) dry; massive;

slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; gradual smooth boundary.

C12-44 to 82 inches; dark yellowish brown (10YR 3/4) silt loam, pale brown (10YR 6/3) dry massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; mildly alkaline.

The A horizon is dark grayish brown, grayish brown, or brown when dry and very dark brown, very dark grayish brown, or dark brown when moist. It is silt loam or coarse silt loam. The B horizon is silt loam or coarse silt loam. The C horizon is light brownish gray or pale brown when dry and dark yellowish brown or brown when moist. It is silt loam or coarse silt loam. Lime in mycelium form is below a depth of 55 inches in some places. Depth to bedrock is 40 to more than 60 inches.

**46B-Walla Walla silt loam, 3 to 7 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SW1/4 section 2, T. 1 N., R. 15 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIE-3; Rolling Hills range site.

**46C-Walla Walla silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the SW1/4SW1/4SW1/4 section 3, T. 1 N., R. 15 S. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-1; Rolling Hills range site.

**46D-Walla Walla silt loam, 12 to 20 percent north slopes.**

A representative mapping unit is in the SE1/4SW1/4SW1/4 section 12, T. 1 N., R. 14 E. This soil is in long, broad, convex areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-4; Droughty North Exposure range site.

**47D-Walla Walla silt loam, 12 to 20 percent south slopes.** A representative mapping unit is in the SW1/4SW1/4SW1/4 section 6, T. 1 N., R. 15 E. This soil is in long, broad, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-4; Rolling Hills range site.

**47E-Walla Walla silt loam, 20 to 35 percent north slopes.** A representative mapping unit is in the NE1/4SW1/4SW1/4 section 9, T. 1 N., R. 14 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVE-3; North Exposure range site.

**48E-Walla Walla silt loam, 20 to 35 percent south slopes.** A representative mapping unit is in the NW1/4NW1/4NW1/4 section 10, T. 1 N., R. 14 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVE-2; Droughty South Exposure range site.

**48F-Walla Walla silt loam, 35 to 50 percent south slopes.** A representative mapping unit is in the W1/4SE1/4NE1/4 section 7, T. 1 N., R. 14 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of this mapping unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty South Exposure range site.

## Wamic Series

The Wamic series consists of well drained soils formed in volcanic ash, and loess overlying alluvium or colluvium weathered from basalt or andesite on uplands. Slopes are 1 to 70 percent. Elevation is 1,000 to 3,600 feet. In uncultivated areas, the vegetation is ponderosa pine, Douglas-fir, oak forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 46° to 50° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 7 inches thick. The subsoil is dark brown loam about 21 inches thick. The substratum is dark brown heavy loam 16 or more inches thick. The soil material throughout the profile is neutral.

Permeability is moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 12.5 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, timber, and wildlife habitat.

Representative profile of Wamic loam, 5 to 12 percent south slopes, 100 feet south of road in the NE1/4NW1/4NW1/4 section 26, T. 2 S., R. 12 E.:

Ap-0 to 7 inches; very dark grayish brown (10YR 3/2) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

B1-7 to 18 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B2-18 to 28 inches; dark brown (10YR 4/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many

very fine and common fine tubular pores; about 2 percent very fine pebbles; light gray (10YR 7/2) when dry coatings of very fine sand on peds; neutral; abrupt wavy boundary.

IIC-28 to 44 inches; dark brown (10YR 4/3) heavy loam, pale brown (10YR 4/3) dry; massive; very hard, firm, sticky and plastic; few fine roots; many very fine and common fine tubular pores; about 2 percent very fine pebbles; brown (7.5YR 4/4) when dry thick clay films in nearly all pores and on faces of fractures; neutral.

IIIR-44 inches; basalt bedrock.

The A horizon is light brownish gray or pale brown when dry and very dark grayish brown or dark brown when moist. It is loam, very fine sandy loam, or silt loam. It has weak granular or subangular blocky structure. The B horizon is light brownish gray, pale brown, or light yellowish brown when dry and dark brown, brown, or dark yellowish brown when moist. It is loam or silt loam, is 18 to 22 percent clay, and is more than 15 percent particles coarser textured than very fine sand. The substratum is pale brown or light yellowish brown when dry and brown or dark yellowish brown when moist. It is heavy loam, foam, or sandy clay loam and is 20 to 80 percent clay.

The amount of ash in the soil ranges from 20 to 60 percent. Depth to bedrock is 40 to 60 inches or more.

**49B-Wamic loam, 1 to 5 percent slopes.** A representative mapping unit is in the SW1/4SE1/4SW1/4 section 26, T. 1 N., R. 12 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 6 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-1; Pine-Oak-Fescue range site; woodland group 60.

**49C-Wamic loam, 5 to 12 percent north slopes.** A representative mapping unit is in the SE1/4NW1/4NW1/4 section 36, T. 2 S., R. 12 E. This soil is on ridgetops in broad, smooth areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-4; Pine-Oak-Fescue range site; woodland group 60.

**50C-Wamic loam, 5 to 12 percent south slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4 section 26, T. 2 S., R. 12 E. This soil is in long, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Oak South Exposure range site.

**50D-Wamic loam, 12 to 20 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 14, T. 2 S., R. 14 E. This soil is in irregularly shaped areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-4; Pine-Oak-Fescue range site; woodland group 60.

**50E-Wamic loam, 20 to 40 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 31, T. 2 S., R. 13 E. This soil is in long, broad areas and narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Bald, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Pine-Douglas Fir-Sedge range site; woodland group 6r.

**50F-Wamic loam, 40 to 70 percent slopes.** A representative mapping unit is in the NE1/4SW1/4SW1/4 section 10, T. 2 N., R. 12 E. This soil is in long, narrow, irregularly shaped areas. It has a profile similar to the one described as representative of the series, but the surface layer is darker colored.

Included with this soil in mapping were areas of Bald, Hesslan, Frailey, and Skyline soils. These soils make up as much as 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Pine-Douglas Fir-Sedge range site; woodland group 6r.

**51D-Wamic-Skyline complex, 2 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 86, T. 2 S., R. 12 E. This 4complex is about 46 to 70 percent a Wamic loam and about 16 to 40 percent a Skyline very cobbly loam. The Wamic soil is on ridgetops or side slopes in circular or elongated mounds. The Skyline soil is in areas where the ridgetops break off into canyons.

Included with this complex in mapping were areas of very shallow, very stony, and deep stony soils. These soils make up about 20 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. This complex is used for range and wildlife habitat. Capability subclass VIe; Wamic soil in Oak South Exposure range site; Skyline soil in Oak Steep South range site.

### Wapinitia Series

The Wapinitia series consists of well drained soils, formed in loess and volcanic ash on uplands. Slopes are 0 to 36 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 60° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 6 inches thick. The upper 13 inches of the subsoil is very dark brown silt loam, and the lower 10 inches is dark brown silty clay loam. The upper 7 inches of the substratum is dark yellowish brown fine sandy loam, and the lower 14 inches is dark brown clay loam. Basalt bedrock is at a depth of about 60 inches. The surface layer and upper part of the subsoil are slightly acid, and the lower part of the subsoil and the substratum is neutral.

Permeability is moderately slow, and the available water capacity is 7 to 12 inches. Water-supplying capacity is 10 to 14 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for small grain, dryfarmed hay, pasture, range, irrigated crops, and wildlife habitat.

Representative profile of Wapinitia silt loam in an area of Watama-Wapinitia silt loams, 0 to 5 percent slopes, 50 feet east of graveled county road and 450 feet south of main irrigation canal in the NW1/4NE1/4SE1/4 section 17, T. 5 S., R. 12 E.:

- Ap-0 to 6 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; abrupt smooth boundary.
- B1-6 to 19 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine tubular pores; few thin clay films on peds; common noncalcareous nodules 1/4 to 3/4 inch in diameter; slightly acid; clear smooth boundary.
- B2t-19 to 29 inches; dark brown (10YR 3/3) silty clay loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many very fine roots; many to common very fine and fine tubular pores; many thin clay films on peds; common noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; clear smooth boundary.
- IIc1-29 to 36 inches; dark yellowish brown (10YR 3/4) fine sandy loam, yellowish brown (10YR 5/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine tubular pores; common clay bridges; neutral; clear smooth boundary.
- IIc2-36 to 50 inches; dark brown (10YR 4/3) clay loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; abrupt smooth boundary.
- IIIR-50 inches; basalt bedrock.

The A horizon is dark grayish brown or grayish brown when dry and very dark brown or very dark grayish brown when moist. It is silt loam or loam. The B horizon is grayish brown or brown when dry. It is clay loam or silty clay loam and is 27 to 35 percent clay. It contains 2 to 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter and more than 16 percent particles coarser textured than very fine sand. The horizon is fine sandy loam, loam, or clay loam. Depth to basalt bedrock is 40 to 60 inches.

The Wapinitia series is mapped only in complexes with Watama soils. Refer to the Watama series for a description of these mapping units.

### Wapinitia Variant

The Wapinitia variant consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 1 to 7 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 12 inches thick. The upper 10 inches of the subsoil is very dark grayish brown

silty clay loam, and the lower 31 inches is dark brown and brown clay. Basalt is at a depth of 53 inches. The surface layer and subsoil are neutral.

Permeability is slow, and the available water capacity is 7 to 11.5 inches. Water-supplying capacity is 10 to 13 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Wapinitia variant silt loam, 1 to 7 percent slopes, 100 feet north of road in the SW1/4SE1/4SW1/4 section 28, T. 5 S., R. 12 E.:

- Ap1-0 to 5 inches; very dark brown (10YR 2/2) silt loam, dark brown (10YR 4dry); weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.
- Ap2-5 to 12 inches; very dark brown (10YR 2/2) loam, dark brown (10YR 4/3) dry; moderate fine granular and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- B1-12 to 22 inches; very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; hard, firm, sticky and very plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- IIb21t-22 to 32 inches; dark brown (10YR 3/3) clay, brown (10YR 6/3) dry; weak medium prismatic and strong medium blocky structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; common thin clay films on peds; 5 percent pebbles 2 millimeters to 3 inches in size; neutral; clear wavy boundary.
- IIb22t-32 to 63 inches; brown (10YR 4/3) clay, brown (10YR 5/3) dry; weak medium prismatic and strong medium blocky structure; extremely hard, very firm, sticky and very plastic; few very fine roots; few very fine tubular pores; common moderately thick clay films on peds; 5 percent pebbles 2 millimeters to 3 inches in size; neutral; abrupt smooth boundary.
- IIIR-53 to 60 inches; basalt.

The A horizon is silt loam or loam. Depth to bedrock is 40 to 60 inches or more.

**52B-Wapinitia variant silt loam, 1 to 7 percent slopes.** A representative mapping unit is in SW1/4SE1/4SW1/4 section 28, T. 5 S., R. 12 E. This soil is in narrow, irregularly shaped areas. Slopes average about 4 percent.

Included with this soil in mapping were areas of Wapinitia, Watama, and Bakeoven soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is moderate. Capability unit IIIe-5; Shrubby Rolling Hills range site.

### Warden Series

The Warden series consists of well drained soils formed in a loess mantle over calcareous, silty lacustrine sediment on terraces. Slopes are 5 to 40 percent. Elevation is 600 to 1,000 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is about 9 inches, the average annual air temperature is 51° to 53° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown and dark brown silt loam about 8 inches thick. The subsoil is dark brown silt loam about 13 inches thick. The substratum is dark grayish brown silt loam about 39 inches thick. The soil material in the profile is neutral to strongly alkaline. Lime accumulation is at a depth of 20 to 30 inches.

Permeability is moderate, and the available water capacity is 10 to 12 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for hay, pasture, range, and wildlife habitat.

Representative profile of Warden silt loam, 5 to 40 percent slopes, in abandoned field 30 feet northeast of Sinamox Road in the SE1/4SW1/4NE1/4 section 27, T. 2 S., R. 15 E.

A1-0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

A12-3 to 8 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; weak medium prismatic structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common fine tubular pores; neutral; abrupt wavy boundary.

B2-8 to 21 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; mildly alkaline; abrupt wavy boundary.

IIC1ca-21 to 34 inches; dark grayish brown (2.5Y 4/3) silt loam, pale brown (10YR 6/3) dry; massive; hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; many fine to medium (1/4 to 1 inch) calcareous concretions; moderately alkaline; strongly calcareous; clear wavy boundary.

IIC2ca-34 to 45 inches; dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (10YR 6/2) dry; massive; hard, friable, friable and firm, slightly sticky and slightly plastic; common very fine roots; many fine tubular pores; strongly alkaline; strongly calcareous; clear wavy boundary.

IIC3ca-45 to 60 inches; dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; massive; hard, friable, slightly sticky and slightly plastic; few roots; many very fine irregular pores; strongly alkaline; strongly calcareous.

The A horizon is grayish brown or light brownish gray when dry. The B horizon is brown or pale brown when dry and dark brown or dark yellowish brown when moist. The C horizon is light brownish gray, brown, or pale brown when dry and grayish brown or dark grayish brown when moist. It is as much as 5 percent calcareous concretions ¼ to 1 inch in diameter. It is moderately calcareous to strongly calcareous.

**53E-Warden silt loam, 5 to 40 percent slopes.** A representative mapping unit is in the SE1/4SW1/4NE1/4 section 27, T. 2 S., R. 15 E. This soil is in narrow and broad, irregularly shaped, dissected terraces.

Included with this soil in mapping were areas of Licksillet and Wrentham soils. These soils make up as much as 10 percent of the unit.

Runoff is medium or slow, and the hazard of erosion is slight to severe. Capability subclass VIe; Silty Terrace range site.

## Watama Series

The Watama series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 35 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown silt loam about 10 inches thick. The upper 14 inches of the subsoil is dark brown loam, and the lower 10 inches is brown clay loam. Basalt bedrock is at a depth of about 34 inches. The soil material in the profile is neutral throughout.

Permeability is moderately slow; and the available water capacity is 3.5 to 8 inches. water-supplying capacity is 6 to 10 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, irrigated crops, and wildlife habitat.

Representative profile of a Watama silt loam in an area of Watama-Wapinitia silt loams, 0 to 5 percent slopes, 75 feet south of gravel road in the NE1/4NW1/4NE1/4 section 16, T. 5 S., R. 12 E.:

A11-0 to 4 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 6/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-4 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B1-10 to 17 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak to moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B21-17 to 24 inches; dark brown (10YR 3/3) heavy loam, brown (10YR 6/3) dry; weak coarse prismatic and moderate medium subangular blocky structure; very hard, firm, sticky and plastic; common very fine roots; many very fine tubular pores; common very dark grayish brown (10YR 3/2) coatings on pedis; 2 percent cobbles; neutral; clear smooth boundary.

B22-24 to 34 inches; brown (10YR 4/3) light clay loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; very hard, firm, sticky and plastic; common very fine roots; many very fine tubular pores; common dark brown (10YR 3/3) coatings on pedis; 2 percent cobbles; neutral; clear smooth boundary.

IIR-34 inches; basalt bedrock.

Depth to basalt bedrock is 20 to 40 inches.

**54B-Watama-Wapinitia silt loams, 0 to 5 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NE1/4 section 16, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 30 percent a Wapinitia silt loam. These soils are in narrow, irregularly shaped areas. Slopes average about 3 percent. Both soils have the profile described as representative of their respective series.

Included with this complex in mapping are areas of

Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3 nonirrigated, and IIe-2 irrigated; Shrubby Rolling Hills range site.

**54C-Watama-Wapinitia silt loams, 5 to 12 percent slopes.**

A representative mapping unit is in the NW1/4SW1/4SE1/4 section 3, T. 5 S., R. 12 E. This complex is about 65 to 65 percent a Watama silt loam and 25 to 30 percent a Wapinitia silt loam. These soils are on ridgetops in long, broad or narrow areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Shrubby Rolling Hills range site.

**54D-Watama-Wapinitia silt loams, 12 to 20 percent slopes.**

A representative mapping unit is in the SE1/4SE1/4SW1/4 section 3, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 35 percent a Wapinitia silt loam. These soils are in long, narrow, irregularly shaped areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Shrubby Rolling Hills Range site.

**54E-Watama-Wapinitia silt loams, 20 to 35 percent slopes.**

A representative mapping unit is in the NW1/4NE1/4NW1/4 section 3, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 35 percent a Wapinitia silt loam. These soils are in long, narrow, irregularly shaped areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe.

Capability unit IVE-2; North Exposure range site.

**Wato Series**

The Wato series consists of well drained soils formed in loess on uplands. Slopes are 3 to 35 percent. Elevation is 300 to 1,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 51° to 54° F, and the frost-free period is 150 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown very fine sandy loam about 15 inches thick. The subsoil is dark brown loam about 27 inches thick. The substratum is dark brown fine sandy loam about 24 inches thick. The soil material throughout the profile is neutral.

Permeability is moderately rapid, and the available water capacity is 6 to 10 inches. Water-supplying capacity is 7 to 10 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Wato very fine sandy loam, 3 to 7 percent slopes, 150 feet west of road in the NW1/4NE1/4NW1/4 section 32, T. 2 N., R. 14 E.:

A11-0 to 3 inches; very dark grayish brown (10YR 3/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

A12-3 to 15 inches; very dark grayish brown (10YR 3/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 2 percent fragments 1 to 2 millimeters in size; neutral; clear smooth boundary.

B1-15 to 21 inches; dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular an tubular pores; 2 percent fragments 1 to 2 millimeters in size; neutral; clear wavy boundary.

B2-21 to 42 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium prismatic and weak medium subangular bloc structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 3 percent fragments 1 to 2 millimeters in size; neutral; clear smooth boundary.

C1-42 to 52 inches; dark brown (10YR 4/3) fine sandy loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many to common very fine roots; many very fine tubular pores; 6 percent weathered fragments 1 to 2 millimeters in size; neutral; clear wavy boundary.

C2-52 to 66 inches; dark brown (10YR 4/3) fine sandy loam, ale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and nonplastic; few very fine roots; 10 percent weathered fragments 1 to 2 millimeters in size; neutral; abrupt wavy boundary.

The B horizon is dark brown to brown when dry. It is very fine sandy loam to loam.

**55B-Wato very fine sandy loam, 3 to 7 percent slopes.** A representative mapping unit is in the NW1/4NE1/4NW1/4 section 32, T. 2 N., R. 14 E. This soil is on ridgetops in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is slow. The hazard of water erosion is slight or moderate, and the hazard of soil blowing is moderate. Some areas are moderately eroded and have lower crop yields than noneroded areas. Capability unit IIIe-6; Rolling Hills range site.

**55C-Wato very fine sandy loam, 7 to 12 percent slopes.** A representative mapping unit is in the SW1/4NE1/4NE1/4 section 3, T. 2 N., R. 14 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Licksillet, Walls Walla, Anderly, and Nansene soils. These soils make up about 10 percent of the unit.

Runoff is medium. The hazard of water erosion is moderate. Capability unit IIIe-6; Rolling Hills range site.

**55D-Wato very fine sandy loam, 12 to 20 percent north slopes.** A representative mapping unit is



in the NE1/4NE1/4NW1/4, section 32, T. 2 N., R. 14 E. This soil is in long, broad, convex areas.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Droughty North Exposure range site.

**55E-Wato very fine sandy loam, 20 to 35 percent north slopes.** A representative mapping unit is in the NE1/4SE1/4NW1/4, section 31, T. 2 N., R. 14 E. This soil is in long, narrow, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up as much as 16 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe.

Capability unit IVE-3 ; North Exposure range site.

### Wind River Series

The Wind River series consists of well drained soils formed in old alluvium on uplands. Slopes are 0 to 30 percent. Elevation is 200 to 800 feet. In uncultivated areas, the vegetation is Douglas-fir, ponderosa pine, Oregon white oak, forbs, and shrubs. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 49° to 52° F, and the frost-free period is 150 to 180 days at 32° and 180 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown fine sandy loam about 10 inches thick. The subsoil is dark brown fine sandy loam about 34 inches thick. The substratum is dark yellowish brown sandy loam to a depth of 60 inches or more. Depth to bedrock is more than 60 inches. The soil material in the profile ranges from medium acid to neutral.

Permeability is moderately rapid, and the available water capacity is 7 to 8 inches. Water-supplying capacity is 10 to 14 inches. Effective rooting depth is more than 60 inches.

These soils are used for fruit orchards, pasture, range, and wildlife habitat.

Representative profile of Wind River fine sandy loam, 0 to 8 percent slopes, 400 feet north of Old Columbia River Highway in the NW1/4SE1/4NW1/4 section 6, T. 2 N., R. 12 E..

Ap1-0 to 6 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; medium acid; abrupt smooth boundary.

Ap2-6 to 10 inches, very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular and tubular pores; slightly acid; gradual smooth boundary.

B2-10 to 17 inches; dark brown (7.5YR 3/3) fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine roots; few fine tubular pores; neutral; gradual smooth boundary.

B3-17 to 44 inches; dark brown (7.5YR 3/4) fine sandy loam, brown (10YR 5/4) dry; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; few 1 to 6 centimeter nodules; neutral; gradual smooth boundary.

C1-44 to 61 inches; dark yellowish brown (10YR 4/4) sandy loam, brown (10YR 5/4) dry; massive, slightly hard, friable, nonsticky and nonplastic; common very fine roots; neutral; clear wavy boundary.

The A horizon is brown, grayish brown, or dark grayish brown when dry and very dark grayish brown, very dark brown, or dark brown moist. It is fine sandy loam or sandy loam. The B horizon is brown, grayish brown, or dark grayish brown when dry and very dark grayish brown, very dark brown, or dark brown moist. It is fine sandy loam, loam, or sandy loam. It has weak coarse prismatic or weak coarse or medium subangular blocky structure. The C horizon is yellowish brown, brown, or light yellowish brown when dry and dark yellowish brown or brown moist. It is fine sandy loam, sandy loam, loamy fine sand, or sand and is 0 to 20 percent rock fragments 2 to 5 millimeters in diameter.

**56B-Wind River fine sandy loam, 0 to 8 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NW1/4 section 6, T. 2 N., R. 12 E. This soil is on ridgetops in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**56C-Wind River fine sandy loam, 8 to 12 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 6, T. 2 N., R. 12 E. This soil is on ridgetops in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-2; Pine-Oak-Fescue range site.

**56D-Wind River fine sandy loam, 12 to 30 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 1, T. 2 N., R. 11 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate to severe. Capability unit IVE-1; Pine-Oak Fescue range site.

### Wrentham Series

The Wrentham series consists of well drained soils formed in loess and basalt colluvium on uplands. Slopes are 35 to 70 percent. Elevation is 1,500 to 3,600 feet. The vegetation is bunchgrasses forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 62° F, and the frost-free period is 60 to 100 days at 32° and 100 to 150 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 18 inches thick. The upper

3 inches of the subsoil is dark brown heavy silt loam, and the lower 17 inches is dark brown very cobbly silty clay loam. Basalt bedrock is at a depth of about 38 inches. The soil material in the profile is mainly neutral, but the lower part of the subsoil is mildly alkaline.

Permeability is moderately slow, and the available water capacity is 2.5 to 7 inches. Water-supplying capacity is 6 to 8 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, wildlife habitat, and water supply.

representative profile of Wrentham silt loam in an area of Wrentham-Rock outcrop complex, 35 to 70 percent slopes, 20 feet north of Sinamox Road in the SE1/4SE1/4 section 28, T. 2 S., R. 15 E.:

- A11-0 to 5 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak very thin platy and weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; few fine and very fine irregular pores; 5 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.
- A12-6 to 10 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 6 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.
- A13-10 to 18 inches; very dark brown (10YR 2/2) silt loam, dark brown (10YR 4/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slight sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 6 percent cobbles; neutral; gradual smooth boundary.
- B1-18 to 21 inches; dark brown (7.5YR 3/3) heavy silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 6 percent cobbles; neutral; gradual smooth boundary.
- B21-21 to 32 inches; dark brown (7.5YR 3/3) very cobbly light silty clay loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; many very fine tubular pores; thin clay films on ped surfaces; 26 percent pebbles and 26 percent cobbles; neutral; gradual smooth boundary.
- B22-32 to 38 inches; dark brown (7.5YR 3/4) very cobbly silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium subangular blocky structure; hard, firm, sticky, plastic; few very fine roots; many very fine tubular pores; 25 percent pebbles and 40 percent cobbles; 50 to 86 percent basalt fragments 1 to 12 inches in diameter; mildly alkaline; abrupt wavy boundary.
- IIR-38 inches; basalt bedrock.

The A horizon is very dark brown or very dark grayish brown when moist. It is 0 to 25 percent coarse fragments, by volume. The B horizon is very dark brown or dark brown when moist. It is heavy silt loam, light silty clay loam, or silty clay loam. It is 18 to 30 percent clay and 50 to 86 percent rock fragments. Depth to basalt bedrock is 20 to 40 inches.

**57F-Wrentham-Rock outcrop complex, 35 to 70 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 28, T. 2 S., R. 15 E. This complex is about 50 to 85 percent Wrentham silt loam and 10 to 35 percent Rock outcrop. It is in long, narrow

areas and has north-facing slopes (fig. 7). The Wrentham soil has the profile described as representative of the series.

Included with this complex in mapping were areas of Cantala, Condom Bakeoven, and Lick Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIc; Wrentham soil in Steep North range site. Rock outcrop not in a range site.

### ***Use and Management of the Soils***

In this section some principles for the management of cropland are described, the soils are grouped into capability units according to the capability classification used by the Soil Conservation Service, yields of principal crops are estimated, and the management of soils when used for range, woodland and windbreaks, wildlife, recreational development, and engineering is discussed.

### ***Crops and Pasture***

Under the grain-fallow system of farming used in the survey area, the major management needs are controlling erosion, conserving moisture, preserving soil structure and tilth, maintaining the organic-matter content and the supply of plant nutrients, using proper silage, managing crop residues, using a suitable cropping system, controlling annual and perennial weeds, and using commercial fertilizer and amendments as needed. Soils that have slopes of more than 7 percent require intensive conservation practices to keep annual soil losses less than about 4 or 5 tone per acre. Each field needs to be evaluated for the best combination of alternative treatments to control erosion and maintain crop yields. Irrigated cropland needs proper irrigation management and soil protection against erosion. Onsite technical assistance is available from the Soil Conservation Service.

### ***Management needs***

Different soils require different treatments, and the same soil may require different treatment from year to year or from crop to crop. The basic management needs for grain summer fallow are described in the following paragraphs.

***Conserving moisture.***-Many cultivated soils in Wasco County, Oregon. Northern Part, are limited in productivity because of inadequate moisture. It is important, therefore, to conserve and use efficiently all available moisture. During the fallow season, evaporation losses can be kept to a minimum by maintaining a cloddy surface mulch and tilling only enough to control weeds.

***Controlling erosion.***-This is a most urgent need. Many of the soils are shallow or only moderately deep. Further erosion reduces the ability of the soils to store moisture and supply nutrients, and continued erosion so reduces their productivity that in time they are suitable only for low-producing range or pasture. Erosion



**Figure 7:** The north-facing soil is Wrentham-Rock outcrop complex, 35 to 70 percent slopes (mostly on right side of hill in center of background), the land on the right is Rock outcrop-Rubble land complex, and the south-facing soil is Licksillet extremely stony loam, 40 to 70 percent slopes (mostly on left side of hill in center of background). The

reduces yields and results in sedimentation downstream. Minimum or cloddy tillage, maintenance of organic-matter content, preservation of soil structure, and installation of such practices as diversions and grassed waterways help to control erosion.

*Preserving soil structure.*-Proper tillage and maintenance of the organic-matter content are the two principal factors in preserving soil structure. Excessive tillage while the soil is fallow tends to destroy organic matter and soil aggregates. This reduces the free movement of water, air, and roots through the soil.

*Maintaining organic-matter content:* Organic matter is the partly decomposed remains of plants and soil organisms. The organic-matter content of the surface layer of the soils of the survey area ranges from a high of 3 or 4 percent under native plant cover to a low of 1 or 2 percent after a long period of cultivation.

Organic matter binds soil particles together in aggregate and thus helps to preserve soil structure. It is the source of most of the available nitrogen in the soil and also supplies other plant nutrients, such as phos-

phorus and sulfur. The decomposition of organic matter releases nutrients in a form available to plants.

The organic matter in the soil is constantly decomposing. Therefore, the supply must be renewed regularly and often.

An adequate supply can be maintained by:

1. Returning all crop residues to the soil. Crop residues are the main source of organic matter. The organic matter is lost if residues are burned or otherwise destroyed or removed.
2. Using commercial fertilizers to balance plant and soil organism requirements in relation to available moisture.
3. Growing grass and legumes in a rotation.

*Supplying plant nutrients.*-Nitrogen fertilizer is used on all but the driest and shallowest cultivated soils in the survey area. Sulfur is used on about one-third of the dryfarmed areas and on all irrigated crops, particularly alfalfa. Phosphate fertilizers are used on most irrigated soils but only in a minor amount on dry-

farmed soils. Boron is commonly needed for good alfalfa production. Most other plant nutrients are adequate. Soil tests and Oregon State University fertilizer guides are available and useful for specific crops.

**Weed control.**-Mechanical and chemical control of annual and perennial weeds are widely used. A persistent weed control program is needed. Control of cheatgrass, grain, rye, and morning glory is especially important.

Providing proper irrigation water management. Better water management by sprinkler irrigation can be accomplished by rough leveling to eliminate pockets, sharp breaks, and other irregularities. Properly designed and operated sprinkler systems are essential to good water management. Such soil properties as intake rate, available water capacity, and permeability are important for properly designed systems. Leveling is needed on all soils before surface irrigation. If soils are properly leveled, water moves quickly and evenly over a field and wets the root zone to a uniform depth. Properly designed ditches and structures are essential to uniform water distribution. After the first leveling, floating is needed periodically to eliminate high spots and fill low spots, so that crops can be irrigated uniformly without wasting water. Ordinarily, several years of floating are required before a field is properly leveled and distribution of water is fast and efficient.

### **Cropping systems**

A cropping system can be a regular rotation of different crops, in which the crops follow each other in a definite order, or it can consist of only one crop grown year after year. The number and variety of cropping systems in the survey area are limited by the low precipitation and the shortage of irrigation water. The principal cropping system is grain and fallow. Another dryfarmed cropping system is grass or grass and alfalfa rotated with grain or grain and fallow.

**Fallow cropping system.**-Most of the cropland in the survey area is used for summer-fallow grain farming. In summer-fallow dryfarming, the soil is kept free of vegetation during one crop season in order to store additional moisture for the growth and yield of a crop the following season. This practice also helps to control weeds and conserves plant nutrients.

The most common method of fallowing is to leave crop stubble standing during the winter. The soil is tilled in February, March, or April, before the weeds have removed much of the moisture and before the surface layer becomes too dry. Tillage is also performed during the summer to keep the soil free of weeds and to prepare a seedbed for fall planting.

Only about a third of the precipitation that occurs during a 2-year period is utilized by crops. Water losses through evaporation from fallow soils are high, and in certain years runoff is rapid because of slow infiltration on finely tilled seedbeds or frozen ground.

**Grass-Legume rotation.**-A small acreage in the survey area is utilized for a rotation of grass and legume, with grain and fallow. This rotation is used to improve fertility, increase the rate of water infiltration, and reduce soil erosion.

Grasses and legumes can be used for rotation hay or pasture. Grasses and legumes seeded on summer-fallow or in spring of the stubble year generally can be used for forage the second year.

Plowing up the grass-legume sod and rotating to other fields needs to be done at about the time of maximum root growth. Experiments at the Sherman Branch Experiment Station show maximum root growth of suited species is reached in about 4 years. Soils used for grass-legume rotations are plowed in 4 or 5 years and then reseeded to grain.

A successful grass-legume seeding depends on a firm seedbed, a suitable seed mixture, and proper seeding. The success of the rotation depends on fitting the rotation in with other rotations on the rest of the farm. Recommendations for grass-legume varieties and seeding rates are available from the County Extension Agent and the Soil Conservation Service.

**Irrigated cropping systems.**-Chenoweth, Cherryhill, Van Horn, Walls Walla, and Wind River soils adjacent to the Columbia River are suited to apples, peaches, apricots, and sweet cherries. Irrigation water is provided by wells and from the Columbia River.

Cover crops are grown in orchards to control erosion. Suitable cover crops are barley or wheat, alone or grown with a legume, such as hairy vetch, common vetch, or peas. The cover crop is disked or mowed in the spring to conserve moisture, and enough residue is left on the surface to control erosion.

The acreage in irrigated hay and pasture has increased during the past 10 years. Irrigated forage is grown along the bottom lands adjacent to streams or in areas where wells or irrigation dams have been constructed.

Alfalfa is the principal legume grown for hay. It is grown alone or in combination with suitable grasses. Yields are good throughout a wide range of conditions. Seed mixtures for hay or pasture are provided by the Extension Service and the Soil Conservation Service.

Good stands, adequate irrigation and fertilization, and controlled grazing are essential for high yields of pasture crops and hay. Sulfur is needed annually on alfalfa. Soil tests can be made to determine the need for phosphorus and boron. Irrigated grass pastures need nitrogen fertilizer each year. Irrigated grass-legume pastures may need sulfur and phosphorus.

Management of grazing is essential for high yields. Good management increases yields, reduces selective grazing, cuts forage wastes, and controls the quality of the forage. Pastures can be divided, and grazing rotated every 2 to 4 days in several pastures to allow 3 to 4 weeks of regrowth.

### **Capability grouping**

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The soils are grouped according to their limitations when used for field crops, the risk of damage when they are so used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils; does not

take into consideration possible but unlikely major reclamation projects; and does not apply to some crops that require special management.

Those familiar with the capability classification can infer from it much about the behavior of soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for range, for forest trees, or for engineering.

In the capability system, the kinds of soils are grouped at three levels: the capability class, the subclass, and the unit. These are discussed in the following paragraphs.

**CAPABILITY CLASSES**, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of ants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife habitat. (None in survey area.)

Class VI soils have severe limitations that make them generally unsuitable for cultivation and limit their use largely to pasture, range, woodland, or wildlife habitat.

Class VII soils have very severe limitations that make them unsuitable for cultivation and that restrict their use largely to pasture, range, woodland, or wildlife habitat.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or esthetic purposes.

**CAPABILITY SUBCLASSES** are soil groups within one class; they are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIw. The letter *e* indicates that the main limitation is risk of erosion; *w* that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, that the chief limitation is climate that is too cold or too dry.

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by *w*, *s*, and *c*, because the soils in class V are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife habitat, or recreation.

**CAPABILITY UNITS** are soil groups within the subclasses. The soils in one capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, IIw-1 or IIIe-2. Thus, in one symbol, the Roman numeral designates the capability class, or degree of limitation; the small letter indicates the subclass, or kind of limitation, as defined in the foregoing paragraph; and the Arabic numeral specifically identifies the capability unit within each subclass. In this survey, only the cultivated soils are grouped at three levels. The noncultivated soils are grouped at two levels, in capability subclasses.

In the following pages the capability unit in the survey area are described. The names of soil series represented in a capability unit are given in the description of the capability unit, but this does not mean that all the soils of a given series appear in the unit. To find the capability unit or subclass in which a soil has been placed, refer to the "Guide to Mapping Units" at the back of this survey.

#### **CAPABILITY UNIT I-1**

This capability unit consists of soils in the Endersby and Hermiston series. These soils are somewhat excessively drained or well drained loams and silt loams. Slopes are 0 to 3 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 130 to 180 days at 32° F and 180 to 200 days at 28°.

Permeability is moderate or moderately rapid, and the available water capacity is 6.6 to 12.6 inches. Water-supplying capacity is 8 to 13 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated crops and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 6 to 8 years, and grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June but in several areas dams impound water for use throughout the summer. Irrigation methods include sprinkler, border, contour furrow, and wild flooding.

#### **CAPABILITY UNIT IIe-1**

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained fine sandy loams, silt

loams, and loams. Slopes are 0 to 8 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F and 170 to 250 days at 28°.

Permeability is moderately rapid to moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow, and the hazard of erosion is slight.

These soils are used for fruit orchards, hay, pasture, and wildlife habitat.

Cover crops are used in orchards as a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but some perennials are used where irrigation water is adequate. Spring mowing or disking reduces the cover crop and conserves soil moisture. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter or early in spring in one application, 6 to 8 pounds of zinc in a spray, and 2 to 3 pounds of boron in a spray.

For trees less than 10 years old, 1/4 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries commonly are planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 56 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is mostly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT II-2

This capability unit consists of soils in the Maupin, Maupin variant, Watama, and Wapinitia series. These soils are well drained silt loams and loams. Slopes are 0 to 5 percent. The annual precipitation is 10 to 16 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 3 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated hay, pasture, grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 5 to 8 years, and then grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until

late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection.

#### CAPABILITY UNIT II-3

This capability unit consists of soils in the Cantala, Dufur, Endersby, Hermiston, Maupin, Maupin variant, Walla Walla, Watama, and Wapinitia series. These soils are somewhat excessively drained and well drained silt loams and loams. Slopes are 0 to 7 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 150 to 210 days at 28°.

Permeability is moderate, and the available water capacity is 7 to 15 inches. Water-supplying capacity is 5 to 13 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow, and the hazard of erosion is slight.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest is helpful in erosion control. Cloddy fallow and minimum tillage increases water intake and reduces soil erosion.

#### CAPABILITY UNIT II-1

The only soil in this capability unit is Pedigo silt loam. It is a somewhat poorly drained soil. Slopes are 0 to 3 percent. The annual precipitation is 10 to 13 inches. The frost-free period is 130 to 180 days at 32° F and 180 to 200 days at 28°.

Permeability is moderate, and the available water capacity is 10 to 11 inches. Water-supplying capacity is 9 to 13 inches. Typically, roots penetrate to a depth of more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

This soil is used for irrigated hay, pasture, dryfarmed grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown for 5 to 8 years and



then grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection.

A grain-fallow system of dryfarming is commonly used. In the fall year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed in some soils.

Several winter wheat varieties are suitable. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

#### CAPABILITY UNIT IIIe-1

This capability unit consists of soils in the Cantala, Dufur, Walla Walla, and Wamic series. These soils are well drained silt loams and loams. Slopes are 1 to 12 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 160 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 8 to 12 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow or medium, and the hazard of erosion is slight or moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fall year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest, cloddy fallow and minimum tillage, and contour farming are needed to keep soil erosion losses to less than about 4 to 6 tons per acre per year.

#### CAPABILITY UNIT IIIe-2

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained silt loams, fine sandy loams, and loams. Slopes are 7 to 20 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F and 170 to 260 days at 28°.

Permeability is moderately rapid to moderately slow, and the available water capacity is 7 to 11 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for fruit orchards, hay, pasture, and wildlife habitat.

Cover crops are used in orchards for erosion control and as a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but some perennials are used where irrigation water is adequate. Spring mowing or disking reduces the cover crop and conserves soil moisture. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter and early in spring in one application, 6 to 8 pounds of zinc in a spray, and 2 to 3 pounds of boron in a spray.

For trees less than 10 years old, 1/4 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries are commonly planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 66 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is mostly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT IIIe-3

The only soil in this capability unit is Sinamox silt loam, 1 to 7 percent slopes. It is a well drained soil. The annual precipitation is 10 to 12 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderately slow, and the available water capacity is 5 to 11 inches. Water-supplying capacity is 6 to 9 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

This soil is used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce

water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest, clod fallow and minimum tillage, and contour farming are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-4**

This capability unit consists of soils in the Cantala, Dufur, Walla Walla, Wamic, Watama, Wapinitia, and Wato series. These soils are well drained silt loams, loams, and very fine sandy loams. The frost-free period is 100 to 170 days at 32° F.

Permeability is moderately rapid to moderately slow, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for dryfarmed small grain, hay, pasture, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using dikes, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 1,700 pounds of crop residue per acre on the soil surface during winter are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-5**

This capability unit consists of soils in the Anderly, Condom Duart, Maupin, Sinamox, Wamic, and Wapinitia variant series. These soils are well drained loams and silt loams. Slopes are 1 to 20 percent. The annual precipitation is 10 to 20 inches. The frost-free period is 100 to 170 days at 32° F.

Permeability is slow to moderate, and the available water capacity is 3 to 11 inches. Water-supplying capacity is 6 to 13 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, clod fallow and minimum tillage, diversion terraces, contour farming, and as much as 1,000 pounds of crop residue per acre on the soil surface during winter are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-6**

This capability unit consists of soils in the Wato series. These soils are well drained very fine sandy loam. Slopes are 3 to 12 percent. The annual precipitation is 12 to 14 inches. The frost-free period is 150 to 170 days at 32° F and 170 to 210 days at 28° F.

Permeability is moderately rapid, and the available water capacity is 6 to 10 inches. Water-supplying capacity is 7 to 10 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow or medium. The hazard of water erosion is slight or moderate, and the hazard of soil blowing is moderate. Some areas are moderately eroded.

These soils are used for dryfarmed small grain, hay, pasture, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces, contour farming, and about 1,000 pounds of crop residue per acre on an established crop are needed on the soil surface at all times to keep water erosion and soil blowing losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IIIe-7

This capability unit consists of soils in the Anderly and Sinamox series. These soils are well drained silt loams. Slopes are 12 to 20 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is from 3 to 11 inches. Water-supplying capacity is 6 to 9 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces, contour farming, as much as 2,100 pounds of crop residue per acre on the soil surface over winter, or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IIIw-1

This capability unit consists of soils in the Quincy and Tygh series. These soils are loamy fine sands and fine sandy loams. They are subject to seasonal flooding or have a water table at a depth of 40 to 60 inches. Slopes are 0 to 3 percent. The annual precipitation is 10 to 20 inches. The frost-free period is 120 to 170 days at 32° F and 150 to 200 days at 28°.

Permeability is rapid or moderately rapid, and the available water capacity is 3 to 8 inches. Water-supplying capacity is variable and depends upon depth to the water table. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated grain, hay, pasture, dryfarmed grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown for 5 to 8 years, and then grain is grown the next year. Alfalfa needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be at the full bud stage, the second cutting at the 1/10 to

1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection, and some fields need protection against flooding. A water table confines roots to a depth of less than 40 to 60 inches unless additional drainage is provided.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

#### CAPABILITY UNIT IVe-1

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained loams, silt loams, and fine sandy loams. Slopes are 12 to 35 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F.

Permeability is moderately slow to moderately rapid, and the available water capacity is 7 to 9 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of more than 60 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or severe.

These soils are used for fruit orchards, pasture, range, and wildlife habitat.

Cover crops are essential in orchards for erosion control, and they also provide a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but perennials are better suited for erosion control. If adequate irrigation water is available, mowing alone is sufficient to reduce the cover crop. Conservation of soil moisture is necessary in nonirrigated orchards. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter or early in spring in one application, 6 to 8 pounds of zinc in a spray, 2 to 3 pounds of boron in a spray.

For young trees less than 10 years old, 1/2 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries are commonly planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 56 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is most-

ly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT IVe-2

This capability unit consists of soils in the Dufur, Walla Walla, Watama, and Wapinitia series. These soils are well drained silt loams. Slopes are 20 to 40 percent. The annual precipitation is 12 to 16 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 4 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the ring by lowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 2,500 pounds of crop residue per acre on the soil surface during winter or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IVe-3

This capability unit consists of soils in the Cantata, Walla Walla, and Wato series. These soils are well drained silt loams and very fine sandy loams. Slopes are 20 to 35 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 150 to 210 days at 28°.

Permeability is moderate or moderately rapid, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 8 to 12 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 2,800 pounds of crop residue per acre on the soil surface over winter or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IVw-1

This capability unit consists of Cumulic Haplaquolls. These soils are nearly level, somewhat poorly drained, or poorly drained silt loams, loams, sandy loams, clay loams, and clays. The annual precipitation is 15 to 30 inches. The frost-free period is 100 to 180 days at 32° F and 180 to 210 days at 28°.

Permeability is moderate to slow, and the available water capacity and water-supplying capacity are variable depending upon texture and depth to water table. Typically, roots penetrate to a depth of 20 to more than 60 inches. These soils are occasionally flooded and are subject to channeling and washing. Runoff is slow, and the hazard of erosion is slight. These soils are subject to overflow and in places are ponded during months of high precipitation.

These soils are used for hay, pasture, range, and wildlife habitat.

Alfalfa and grass are grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grating in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 5 to 8 years, and grain is grown the next year. Alfalfa generally needs an annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Fields adjoining streams need streambank protection, and most fields need protection against flooding. A water table confines roots to a depth of less than 20 to 60 inches unless additional drainage is provided.

#### CAPABILITY SUBCLASS VIe

This capability subclass consists of soils in the Anderly, Bakeoven, Bins, Cherryhill, London, Duart, Frailey, Ketchly, Sherar, Sinamox, Skyline, Walla Walla, Wamic, and Warden series. These soils are well drained, and they formed in loess and volcanic ash and

in colluvium or residuum weathered from sandstone, conglomerate, and basalt. Slopes are 2 to 55 percent. The annual precipitation is 9 to 30 inches. The frost-free period is 50 to 180 days at 32° F and 90 to 200 days at 28°.

Permeability is slow to moderate, and the available water capacity is about 1 inch to 12 inches. Water-supplying capacity is 3 to 20 inches. Typically, roots penetrate to a depth of about 4 to more than 60 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, pasture, timber, wildlife habitat, and water supply. For use and management suggestions see the sections, "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIe**

This capability subclass consists of soils in the Bald and Bindle series. These soils are well drained, and they formed in volcanic ash and colluvium derived from basalt. Slopes are 1 to 45 percent. The annual precipitation is 20 to 30 inches. The frost-free period is 50 to 140 days at 32° F and 90 to 180 days at 28°.

Permeability is moderate, and the available water capacity is 2 to 7 inches. Water-supplying capacity is 12 to 20 inches. Typically, roots penetrate to a depth of 20 to 40 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIIe**

This capability subclass consists of soils in the Bins, Frailey, Ketchly, Nansene, Sherar, Sinamox, and Wamic series. These soils are well drained, and they formed in loess and volcanic ash and in colluvium or residuum weathered from sandstone, conglomerate, and basalt. Slopes are 30 to 70 percent. The annual precipitation is 10 to 30 inches. The frost-free period is 50 to 180 days at 32° F and 90 to 220 days at 28°.

Permeability is slow to moderate, and the available water capacity is 2 to 12 inches. Water-supplying capacity is 2 to 20 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIIIs**

This capability subclass consists of soils in the Bakeoven, Bald, Bald variant, Bindle, Bodell, Condom Hessler, Licksillet, Maupin, Skyline, Watama, and Wrentham series and Rock outcrop. The soils are well drained, and they formed on uplands in loess and volcanic ash and in colluvium and residuum weathered from sandstone, and conglomerate, and basalt. Slopes range from 2 to 70 percent. The annual precipitation

ranges from 10 to 30 inches. The frost-free period is 50 to 170 days at 32° F and 90 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is about 1 inch to 11 inches. Water-supplying capacity is about 3 to 20 inches. Typically, roots penetrate to a depth of about 4 to 40 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIIIe**

This capability subclass consists only of Dune land. This land type consists of areas where westerly winds have drifted sand into small dunes. It is barren, and has little or no value for farming or grazing. Dune land is used for wildlife habitat.

#### **CAPABILITY SUBCLASS VIIIIs**

This capability subclass consists of Rock outcrop. Rubble land complex and Rock outcrop-Xeropsamments complex. Rock outcrop-Rubble land complex consists of severely eroded areas and basalt cliffs that have stony or bouldery foot slopes. Slopes are mainly 30 to 100 percent. Rock outcrop-Xeropsamments complex is old scoured terraces along the Columbia River and consists of outcroppings of rock, sand, and gravel. Slopes are 0 to 30 percent. Most of the area is not accessible to livestock.

These complexes are used for wildlife habitat, for water supply, and as a source of material for roads and other construction.

#### **CAPABILITY SUBCLASS VIIIIs**

This capability subclass consists of Riverwash. Riverwash is subject to overflow and shifting during normal high water and has little or no value for farming.

Riverwash is used for wildlife habitat and as a source of material for roads and other construction.

#### **Estimated yields**

Table 2 shows estimated average yields per acre of selected crops for most soils in the survey area. Estimates are used on the most common combination of management practices used by most farmers and ranchers in Wasco County, Oregon, Northern Part. The estimated yields for dryfarmed wheat is for the year of harvest or every 2 years. It is based on data from Agricultural Stabilization and Conservation Service records for the determination of the 10-year cereal grain base. Most dryfarmed mapping units in the survey area are included in these records.

Estimated yields of cherries and apples are based on the records of farmers. The yield data for grass-legume hay are based on leaving a 50 percent stubble. These data are estimated from actual use records, clipping information, and observations.

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

## Range

About 75 percent of the survey area is in two types of range, based on the sensitivity of the vegetation to climate. The western third of the survey area is dominated by Oregon white oak and coniferous trees. Oaks follow the flow of warm, moist air from the Columbia Gorge and south from The Dalles along the base of the Cascade Mountains for about 35 miles. The eastern part of the survey area is beyond this temperate influence, and bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass make up nearly 100 percent of the original plant community. South of Tygh Ridge, a more complex type of vegetation occurs. It consists of native bunchgrass, western juniper, big sagebrush, and bitterbrush. This area lies adjacent to the White River Game Management Area administered by the Oregon Wildlife Commission, and deer and elk use the area for winter range.

A significant ecological change in recent years is the increase of Oregon white oak. Because Oregon white oak sprouts following fire, it has replaced pon-

derosa pine in the more favorable soil areas. As a result, the original pine-oak savannahs have been replaced by young stands of "scrub" oak that now dominate much of the landscape from The Dalles south along the western portion of the survey area.

### *Range sites and condition classes*

Soils that have the capacity to produce the same kinds, amounts, and proportions of range plants are grouped into range sites. A range site is the product of all environmental factors responsible for its development.

A plant community existing within a range site that has not undergone abnormal disturbance is the potential, or climax, plant community, for that site. Climax plant communities are not precise or fixed in their composition but vary, within reasonable limits, from year to year and from place to place.

Abnormal disturbance, such as overuse by livestock, excessive burning, erosion, or plowing, results in changes in the climax plant community or even its complete destruction if disturbance is drastic enough. When the range site has not deteriorated significantly under such disturbance, secondary plant succession

S. F. GREENFIELD, JR., range conservationist, Soil Conservation Service, helped prepare this section.



progresses in the direction of the natural potential or climax plant community for the site.

Four range condition classes are used to indicate the degree of departure from the potential, or climax, vegetation brought about by grazing or other uses. The classes show the present condition of the native vegetation on a range site in relation to the native vegetation that could grow there.

A range is in excellent condition if 76 to 100 percent of the vegetation is of the same kind as that in the climax stand. It is in good condition if the percentage is 51 to 75 ; in fair condition if the percentage is 26 to 50 ; and in poor condition if the percentage is less than 25.

When changes occur in the climax plant community due to use by livestock or disturbance, some plant species increase, others decrease. The species that increase or decrease depends upon the grazing animal, season of use, and the degree of utilization. By comparing the composition of the present plant community to the potential plant community, it is possible to see how individual species have increased while others decreased. Plants not present in the climax community which show up in the present plant community are invaders for the site.

The composition of climax and present plant communities together with other range site information provides the basis for selecting range management systems.

Management programs on range generally try to increase desirable plants and restore range to as near climax condition as possible. Some programs are designed to create or maintain plant communities somewhat removed from the climax to fit specific needs in the grazing program, to provide for wildlife habitat, or for other benefits. Any management objective should be compatible with conservation objectives.

Grazing of understory plants on forest land is compatible with timber management if it is controlled in a manner that maintains or enhances both timber and forage resources. However, there are several factors that affect forage production and grazing use. Tree spacing and canopy cover strongly influence both the composition and productivity of the understory. As the shade cast by tree canopies increases, productivity decreases and species that are not shade tolerant decrease in number or die. When forest cover is cut or burned, maximum forage production can occur for a number of years under proper treatment and management.

Environmental variations on forest land also influence plant composition and forage production. In this survey area, south-facing slopes and other less favorable tree-producing sites have good stands of forage bunchgrasses because of the more nearly open tree canopy. In the upper mountain areas, especially on north-facing slopes, the value for grazing is low because of the normally dense canopy cover and the heavy accumulation of fallen needles under the trees. Such a condition leaves only a sparse understory of shade-tolerant grasses and forbs.

Table 3 shows, for each soil, the range site; the total annual production in favorable, normal, and unfavorable years; and the names of major plant species and the percentage of each in the composition of the potential plant community.

A range site supports a distinctive potential plant community, or combination of plants, that can grow on a site that has not undergone major disturbance. Soils that produce the same kind, amount, and proportion of range plants are grouped into range sites. Range sites can be interpreted directly from the soil map where the relationships between soils and vegetation have been correlated. Properties that determine the capacity of the soil to supply moisture and plant nutrients have the greatest influence on range plants and their productivity. Soil reaction, salt content, and a seasonal high water table are also important.

Potential production refers to the amount of vegetation that can be expected from a well-managed range that is supporting the potential plant community. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. A favorable year is one in which the amount and distribution of precipitation and the temperature result in growing conditions substantially better than average; a normal year is one in which these conditions are about average for the area; an unfavorable year is one in which growing conditions are well below average, generally because of low available soil moisture.

Dry weight refers to the total air-dry vegetation produced per acre each year by the potential plant community. All vegetation, both that which is highly palatable and that which is unpalatable to livestock, is included. Some vegetation also may be grazed extensively by wildlife and some of it may not. Plant species that have special value for livestock forage are mentioned in the description of each soil mapping unit.

Common names are listed for the grasses, forbs, and shrubs that make up most of the potential plant community on each soil. Under the heading "Composition" in table 3, the proportion of each species is presented as the percentage, in dry-weight, of the total annual production of herbaceous and woody plants. The amount that can be used as forage depends on the kinds of grazing animals and on the season when the forage is grazed. All of the vegetation produced is normally not used.

#### ROLLING HILLS RANGE SITE

This range site is on Anderly, Bakeoven, Cantala, Condom Duarte, Dufur, Walla Walla, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very fine sandy loams that formed mostly in loess and volcanic ash on broad ridgetops and rolling uplands. They are nearly level to steep.

Elevation ranges from 300 to 3,600 feet. The average annual precipitation is 10 to 14 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Permeability is moderate or moderately rapid, and the water-supplying capacity is 6 to 12

inches. Roots penetrate to a depth of 20 to 60 inches or more. Major forage grasses begin to grow about March 20.

Where this site is in poor condition, big sagebrush and an understory of Sandberg bluegrass commonly increase in the stand. Bluebunch wheatgrass and Idaho fescue have been nearly eliminated. If deterioration is severe, cheatgrass, squirreltail, and annual weeds invade and dominate.

Special improvement measures are suited to most areas of this site. If the range is in fair and poor condition, spraying to control brush or cheatgrass and seeding grasses are practical. Where a reasonably good stand of perennial grasses is under the brush, spraying alone is practical.

#### SCABLAND RANGE SITE

This range site is on Bakeoven soils. It is mainly in the eastern and southern parts of the survey area. These soils are well drained. They have a surface layer of very cobbly loam or very stony loam, and a subsoil of very cobbly loam or very cobbly clay loam. They formed in loess and in residuum weathered from basalt on uplands. They are nearly level to moderately steep.

Elevation ranges from 1,600 to 3,600 feet. The average annual precipitation is 10 to 13 inches. Runoff is slow to rapid, and the hazard of erosion is slight or moderate. Permeability is moderately slow, and the water-supplying capacity is less than 2.5 inches. Roots penetrate to a depth of 4 to 12 inches. The major forage grass, Sandberg bluegrass, begins to grow about April 1. Some areas commonly have a distinctive pattern of circular mounds, or biscuits, surrounded by scabland (fig. 8).

Where this site is in poor condition, the already sparse stand of bunchgrasses has been nearly eliminated. Sandberg bluegrass is depleted, and stiff sage-

brush and forbs have increased. If deterioration is severe, only bare ground, stones, and hedged sagebrush occupy the site.

Special improvement measures generally are not suited to this site. Stiff sagebrush is a natural part of the plant community and provides valuable forage late in fall, in winter, and early in spring. Brush spraying should be avoided to protect the stiff sagebrush.

In areas of this range site in the southern part of the survey area south of Tygh Valley, western juniper has a canopy cover of 5 to 10 percent. These areas are in a 12- to 16-inch precipitation zone. The vegetation consists of Sandberg bluegrass, 45 percent; bluebunch wheatgrass, 2 percent; Thurber needlegrass, 2 percent; Oregon bluegrass, 5 percent; squirreltail, 2 percent; lomatium, 2 percent; snow eriogonum, 5 percent; western juniper, 35 percent; and other shrubs, 2 percent.

#### DROUGHTY SOUTH EXPOSURE RANGE SITE

This range site is on Anderly, Duarte, Licksillet, and Walla Walla soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very stony loams that formed in loess, volcanic ash, and mixed colluvium. They are steep and very steep and have south-facing slopes. They are on uplands. Elevation ranges from 200 to 2,800 feet. The average annual precipitation is 10 to 14 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is moderate, and the water-supplying capacity is 2 to 12 inches. Roots penetrate to a depth of 12 to 60 inches or more. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the perennial bunchgrasses have been nearly eliminated. Squirreltail and a small amount of bluebunch wheatgrass are in some protected places, such as under the brush or in rocky areas. If deterioration is severe, big sagebrush,



Figure 8: Scabland range site is in foreground (biscuit part is Condon soil). The cultivated field in the center is Condon silt loam, 2 to 20 percent slopes. Scabland range site is in near background, and Rolling Hills range site is in far background.

snakeweed, and rabbitbrush become dominant and annual grasses and weeds invade the site.

Special improvement measures generally are suited to this site. If the range is in poor condition, spraying to control brush and seeding grasses are practical. However, drill seeding on the very stony Lickskillet soil is hard on equipment and is not considered practical. Where brush control is a concern and a reasonably good stand of grass is under the brush, spraying alone can be the most practical way of returning this site to optimum production.

#### DROUGHTY STEEP SOUTH RANGE SITE

This range site is on Lickskillet and Sherar soils. It is mainly on the breaks of the Deschutes River along the eastern boundary of the survey area. These soils are well drained extremely stony loams and very cobbly loams that formed in loess and colluvium. They are very steep and have south-facing slopes. They are on uplands (fig. 9). Elevation ranges from 200 to 300 feet. The average annual precipitation is 10 to 13 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is slow to moderate, and the water-supplying capacity is 2 to 5 inches. Roots penetrate to a depth of 12 to 40 inches. Major forage grasses begin to grow about February 20.

Where this site is in poor condition, broom snakeweed, rabbitbrush, and big sagebrush have nearly re-

placed the stand of forage bunchgrasses. Cheatgrass and low-value forbs are dominant. If deterioration is severe, much of the ground is bare and rocky.

Special improvement measures generally are not suited to this site because the soils are steep, extremely stony or very cobbly, and very droughty.

#### SOUTH EXPOSURE RANGE SITE

This range site is only on Bodell cobbly loam, 5 to 45 percent slopes. It is mainly in the northwestern part of the survey area. This soil is well drained. It formed in loess, volcanic ash, and basalt colluvium. It is nearly level to steep and has south-facing slopes. It is on uplands. Elevation commonly ranges from 500 to 2,500 feet. The average annual precipitation is 20 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderate, and the water-supplying capacity is 4 to 7 inches. Roots penetrate to a depth of 12 to 20 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, cheatgrass and a variety of forbs have nearly replaced the stand of perennial bunchgrasses. If deterioration is severe, annual forbs and low-value grasses dominate, and the site takes on a weedy appearance.

Special improvement measures generally are not suited to this site because the soil is stony and shallow.



Figure 9: Lickskillet extremely stony loam, 40 to 70 percent slopes, in Droughty Steep South range site.

#### STEEP SOUTH RANGE SITE

This range site is only on Bodell very cobbly loam, 45 to 75 percent slopes. It is mainly in the northwestern part of the survey area. This soil is well drained, and it formed in loess, volcanic ash and in basalt colluvium. It is very steep and has south-facing slopes. It is on uplands. Elevation commonly ranges from 500 to 2,500 feet. The average annual precipitation is 20 to 30 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate and the water-supplying capacity is 4 to 7 inches. Roots penetrate to a depth of 12 to 20 inches. Major forage grasses begin to grow about March 1.

Where this soil is in poor condition, cheatgrass and a variety of forbs have nearly replaced the stand of perennial bunchgrasses. If deterioration is severe, annual forbs and low-value grasses dominate and the site takes on a weedy appearance.

Special improvement measures are not suited to this site because it is steep, stony, and shallow.

#### DROUGHTY NORTH EXPOSURE RANGE SITE

This range site is on Cantala, Dufur, Sinamox, Walla Walla, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very fine sandy loams that formed in loess, volcanic ash, and alluvium. They have north-facing slopes and are on uplands.

Elevation ranges from 800 to 3,000 feet. The average annual precipitation is 10 to 14 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or high. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 12 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer has been destroyed and bare ground is exposed. During deterioration, bluebunch wheatgrass, temporarily increases and dominates in places because selective summer grazing by cattle and heavy use by sheep or deer deplete the stand of Idaho fescue. If deterioration is severe, snakeweed, annual grasses, and brush are prominent.

Special improvement measures are suited to this site. If the range is in poor condition, spraying to control brush and seeding grasses are practical. Were a reasonably good stand of grass is under the brush spraying alone can be the most practical way of re turning the site to optimum production.

#### NORTH EXPOSURE RANGE SITE

This range site is on Cantala, Dufur, Walla Walla, Watama, Wapinitia, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very fine sandy loams that formed mainly in loess and volcanic ash. They are steep and have north-facing slopes. They are on uplands.

Elevation ranges from 1,000 to 3,600 feet. The average annual precipitation is 10 to 16 inches. Runoff is

rapid, and the hazard of erosion is severe. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 14 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer is destroyed and bare ground is exposed. Sandberg bluegrass and perennial forbs are prominent in the stand. During deterioration, bluebunch wheatgrass temporarily increases and dominates in places because selective summer grazing by cattle and heavy use by sheep or deer deplete the stand of Idaho fescue. If deterioration is severe, the site becomes weedy and brushy.

Special improvement measures generally are suited to this site. If the range is in poor condition and a reasonable stand of grass is under the brush, spraying to control brush can be the most practical way of returning the site to optimum production.

#### STEEP NORTH RANGE SITE

This range site is on Nansene, Sinamox, and Wrentham soils. It is in the eastern part of the survey area. These soils are well drained silt loams that formed in loess and mixed colluvium. They are steep or very steep and have north-facing slopes. They are on uplands.

Elevation ranges from 300 to 3,600 feet. The average annual precipitation is 10 to 13 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is moderate, and the water-supplying capacity is 6 to 12 inches. Roots penetrate to a depth of 20 inches to more than 60 inches. Major forage grasses begin to grow about April 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer has been destroyed and bareground is exposed. Sandberg bluegrass and perennial forbs are prominent. During deterioration, bluebunch wheatgrass temporarily increases and dominates the site in places because selective summer grazing by cattle and heavy use by sheep and deer deplete the stand of Idaho fescue. If deterioration is severe, sagebrush and cheatgrass invade strongly and the site becomes weedy and brushy.

Special improvement measures generally are not suited to this site because the soils are steep. However, if the range is in poor condition and a reasonable stand of grass is under the brush, spraying to control brush on the more gently sloping soils is practical.

#### SHRUBBY ROLLING HILLS RANGE SITE

This range site is on Maupin, Maupin variant, Sinamox, Watama, Wapinitia, and Wapinitia variant soils. It is in the southern part of the survey area south of Tygh Ridge. These soils are well drained loams and silt loams that formed in volcanic ash and in colluvium. They are nearly level to moderately steep and are on uplands.

Elevation ranges from 1,500 to 3,400 feet. The aver-

age annual precipitation is 10 to 16 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 14 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, bluebunch wheatgrass and Idaho fescue have been nearly eliminated from the stand. Bitterbrush is commonly hedged, and dead plants occur. Low-value shrubs increase, and juniper from adjacent areas invade the site in places. If deterioration is severe, annual weeds invade the areas of shallow and eroded soils.

Special improvement measures are suited to this site. If the range is in poor condition, clearing the juniper or spraying to control brush and seeding grasses are practical. Where brush is the concern and a reasonably good stand of grass is under the brush, spraying alone can be the most practical way of returning this site to optimum production. Plans for manipulating brush should consider the amount and value of existing bitterbrush and other forage shrubs.

In the area south of Tygh Valley in the southern part of the survey area, Maupin and Watama soils in this range site are mapped in complexes with Bakeoven soils (see Scabland range site description). For the percentages of Maupin and Watama soils in these mapping units, see descriptions of the mapping units.

#### SHRUBBY SOUTH EXPOSURE RANGE SITE

This range site is on Sherar cobbly loam, 5 to 45 percent slopes. It is in the southern part of the survey area, south of Tygh Ridge. These soils are well drained cobbly loams that formed in loess and colluvium. They have south-facing slopes and are on uplands.

Elevation ranges from 1,500 to 2,500 feet. The average annual precipitation is 10 to 12 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or severe. Permeability is slow, and the water-supplying capacity is 2 to 5 inches. Depth to very gravelly semiconsolidated tuff is 20 to 40 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced and matchweed, big sagebrush, and rabbitbrush are prominent. If deterioration is severe, the site becomes brushy and weedy. Bitterbrush and other forage shrubs are hedged, and dead plants occur.

Special improvement measures are suited to this site. If the range is in poor condition, reducing the brush and seeding grasses are practical. Where a reasonable stand of grass is under the brush, spraying for selective reduction of sagebrush and rabbitbrush can be the most practical way of returning the site to optimum production. Plans for manipulating brush should consider the amount and value of existing forage shrubs.

#### SILTY TERRACE RANGE SITE

This range site is on Warden silt loam, 5 to 40 percent slopes. It is commonly on terraces along the Deschutes River another places in the eastern part of

the survey area. This well drained soil formed in loess and lacustrine silt. It is gently sloping on bench terraces and terrace fronts.

Elevation ranges from 600 to 1,000 feet. The average annual precipitation is 9 to 10 inches. Runoff is slow or medium, and the hazard of erosion is slight to severe. Permeability is moderate, and the water-supplying capacity is 6 to 9 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor range condition, big sagebrush and gray rabbitbrush have nearly replaced the stand of bluebunch wheatgrass. If deterioration is severe, cheatgrass and annual weeds replace the perennial forbs and grasses.

Special improvement measures are well suited to this site. Where the range is in fair and poor condition, reducing brush and seeding drought-resistant grasses is practical. Where a reasonably good stand of perennial grasses remains under the brush, spraying alone may be the most practical way of returning this site to optimum condition.

#### SEMI-MOIST BOTTOM RANGE SITE

This range site is on Endersby, Hermiston, Quincy, and Tygh soils. These soils are well drained to somewhat poorly drained loams, silt loams, loamy fine sands, and fine sandy loams that formed mostly in alluvium. They are nearly level and are on bottom lands.

Elevation ranges from 200 to 2,500 feet. The average annual precipitation is 10 to 20 inches. Runoff is slow, and the hazard of erosion is slight. Some of the soils are subject to flooding and have a high water table, and the hazard of streambank erosion is high. Permeability is moderate or moderately rapid, and the water-supplying capacity is about 9 to 13 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, big sagebrush and rabbitbrush have nearly replaced the stand of giant wildrye. If deterioration is severe, the site becomes very brushy or very weedy and much ground is left bare.

Many areas of this site are in irrigated hay or pasture, but special improvement measures are suited to this site if it is not used for crops. Streamside vegetation, especially shrubs and giant wildrye, is important to streambank stabilization and wildlife cover, and it should be taken into account when planning management.

#### ALKALINE BOTTOM RANGE SITE

This range site is only on Pedigo silt loam. It is along drainageways in the eastern part of the survey area. This soil is somewhat poorly drained. It formed in alluvium from loess and some volcanic ash washed from uplands. It is nearly level and is on bottom lands.

Elevation ranges from 200 to 2,700 feet. The average annual precipitation is 10 to 13 inches. Runoff is slow, and the hazard of erosion is slight. However, during periods of high streamflow, the hazard of streambank erosion is severe in several places. Permeability is

moderate, and the water-supplying capacity is 9 to 13 inches. Roots penetrate to a depth of more than 60 inches. Major forage grasses begin to grow about April 1.

any areas of this site are in irrigated hay or pasture, but special improvement measures are well suited to this site if it is not used for crops. Streamside vegetation, especially giant wildrye and riparian shrubs, is important to streambank stabilization and wildlife cover, and it should be taken into account when planning management.

#### OAK SOUTH EXPOSURE RANGE SITE

This range site is on Cherryhill and Wamic soils. It is in the northwestern part of the survey area. These soils are well drained loams and silt loams that formed in loess, volcanic ash, colluvium, and alluvium. They are nearly level to very steep and have south-facing slopes. They are on uplands.

Elevation commonly ranges from 500 to 2,000 feet. The average annual precipitation is 14 to 20 inches. Runoff is medium or rapid, and the hazard of erosion is moderate to severe. Permeability is moderately slow, and the water-supplying capacity is 8 to 12 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, oaks and such perennial forbs as arrowleaf balsamroot and lupine have severely reduced the stand of forage bunchgrasses. If deterioration is severe, cheatgrass and other low-value plants dominate the understory.

Most areas of Cherryhill soils are in fruit orchards or other crops, but special improvement measures generally are suited to this site if it is not cultivated. Where the range has been burned, oak becomes more dense and reproduction is more profuse. After a fire, it is practical to broadcast seed of suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak reproduction. The site provides important aesthetic values. Habitat for wildlife should be taken into account when planning management.

#### OAK STEEP SOUTH RANGE SITE

This range site is on Skyline and Hesslan soils. It is mainly in the northwestern part of the survey area. These soils are well drained stony loams and very cobbly loams that formed in loess, volcanic ash, and colluvium. They are nearly level to very steep and have south-facing slopes. They are on uplands.

Elevation commonly ranges from 1,000 to 3,500 feet. The average annual precipitation is 14 to 20 inches. Runoff is moderate or rapid, and the hazard of erosion is moderate or severe. Permeability is moderate. In the Skyline soils, roots penetrate to a depth of 12 to 20 inches and the water-supplying capacity is 6 to 9 inches. In the Hesslan soils, roots penetrate to a depth of 20 to 40 inches and the water-supplying capacity is 5 to 7 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, cheatgrass, annual weeds, and other shallow-rooted plants have

replaced the stand of tall bunchgrasses. If deterioration is severe, much ground is left bare.

Special improvement measures are not suited to this site because the soils are steep and stony or cobbly.

#### OAK STEEP NORTH RANGE SITE

This range site is on Hesslan soils of the Skyline-Hesslan complex, 30 to 70 percent slopes. It is mainly in the northwestern part of the survey area. These are well drained stony loams that formed in loess, volcanic ash, and colluvium. They are steep or very steep and have north-facing slopes. They are on uplands.

Elevation commonly ranges from 1,000 to 3,000 feet. The average annual precipitation is 14 to 20 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate, and the water-supplying capacity is 6 to 7 inches. Roots penetrate to a depth of 20 to 40 inches or more. Major forage grasses begin to grow about April 1.

Where this site is in poor condition, oaks and such perennial forbs as lupine and arrowleaf balsamroot have severely reduced the stand of forage bunchgrasses. If deterioration is severe, cheatgrass and other plants of low-forage value dominate the understory.

Special improvement measures are not suited to this site because the soils are steep and stony. Where the range has burned, dense stands of oak occur. After fire it is practical to broadcast seed suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak regeneration. This site also provides important forage and cover for deer and other wildlife, which needs to be taken into account when planning management.

#### OAK-PINE STEEP SOUTH RANGE SITE

This range site is on Bald very cobbly loam, 45 to 75 percent slopes. It is in the northwestern part of the survey area. This soil is well drained, and it formed in loess, volcanic ash, and basalt colluvium. It is very steep and has south-facing slopes. It is on uplands.

Elevation commonly ranges from 200 to 3,000 feet. The average annual precipitation is 25 to 30 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate, and the water-supplying capacity is 12 to 15 inches. Roots penetrate to a depth of 20 to 40 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, cheatgrass and other shallow-rooted plants occupy the openings. Also, perennial forbs, shrubs, and white oak reproduction have reduced the stand of forage bunchgrasses. If deterioration is severe, much ground is left bare.

Special improvement measures are not suited to this site because this soil is very steep and very cobbly.

#### PINE-OAK-FESCUE RANGE SITE

This range site is on Chenoweth, Cherryhill, Van Horn, Wamic, and Wind River soils. Wamic soils are along the western part of the survey area, and they sometimes occur as small hummocks interspersed with areas of shallow and very stony scabland. The other



soils are in the northwestern part of the survey area. These soils are well drained loams, silt loams, and fine sandy loams that formed in loess, volcanic ash, and alluvium. They are on ridgetops and on uplands. They are nearly level to steep.

Elevation commonly ranges from 100 to 2,500 feet. The average annual precipitation is 14 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderately slow to moderately rapid, and the water-supplying capacity is 8 to 14 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, the competition from dense shrub and oak reproduction severely reduces the stand of understory plants, especially grasses. If deterioration is severe, cheatgrass and other low-value plants dominate and much soil is bare.

Many areas of the site are used for fruit orchards or other crops, but in uncultivated areas, special management is suited to this site to improve plant resources. Where the range has been cut over or burned, oak reproduction and shrub growth occur in a dense stand. After a fire, it is practical to broadcast seed suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak and shrub reproduction. This site provides important aesthetic values, habitat for wildlife, and is a component of the deer and elk winter range in this area. These considerations need to be taken into account when planning management alternatives.

Shallow and very cobbly Skyline soils interspersed with the deeper Wamic soils are also in this site. They are in a complex pattern, and it was not practical to separate them. Only the Wamic soils should be considered when evaluating forage production for the site. For the percentage of each soil refer to the mapping unit description for Wamic-Skyline complex, 2 to 20 percent slopes.

#### PINE-DOUGLAS FIR-SEGE RANGE SITE

This range site is on Bald, Cherryhill, Frailey, and Wamic soils. Bald and Cherryhill soils are in the northwestern part of the survey area. Frailey and Wamic soils are along the western part of the survey area. These soils are well drained silt loams, loams, and cobbly loams that formed in loess, volcanic ash, colluvium, and alluvium. Slopes are 5 to 70 percent. The soils are on uplands.

Elevation ranges from 500 to 3,000 feet. The average annual precipitation is 14 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderately slow or moderate, and the water-supplying capacity is 8 to 15 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15 in most areas.

In the absence of fire and where ponderosa pine has been logged from the stand, the more shade-tolerant Douglas-fir has increased in abundance and dominates many of the present stands. As the understory deteriorates, elk sedge and other forage bunchgrasses lose

vigor and decrease in the stand. If deterioration is severe, the more densely shaded areas have only a few spindly shrubs, scattered forbs, and an occasional spear of grass.

Where this site has been severely cut over or burned, shrubs of many kinds increase in vigor and abundance, and the range can produce a considerable amount of forage for a number of years. After fire or logging, it is practical to broadcast seed suitable plants in disturbed areas before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive shrub reproduction. This site provides important forage and cover for deer and elk, which need to be taken into account when planning management.

#### Woodland and Windbreaks

In this section, the relationship between soils and trees is described. Interpretations useful to landowners and operators in developing and carrying out plans for establishment and management of tree crops (fig. 10) and windbreaks are given.

Forests cover about 65,000 acres, or 12 percent of the survey area. About 35 percent is owned by farmers, 37 percent is privately owned, 23 percent is owned by the forest industry, and 5 percent is owned by Federal and local governments.

The principal forest cover types (9) include inland Douglas-fir, ponderosa pine, and western juniper.

#### Woodland management and productivity

Table 4 contains information useful to woodland owners or forest managers planning the use of soils for wood crops. Those soils suitable for wood crops are listed, and the woodland group for each soil is given. All soils in the same woodland group require the same general kinds of management and have about the same potential productivity.

The first part of the woodland group, a number, indicates the potential productivity of the soils for important trees. The number 1 indicates very high productivity; 2, high; 3, moderately high; 4, moderate; and 5, low. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *f* indicates high content of coarse fragments in the soil profile, and *r*, steep slopes. The letter *o* indicates no significant limitations or restrictions.

In table 4 the soils are also rated for a number of factors to be considered in management. The ratings slight, moderate, and severe are used to indicate the degree of major soil limitations.

*The hazard of erosion* indicates the risk of loss of soil in well-managed woodland. The risk is *slight* if the expected soil loss is small; *moderate* if some measures are needed to control erosion during logging and road construction; and *severe* if intensive management or special equipment and methods are needed to prevent excessive loss of soil.

JAMES T. BEENE, forester, Soil Conservation Service, helped prepare this section.



**Figure 10: Thinning mixed pine and fir stand on Wamic loam, 12 to 20 percent slopes.**

*Equipment limitation* ratings reflect the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. A rating of *slight* indicates that use of equipment is not limited to a particular kind of equipment or time of year; *moderate* indicates a short seasonal limitation or a need for some modification in management or equipment; *severe* indicates a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

*Seedling mortality* ratings indicate the degree that the soil affects expected mortality of planted tree seedlings when plant competition is not a limiting factor. The ratings are for seedlings from good planting stock that are properly planted during a period of sufficient rainfall. A rating of *slight* indicates that the expected mortality of the planted seedlings is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

*Plant competition* ratings indicate the degree to which undesirable plants are expected to invade or grow if openings are made in the tree canopy. The invading plants compete with native plants or planted seedlings by impeding or preventing their growth.

A rating of *slight* indicates little or no competition from other plants; *moderate* indicates that plant competition is expected to hinder the development of a fully stocked stand of desirable trees; *severe* means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

The *potential productivity* of merchantable trees on a soil is expressed as a *site index*. This index is the average height, in feet, of the dominant and codominant Douglas-fir trees at the age of 50 years (4) and ponderosa pine at 100 years. The site index applies to fully stocked, even-aged, unmanaged stands. Conversion of site index into yield may be made by referring to table 5 and 6.

*Trees to plant* are those that are suitable for commercial wood production and that are suited to the soils.

#### **Windbreaks**

Windbreaks are established to protect livestock, buildings, and yards from winds and snow (13). Windbreaks also help protect fruit trees and gardens,

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All tables have been updated and are available as a separate document..

and they furnish habitat for wildlife. Several rows of both broadleaved and coniferous species provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field, the interval depending on erodibility of the soil. They protect cropland and crops from wind and hold snow on the fields, and they also provide food and cover for wildlife.

Some plants help to beautify and screen homes and other buildings and to abate noise around them. The plants, mostly evergreen shrubs and trees, are closely spaced. Healthy planting stock of suitable species planted properly on a well prepared site and maintained in good condition can ensure a high degree of plant survival.

### ***Windbreak groups***

Most soils of the survey area have been placed in one of two windbreak groups. Timbered soils, steep soils, and shallow soils are excluded.

#### **WINDBREAK GROUP 1**

This group consists of well drained to poorly drained silt loams, loams, fine sandy loams, and loamy fine sands. These soils are on uplands, fans, and alluvial bottoms. Slopes are mainly 0 to 30 percent. The native vegetation is grasses, forbs, shrubs, and some oaks and ponderosa pine. The average annual precipitation is about 10 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

Successful dryland plantings require careful site preparation and clean cultivation. Irrigated windbreaks need to be cultivated in early years of establishment to the degree that competing vegetation does not seriously impede survival or growth of windbreak species.

The suited deciduous trees are black locust and Russian-olive. The suited shrubs are common lilac, caragana, Amur honeysuckle, and Tatarian honeysuckle. The suited evergreens are Rocky Mountain juniper, Austrian pine, Scotch pine, and ponderosa

pine. Junipers are hosts to the cedar-apple rust disease and, consequently, should not be planted in areas of apple orchards.

Lombardy poplar, hybrid poplar, Douglas-fir, black willow, mountain ash, and Nanking cherry are suited where precipitation is more than about 15 inches or where the soils are irrigated.

#### **WINDBREAK GROUP 2**

This group consists of well drained silt loams, loams, and very fine sandy loams on uplands. Slopes are mainly 0 to 40 percent. The native vegetation is grasses and forbs. The average annual precipitation is about 9 to 16 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Most roots penetrate to a depth of 20 to 60 inches or more.

The soils in this group receive less precipitation than soils in group 1 and, consequently, windbreaks generally are more difficult to establish. Height, grow, and general development is slower. Planting sites need summer fallowing the year prior to planting, careful site preparation before planting, and clean cultivation throughout the life of the windbreak unless irrigated.

The suited deciduous trees are black locust and Russian-olive. The suited shrubs are common lilac and caragana. The suited evergreens are ponderosa pine and Rocky Mountain juniper.

Lombardy poplar, hybrid poplar, Douglas-fir, black willow, mountain ash, and Nanking cherry are also suited if irrigated.

### **Wildlife**

All of the soils in the survey area are suited to and support habitat for one or more species of wildlife. This survey area embraces an area which includes the transition from arid grasslands to heavily timbered slopes on the side of Mt. Hood (fig. 11). Elevations range from 100 to 3,600 feet. The average annual

ROBERT A. CORTHELL, biologist, Soil Conservation Service, helped prepare this section.



**Figure 11: Mule deer grazing in an open, grassy area. The soils are mostly Bakeoven, Condon, Licksillet, and Wrentham soils.**

precipitation ranges from 9 inches to more than 30 inches.

The transition from arid grassland to woodland has produced rich and varied plant communities which provide habitat for many kinds of wildlife. For example, oak and pine trees are common, and they are among the most valuable trees for wildlife. The distribution of wildlife has also been influenced by the proximity of the Columbia River Gorge which has allowed western Oregon species such as the black-tailed deer and the band-tailed pigeon to become established in the survey area on the east slope of the Cascade Mountain range. Species of wildlife that are not native to the area, such as ring-necked pheasant, chukar partridge, wild turkey, California quail, and Hungarian partridge, have been introduced and have found suitable habitat within the survey area.

Perennial streams which drain the survey area provide habitat for rainbow trout and steelhead trout. Fishpond construction has generally been limited by unfavorable soil characteristics, and fish production is only fair when ponds are constructed.

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover, and they affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, and water. If any one of these elements is missing, inadequate, or inaccessible, wildlife either is scarce or does not inhabit the area.

If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, by properly managing the existing plant cover,

and by fostering the natural establishment of desirable plants.

In table 7 the soils in the survey area are rated according to their potential to support the main kinds of wildlife habitat in the area. This information can be used in

1. Planning the use of parks, wildlife refuges, nature study areas, and other developments for wildlife.
2. Selecting soils that are suitable for creating, improving, or maintaining specific elements of wildlife habitat.
3. Determining the intensity of management needed for each element of the habitat.
4. Determining areas that are suitable for acquisition to manage for wildlife.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose. A rating of *fair* means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderate intensity of management and fairly frequent attention are required for satisfactory results. A rating of *poor* means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort. A rating of *very poor* means that restrictions for the element of wildlife habitat or kind of wildlife are very severe, and that unsatisfactory results can be expected. Wildlife habitat is impractical or even impossible to create, improve, or maintain on soils that have such a rating.

The elements of wildlife are briefly described in the following paragraphs.

*Grain and seed crops* are seed-producing annuals used by wildlife. Examples are wheat, oats, and barley. The major soil properties that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flood hazard. Soil temperature and moisture are also considerations.

*Grasses and legumes* are domestic perennial grasses and herbaceous legumes used by wildlife for food and cover. Examples are fescue, bluegrass, brome grass, timothy, orchardgrass, clover, alfalfa, and vetch. Major soil properties that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, and slope. Soil temperature and moisture are also considerations.

*Wild herbaceous plants* are native or naturally established herbaceous grasses and forbs, including weeds, that provide food and cover for wildlife. Examples are balsamroot, goldenrod, beggarweed, big bluegrass, Sandberg bluegrass, wheatgrass, fescue, and milkvetch. Major soil properties that affect the growth of these plants are depth of the root zone, texture of the sur-

face layer, available water capacity, wetness, surface stoniness, and flood hazard. Soil temperature and moisture are also considerations.

*Hardwood trees* and the associated woody understory provide cover for wildlife and produce nuts or other fruit, buds, catkins, twigs, bark, or foliage that wildlife eat. Examples of native plants are Oregon white oak, cherry, apple, dogwood, sumac, blackberry, Oregon-grape, blueberry, and briars. Examples of fruit-producing shrubs that are commercially available and suitable for planting on soils rated good are Russian-olive and multiflora rose. Major soil properties that affect growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness.

*Coniferous plants* are cone-bearing trees, shrubs, or ground cover that furnish habitat or supply food in the form of browse, seeds, or fruitlike cones. Examples are pine, spruce, hemlock, fir, and juniper. Major soil properties that affect the growth of coniferous plants are depth of the root zone, available water capacity, and wetness.

*Shrubs* are bushy woody plants that produce fruits, buds, twigs, bark, or foliage used by wildlife or that provide cover and shade for some species of wildlife. Examples are mountainmahogany, bitterbrush, snowberry, and big sagebrush. Major soil properties that affect the growth of shrubs are depth of the root zone, available water capacity, and moisture.

*Wetland plants* are annual and perennial wild herbaceous plants that grow on moist or wet sites, exclusive of submerged or floating aquatics. They produce food or cover for wildlife that use wetland as habitat. Examples of wetland plants are wild millet, rushes, sedges, reeds, cordgrass, and cattail. Major soil properties affecting wetland plants are texture of the surface layer, wetness, reaction, slope, and surface stoniness.

*Shallow water areas* are bodies of surface water that have an average depth of less than 5 feet and are useful to wildlife. They can be naturally wet areas, or they can be created by dams or levees or by water-control devices in marshes or streams. Examples are muskrat marshes, waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds. Major soil properties affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. The availability of a dependable water supply is important if water areas are to be developed.

The kinds of wildlife habitat are briefly described in the following paragraphs.

*Openland habitat* consists of cropland, pasture, meadow, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kinds of wildlife attracted to these areas include dove, quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, and partridge.

*Woodland habitat* consists of hardwoods or conifers or a mixture of both, with associated grasses, legumes, and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, ruffed grouse,

blue grouse, mountain quail, band-tailed pigeon, tree squirrels, raccoon, deer, elk (fig. 12), and black bear. Tygh and Endersby soils are in the bottom land and Hesslan, Skyline, and Frailey soils occupy the steep slopes.

*Wetland habitat* consists of water-tolerant plants in open, marshy, or swampy shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, kingfishers, muskrat, and beaver.

*Rangeland habitat* consists of wild herbaceous plants and shrubs on range. Examples of wildlife attracted to this habitat are deer, chukar, California and mountain quail, meadowlark, Hungarian partridge, and dove.

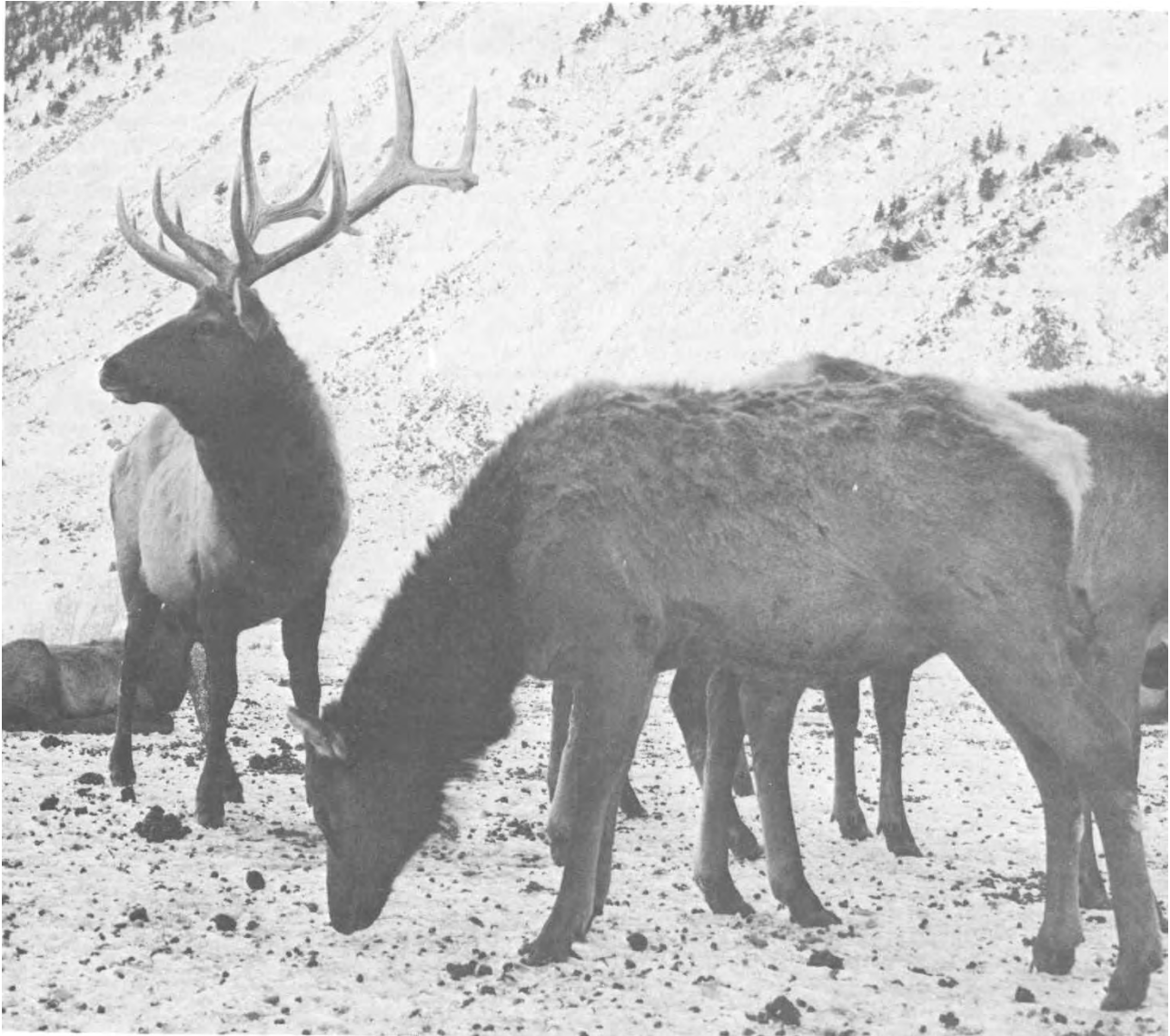
## Recreation

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for camp areas, picnic areas, playgrounds, and paths and trails. The ratings are based on such restrictive soil features as flooding, wetness, slope, and texture of the surface layer. Not considered in these ratings, but important in evaluating a site, are location and accessibility of the area, size and shape of the area and its scenic quality, the ability of the soil to support vegetation, access to water, potential water impoundment sites available, and either access to public sewerlines or capacity of the soil to absorb septic tank effluent. Soils subject to flooding are limited, in varying degrees, for recreational use by the duration of flooding and the season when it occurs. Onsite assessment of height, duration, and frequency of flooding is essential in planning recreational facilities.

In table 8 the limitations of soils are rated as slight, moderate, or severe. *Slight* means that the soil properties are generally favorable and that the limitations are minor and easily overcome. *Moderate* means that the limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

The information in table 8 can be supplemented by additional information in other parts of this survey. Especially helpful are interpretations for septic tank absorption fields, given in table 9, and interpretations for dwellings without basements and for local roads and streets, given in table 10.

*Camp areas* require such site preparation as shaping and leveling tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils for this use have mild slopes and are not wet nor subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing camping sites.



**Figure 12: Elk wintering in woodland area.**

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for use as picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

*Playgrounds* require soils that can withstand intensive foot traffic. The best soils are almost level and not wet nor subject to flooding during the season of use. The surface is free of stones or boulders, is firm after

rain, and is not dusty when dry. If shaping is required to obtain a uniform grade, the depth of the soil over rock should be sufficient to allow necessary grading.

The design and layout of *paths and trails* for walking, horseback riding, and bicycling should require little or no cutting and filling. The best soils for this use are those that are not wet, are firm after rain, are not dusty when dry, and are not subject to flooding more than once during the period of use. They should have moderate slopes and have few or no stones or boulders on the surface.



## Engineering

This section provides information about the use of soils for building sites, sanitary facilities, construction materials, and water management. Among those who can benefit from this section are engineers, landowners, community decision makers and planners, town and city managers, land developers, builders, contractors, and farmers and ranchers.

The ratings in tables in this section are based on test data and estimated data in the "Soil Properties" section. The ratings were determined jointly by soil scientists and engineers of the Soil Conservation Service using known relationships between the soil properties and the behavior of soils in various engineering uses.

Among the soil properties and site conditions identified by the soil survey and used in determining the ratings in this section are grain-size distribution, liquid limit, plasticity index, soil reaction, depth to and hardness of bedrock within 5 or 6 feet of the surface, soil wetness characteristics, depth to a seasonal water table, slope, likelihood of flooding, natural soil structure or aggregation, in-place soil density, and geologic origin of the soil material. Where pertinent, data about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of absorbed cation were also considered.

Based on the information assembled about soil properties, ranges of values can be estimated for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, shear strength, compressibility, slope stability, and other factors of expected soil behavior in engineering uses. As appropriate, these values can be applied to each major horizon of each soil or to the entire profile.

These factors of soil behavior affect construction and maintenance of roads, airport runways, pipelines, foundations for small buildings, ponds and small dams, irrigation projects, drainage systems, sewage and refuse disposal systems, and other engineering works. The ranges of values can be used to: select potential residential, commercial, industrial, and recreational areas; make preliminary estimates pertinent to construction in a particular area; evaluate alternate routes for roads, streets, highways, pipelines, and underground cables; evaluate alternate sites for location of sanitary landfills, onsite sewage disposal systems, and other waste disposal facilities; plan detailed onsite investigations of soils and geology; find sources of gravel, sand, clay, and to soil; plan farm drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; relate performance of structures already built to the properties of the kinds of soil on which they are built so that performance of similar structures on the same or a similar soil in other locations can be predicted; and predict the trafficability of soils for cross-country movement of vehicles and construction equipment.

Data presented in this section are useful for land-

use planning and for choosing alternative practices or general designs that will overcome unfavorable soil properties and minimize soil-related failures. Limitations to the use of these data, however, should be well understood. First, the data are generally not presented for soil material below a depth of 5 or 6 feet. Also, because of the scale of the detailed map in this soil survey, small areas of soils that differ from the dominant soil may be included in mapping. Thus, these data do not eliminate the need for onsite investigations and testing.

The information is presented mainly in tables. Table 9 shows, for each kind of soil, ratings of the degree and kind of limitations for sanitary facilities; table 10 for building site development; and table 11, for water management. Table 12 shows the suitability of each kind of soil as a source of construction material.

The information in the tables, along with the soil map, the soil descriptions, and other data provided in this survey can be used to make additional interpretations and to construct interpretive maps for specific uses of land.

Some of the terms used in this soil survey have different meanings in soil science and in engineering; many of these terms are defined in the Glossary.

### Sanitary facilities

Favorable soil properties and site features are needed for proper functioning of septic tank absorption fields, sewage lagoons, and sanitary landfills. The nature of the soil is important in selecting sites for these facilities and in identifying limiting soil properties and site features to be considered in design and installation. Also, those soil properties that affect ease of excavation or installation of these facilities will be of interest to contractors and local officials. Table 9 shows the degree and kind of limitations of each soil for such uses and for use of the soil as daily cover for landfills.

If the degree of soil limitation is expressed as *slight*, soils are generally favorable for the specified use and limitations are minor and easily overcome; if *moderate*, soil properties or site features are unfavorable for the specified use, but limitations can be overcome by special planning and design; and if *severe*, soil properties or site features are so unfavorable or difficult to overcome that major soil reclamation, special designs, or intensive maintenance are required.

*Septic tank absorption fields* are subsurface systems of tile or perforated pipe that distribute effluent from a septic tank into the natural soil. Only the soil horizons between depths of 18 and 72 inches are evaluated for this use. The soil properties and site features considered are those that affect the absorption of the effluent and those that affect the construction of the system.

Properties and features that affect the absorption of the effluent are permeability, depth to seasonal high water table, depth to bedrock, any susceptibility to flooding. Stones, boulders, and a shallow depth to bedrock interfere with installation. Excessive slope

ELWIN A. Ross, engineer, Soil Conservation Service, helped prepare this section.

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All tables have been updated and are available as a separate document.

may cause lateral seepage and surfacing of the effluent in downslope areas. Also, soil erosion and soil slippage are hazards where absorption fields are installed in sloping soils.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below

the tile lines. In these soils the absorption field does not adequately filter the effluent, and ground water in the area may be contaminated.

Percolation tests are performed to determine the absorptive capacity of the soil and its suitability for septic tank absorption fields. These tests should be per-

formed during the season when the water table is highest and the soil is at minimum absorptive capacity.

On many of the soils that have moderate or severe limitations for septic tank absorption fields, a system to lower the seasonal water table or the size of the absorption field could be increased so that performance is satisfactory.

*Sewage lagoons* are shallow ponds constructed to hold sewage while bacteria decompose the solid and liquid wastes. Lagoons have a nearly level flow area surrounded by cut slopes or embankments of compacted, nearly impervious soil material. They generally are designed to hold sewage within a depth of 2 to 5 feet. Impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of local ground water. Soils that are very high in organic-matter content and those that have cobbles, stones, and boulders are undesirable. Unless the soil has very slow permeability, contamination of local ground water is a hazard in areas where the seasonally high water table is above the level of the lagoon floor. In soils where the water table is seasonally high, seepage of ground water into the lagoon can seriously reduce its capacity for liquid waste. Slope, depth to bedrock, and susceptibility to flooding also affect the suitability of sites for sewage lagoons or the cost of construction. Shear strength and permeability of compacted soils affect the performance of embankments.

*Sanitary landfill* is a method of disposing of solid waste, either in excavated trenches or on the surface of the soil. The waste is spread, compacted, and covered daily with thin layers of soil. Landfill areas are subject to heavy vehicular traffic. Ease of excavation, risk of polluting ground water, and trafficability affect the suitability of a soil for this use. The best soils have a loamy or silty texture, have moderate or slow permeability, are deep to bedrock and a seasonal water table, are free of large stones and boulders, and are not subject to flooding. In areas where the seasonal water table is high, water seeps into the trenches and causes problems in excavating and filling the trenches. Seepage into the refuse increases the risk of pollution of ground water. Clayey soils are likely to be sticky and difficult to spread. Sandy or gravelly soils generally have rapid permeability that might allow noxious liquids to contaminate local ground water.

Unless otherwise stated, the ratings in table 9 apply only to soil properties and features within a depth of about 6 feet. If the trench is deeper, ratings of slight or moderate may not be valid. Site investigation is needed before a site is selected.

In the area type of sanitary landfill, refuse is placed on the surface of the soil in successive layers. The limitations caused by soil texture, depth to bedrock, and stone content do not apply to this type of landfill. Soil wetness, however, can be a limitation because of difficulty in operating equipment.

*Daily cover for landfill* should be soil that is easy to excavate and spread over the compacted fill during both wet and dry weather. Soils that are loamy or silty and free of stones or boulders are better than other soils. Clayey soils may be sticky and difficult to spread; sandy soils may be subject to soil blowing.

The soils selected for final cover of landfills should be suitable for growing plants. Of all horizons, the A horizon in most soils has the best workability, a higher content of organic matter, and the best potential for growing plants. Thus, for either the area- or trench-type landfill, stockpiling material from the A horizon for use as the surface layer of the final cover is desirable.

Where it is necessary to bring in soil material for daily or final cover, thickness of suitable soil material available and depth to a seasonal high water table in soils surrounding the sites should be evaluated. Other factors to be evaluate are those that affect reclamation of the borrow areas, such as slope, erodibility, and potential for plant growth.

### ***Building site development***

The degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, and local roads and streets are indicated in table 10. A *slight* limitation indicates that soil properties are favorable for the specified use; any limitation is minor and easily overcome. A *moderate* limitation indicates that soil properties and site features are unfavorable for the specified use, but the limitations can be overcome or minimized by special planning and design. A *severe* limitation indicates one or more soil properties or site features are so unfavorable or difficult to overcome that a major increase in construction effort, special design, or intensive maintenance is required. For some soils rated severe, such costly measures are not feasible.

*Shallow excavations* are used for pipelines, sewerlines, telephone and power transmission lines, basements, open ditches, and cemeteries. Such digging or trenching is influenced by the soil wetness or seasonal high water table, the texture and consistence of soils, the tendency of soils to cave in or slough, and the presence of very firm, dense soil layers, bedrock, or large stones. In addition, excavations are affected by slope of the soil and the probability of flooding. Ratings do not apply to soil horizons below a depth of 6 feet unless otherwise noted.

In the soil series descriptions, the consistence of each soil horizon is defined, and the presence of very firm or extremely firm horizons, generally difficult to excavate, is indicated.

*Dwellings and small commercial buildings* referred to in table 10 are built on undisturbed soil and have foundation loads of a dwelling no more than three stories high. Separate ratings are made for small commercial buildings without basements and for dwellings with and without basements. For such structures, soils should be sufficiently stable that cracking or subsidence from settling or shear failure of the foundation does not occur. These ratings were determined from estimates of the shear strength, compressibility, and shrink-swell potential of the soil. Soil texture, plasticity and in-place density, potential frost action, soil wetness, and depth to a seasonal high water table were also considered. Soil wetness and depth to a seasonal high water table indicate potential difficulty in providing adequate drainage for basements, lawns, and gar-

dens. Depth to bedrock, slope, and the large stones in or on the soil are also important considerations in the choice of sites for these structures and were considered in determining the ratings. Susceptibility to flooding is a serious limitation.

*Local roads and streets* referred to in table 10 have an all-weather surface that can carry light to medium traffic all year. They consist of subgrade of the underlying soil material; a base of gravel, crushed rock fragments, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. The roads are graded with soil material at hand, and most cuts and fills are less than 6 feet deep.

The load-supporting capacity and the stability of the soil as well as the quantity and workability of fill material available are important in design and construction of roads and streets. The classifications of the soil and the soil texture, density, shrink-swell potential, and potential frost action are indicators of the traffic-supporting capacity used in making ratings. Soil wetness, flooding, slope, depth to hard rock or very compact layers, and content of large stones, all of which affect stability and ease of excavation, were also considered.

### **Water management**

Many soil properties and site features that affect water management practices have been identified in this soil survey. In table 11 soil and site features that affect use are indicated for each kind of soil. This information is significant in planning, installing, and maintaining water control structures.

*Pond reservoir areas* hold water behind a dam or embankment. Soils suitable for this use have low seepage potential, which is determined by the permeability and the depth to fractured or permeable bedrock or other permeable material.

*Embankments, dikes, and levees* require soil material that is resistant to seepage, erosion, and piping and that has favorable stability, shrink-swell potential, shear strength, and compaction characteristics. Stones and organic matter in a soil downgrade the suitability of a soil for use in embankments, dikes, and levees.

*Drainage* of soil is affected by such soil properties as permeability, texture, structure, depth to bedrock, hardpan, or other layers that influence rate of water movement, depth to the water table, slope, stability of ditchbanks, susceptibility to flooding, salinity and alkalinity, and availability of outlets for drainage.

*Irrigation* is affected by such features as slope, susceptibility to flooding, hazards of water erosion and soil blowing, Texture, presence of salts and alkali, depth of root zone, rate of water intake at the surface, permeability of the soil below the surface layer, available water capacity, need for drainage, and depth to the water table.

*Terraces and diversions* are embankments, or a combination of channels and ridges, constructed across a slope to intercept runoff. They allow water to soak into the soil or flow slowly to an outlet. Features

that affect suitability of a soil for terraces are uniformity and steepness of slope; depth to bedrock; hardpan, or other unfavorable material; large stones; permeability; ease of establishing vegetation; and resistance to water erosion, soil blowing, soil slipping, and piping.

*Grassed waterways* are constructed to channel runoff to outlets at nonerosive velocities. Features that affect the use of soils for waterways are slope, permeability, erodibility, wetness, and suitability for permanent vegetation.

### **Construction materials**

The suitability of each soil as a source of road fill, sand, gravel, and topsoil is indicated in table 12 by ratings of good, fair, or poor. The texture thickness, and organic-matter content of each soil horizon are important factors in rating soils for use as construction materials. Each soil is evaluated to the depth observed and described as the survey is made, generally about 6 feet.

*Roadfill* is soil material used in embankments for roads. The ratings reflect the ease of excavating and working the material and the expected performance of the material where it has been compacted and adequately drained. The performance of soil after it is stabilized with lime or cement is not considered in the ratings, but information about some of the soil properties that influence such performance is given in the descriptions of the soil series.

The ratings apply to the soil profile between the A horizon and a depth of 5 to 6 feet. It is assumed that soil horizons will be mixed during excavation and spreading. Many soils have horizons of contrasting suitability within their profile. The estimated engineering properties in table 13 provide more specific information about the nature of each horizon. This information can help determine its suitability for roadfill.

Soils rated *good* are coarse grained. They have low shrink-swell potential, low potential frost action, and few cobbles and stones. They are at least moderately well drained and have slopes of 15 percent or less. Soils rated *fair* have a plasticity index of less than 15 and have other limiting features, such as high shrink-swell potential, moderately steep slopes, wetness, or many stones. If the thickness of suitable material is less than 3 feet, the entire soil is rated *poor*.

*Sand and gravel* are used in great quantities in many kinds of construction. The ratings in table 12 provide guidance as to where to look for probable sources and are based on the probability that soils in a given area contain sizable quantities of sand or gravel. A soil rated *good* or *fair* has a layer of suitable material at least 3 feet thick, the top of which is within a depth of 6 feet. Coarse fragments of soft bedrock material, such as shale and siltstone, are not considered to be sand and gravel. Fine-grained soils are not suitable sources of sand and gravel.

The ratings do not take into account depth to the water table or other factors that affect excavation of

the material. Descriptions of grain size, kinds of minerals, reaction, and stratification are given in the soil series descriptions and in table 13.

Topsoil is used in areas where vegetation is to be established and maintained. Suitability is affected mainly by the ease of working and spreading the soil material in preparing a seedbed and by the ability of the soil material to support plant life. Also considered is the damage that can result to the area from which the topsoil is taken.

Soils rated *good* have at least 16 inches of friable loamy material at their surface. They are free of stones, are low in content of gravel, and have gentle slopes. They are low in soluble salts that can limit or prevent plant growth. They are naturally fertile or respond well to fertilizer. They are not so wet that excavation is difficult during most of the year.

Soils rated *fair* are loose sandy or firm loamy or clayey soils in which the suitable material is only 8 to 16 inches thick or soils that have appreciable amounts of gravel, stones, or soluble salt.

Soils rated *poor* are very sandy soils, very firm clayey soils, soils that have suitable layers less than 8 inches thick; soils that have large amounts of gravel, stones or soluble salts; steep soils; and poorly drained soils.

Although a rating of *good* is not based entirely on high content of organic matter, a surface horizon is generally preferred for topsoil because of its organic-matter content. This horizon is designated as A1 or Ap in the soil series descriptions. The absorption and retention of moisture and nutrients for plant growth are greatly increased by organic matter. Consequently, careful preservation and use of material from these horizons is desirable.

## Soil Properties

Extensive data about soil properties are summarized on the following pages. The two main sources of these data are the many thousands of soil borings made during the course of the survey and the laboratory analyses of selected soil samples from typical profiles.

In making soil borings during field mapping, soil scientists can identify several important soil properties. They note the seasonal soil moisture condition or the presence of free water and its depth. For each horizon in the profile, they note the thickness of the soil and color of the soil material; the texture, or amount of clay, silt, sand, and gravel or other coarse fragments; the structure, or the natural pattern of cracks and pores in the undisturbed soil; and the consistence of the soil material in place under the existing soil moisture conditions. They record the depth of plant roots, determine the pH or reaction of the soil, and identify any free carbonates.

Samples of soil material are analyzed in the laboratory to verify the field estimates of soil properties and to determine all major properties of key soils, especially properties that cannot be estimated accurately by field observation. Laboratory analyses are not conducted for all soil series in the survey area, but labora-

tory data for many of the soil series not tested are available from nearby survey areas.

The available field and laboratory data are summarized in tables. The tables give the estimated range of engineering properties, the engineering classification, and the physical and chemical properties of each major horizon of each soil in the survey area. They also present pertinent soil and water features, engineering test data, and data obtained from physical and chemical laboratory analyses of soils.

## Engineering properties

Table 13 gives estimates of engineering properties and classifications for the major horizons of each soil in the survey area. These estimates are presented as ranges in values most likely to exist in areas where the soil is mapped.

Most soils have, within the upper 5 or 6 feet, horizons of contrasting properties. Information is presented for each of these contrasting horizons. Depth to the upper and lower boundaries of each horizon in a typical profile of each soil is indicated. More information about the range in depth and about other properties of each horizon is given for each soil series in the section "Descriptions of the Soils."

Texture is described in table 13 in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in soil material that is less than 2 millimeters in diameter. "Loam," for example, is soil material that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If a soil contains gravel or other particles coarser than sand, an appropriate modifier is added, for example, "gravelly loam." Other texture terms are defined in the Glossary.

The two systems commonly used in classifying soils for engineering use are the Unified Soil Classification System (Unified) (2) and the American Association of State Highway and Transportation Officials Soil Classification System (AASHTO) (1). In table 13 soils in the survey area are classified according to both systems.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter, plasticity index, liquid limit, and organic-matter content. Soils are grouped into 15 classes - eight classes of coarse-grained soils, identified as GW, GP, GM, GC, SW, SP, SM, and SC; six classes of fine-grained soils, identified as ML, CL, OL, MH, CH, and OH; and one class of highly organic soils, identified as Pt. Soils on the borderline between two classes have a dual classification symbol, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect their use in highway construction and maintenance. In this system a mineral soil is classified as one of seven basic groups ranging from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines. At the other extreme, in group A-7, are fine-grained soils.

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Highly organic soils are classified as A-8 on the basis of visual inspection.

When laboratory data are available, the A-1, A-2, and A-7 groups are further classified as follows: A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, and A-7-6. As an additional refinement, the desirability of soils as subgrade material can be indicated by a group index number. These numbers range from 0 for the best sub grade material to 20 or higher for the poorest. The AASHTO classification for soils tested in the survey area, with group index numbers in parentheses, is given in table 16. The estimated classification, without group index numbers, is given in table 13. Also in table 18 the percentage, by weight, of cobbles or the rock fragments more than 3 inches in diameter are estimated for each major horizon. These estimates are determined mainly by observing volume percentage in the field and then converting that, by formula, to weight percentage.

A comparison of these and other systems of size limits for soil separates can be found in the PCA soil primer (7).

Percentage of the soil material less than 3 inches in diameter that passes each of four sieves (U. S. standard) is estimated for each major horizon. The estimates are based on tests of soils that were sampled in the survey area and in nearby areas and on field estimates from many borings made during the survey.

*Liquid limit and plasticity index* indicate the effect of water on the strength and consistence of soil. These indexes are used in both the Unified and AASHTO soil classification systems. They are also used as indicators in making general predictions of soil behavior. Range in liquid limit and plasticity index are estimated on the basis of test data from the survey area or from nearby areas and on observations of the many soil borings made during the survey.

All estimates in table 13 have been rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount across classification boundaries (1 or 2 percent), the classification of the marginal zone has been omitted.

#### ***Physical and chemical properties***

Table 14 shows estimated values for several soil characteristics and features that affect behavior of soils in engineering uses. These estimates are given for each major horizon, at the depths indicated, in the representative profile of each soil. The estimates are based on field observations and on test data for these and similar soils.

*Permeability* is estimated on the basis of known relationships between the soil characteristics observed in the field-particularly soil structure, porosity, and gradation or texture-that influence the downward movement of water in the soil. The estimates are for water movement in a vertical direction when the soil is saturated. Not considered in the estimates are lateral seepage or such transient soil features as plowpans and surface crusts. Permeability of the soil is an important factor to be considered in the planning and designing of drainage systems, in evaluating the poten-



tial of soils for septic tank systems and other waste disposal systems, and in many other aspects of land use and management.

*Available water capacity* is rated on the basis of soil characteristics that influence the ability of the soil to hold water and make it available to plants. Important characteristics are content of organic matter, soil texture, and soil structure. Shallow-rooted plants are not likely to use the available water from the deeper soil horizons. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design of irrigation systems.

*Soil reaction* is expressed as range in pH values. The range in pH of each major horizon is based on many field checks. For many soils, the values have been verified by laboratory analyses. Soil reaction is important in selecting the crops, ornamental plants, or other plants to be grown; in evaluating soil amendments for fertility and stabilization; and in evaluating the corrosivity of soils.

*Salinity* is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25° C. Estimates are based on field and laboratory measurements at representative sites of the nonirrigated soils. The salinity of individual irrigated fields is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of individual fields can differ greatly from the value given in table 14. Salinity affects the suitability of a soil for crop production, its stability when used as a construction material, and its potential to corrode metal and concrete.

*Shrink-swell potential* depends mainly on the amount and kind of clay in the soil. Laboratory measurements of the swelling of undisturbed clods were made for many soils. For others the swelling was estimated on the basis of the kind and amount of clay in the soil and on measurements of similar soils. The size of the load and the magnitude of the change in soil moisture content also influence the swelling of soils. Shrinking and swelling of some soils can cause damage to building foundations, basement walls, roads, and other structures unless special designs are used. A *high* shrink-swell potential indicates that special design and added expense may be required if the planned use of the soil will not tolerate large volume changes.

*Risk of corrosion*, as used in table 14, pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to soil moisture, particle-size distribution, total acidity, and electrical conductivity of the soil material. The rate of corrosion of concrete is based mainly on the sulfate content, texture, and acidity of the soil. Protective measures for steel or more resistant concrete help to avoid or minimize damage resulting from the corrosion. Installations of steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than an installation that is entirely within one kind of soil or within one soil horizon.

*Erosion factors* are used to predict the amounts of erosion that will result from specific kinds of land use

and treatment. The soil erodibility factor (K) is a measure of the susceptibility of the soil to erosion by water. Soils having the highest K values are the most erodible. The soil-loss tolerance factor (T) is the maximum rate of soil erosion, whether from rainfall or soil blowing, that can occur without reducing crop production or environmental quality. The rate is expressed in terms of soil loss per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties that affect their resistance to soil blowing if cultivated. The groups are used to predict the susceptibility of soil to blowing and the amount of soil lost as a result of blowing. Soils are grouped according to the following distinctions

1. Sands, coarse sands, fine sands, and very fine sands. These soils are extremely erodible, so vegetation is difficult to establish. They are generally not suitable for crops.

2. Loamy sands, loamy fine sands, and loamy very fine sands. These soils are very *highly erodible*, but crops can be grown if intensive measures to control soil blowing are used.

3. Sandy loamy, coarse sandy loamy, fine sandy loamy, and very fine sandy loamy. These soils are highly erodible, but crops can be grown if intensive measures to control soil blowing are used.

- 4L. Calcareous loamy soils that are less than 35 percent clay and more than 5 percent finely divided calcium carbonate. These soils are erodible, but crops can be grown if intensive measures to control soil blowing are used.

4. Clays, silty clays, clay loamy, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible, but crops can be grown if measures to control soil blowing are used.

5. Loamy soils that are less than 18 percent clay and less than 5 percent finely divided calcium carbonate and sandy clay loams and sandy clays that are less than 5 percent finely divided calcium carbonate. These soils are slightly erodible, but crops can be grown if measures to control soil blowing are used.

6. Loamy soils that are 18 to 35 percent clay and less than 5 percent finely divided calcium carbonate, except silty clay loams. These soils are very slightly erodible, and crops can easily be grown.

7. Silty clay loamy that are less than 35 percent clay and less than 5 percent finely divided calcium carbonate. These soils are very slightly erodible, and crops can easily be grown.

8. Stony or gravelly soils and other soils not subject to soil blowing.

#### **Soil and water features**

Table 15 contains information helpful in planning land uses and engineering projects that are likely to be affected by soil and water features.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils not protected by vegetation are placed in one of four groups on the basis of the intake of water after the soils have been wetted and have received precipitation from long-duration storms.

The four hydrologic soil groups are

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of deep, well drained to excessively drained sands or gravels. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep to deep, moderately well drained to well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils that have a layer that impedes the downward movement of water or soils that have moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clay soils that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

*Flooding* is the temporary covering of soil with water from overflowing streams, with runoff from adjacent slopes, and by tides. Water standing for short periods after rainfall or snowmelt and water in swamps and marshes is not considered flooding. Flooding is rated in general terms that describe the frequency and duration of flooding and the time of year when flooding is most likely. The ratings are based on evidence in the soil profile of the effects of flooding, namely thin strata of gravel, sand, silt, or, in places, clay deposited by floodwater; irregular decrease in organic-matter content with increasing depth; and absence of distinctive soil horizons that form in soils of the area that are not subject to flooding. The ratings are also based on local information about floodwater levels in the area and the extent of flooding; and information that relates the position of each soil on the landscape to historic floods.

The generalized description of flood hazards is of value in land-use planning and provides a valid basis for land-use restrictions. The soil data are less specific, however, than those provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

*High water table* is the highest level of a saturated zone more than 6 inches thick in soils for a continuous period of more than 2 weeks during most years. The depth to a high water table applies to undrained soils. Estimates are based mainly on the relationship between grayish colors or mottles in the soil and the depth to free water observed in many borings made during the course of the soil survey. Indicated are the depth to the high water table; the kind of water table, that is perched, artesian, or apparent; and the months of the year that the water table commonly is high. Only saturated zones above a depth of 5 or 6 feet are indicated.

Information about the high water table helps in assessing the need for specially designed foundations, the need for specific kinds of drainage systems, and the need for footing wins to insure dry basements. Such information is also needed to decide whether or not construction of basements is feasible and to determine how septic tank absorption fields and other underground installations will function. Also, a high water table affects ease of excavation.

*Depth to bedrock* is shown for all soils that are underlain by bedrock at depths of 5 to 6 feet or less. For many soils, the limited depth to bedrock is apart of the definition of the soil series. The depths shown are based on measurements made in many soil borings and other observations during the soil mapping. The kind of bedrock and its relative hardness as related to ease of excavation is also shown. Rippable bedrock can be excavated with a single-tooth attachment on a 200 horsepower tractor, but hard bedrock generally requires blasting.

*Cemented pans* are hard subsurface layers that are strongly compacted (indurated). Such pans cause difficulty in excavation. The hardness of pans is similar to that of bedrock.

*Potential frost action* refers to the likelihood of damage to pavements and other structures by frost heaving and low soil strength after thawing. Frost action results from the movement of soil moisture into the freezing zone, which causes the formation of ice lenses. Soil texture, temperature, moisture content, porosity, permeability, and content of organic matter are the most important soil properties that affect frost action. It is assumed that the soil is not covered by insulating vegetation or snow and is not artificially drained. Silty and clayey soils that have a high water table in winter are most susceptible to frost action. Well drained very gravelly or sandy soils are the least susceptible.

#### ***Engineering test data***

Samples from soils of the Dufur series representative of Wasco County, Northern Part, were tested by standard AASHTO procedures to help evaluate the soils for engineering purposes. Only selected layers of each soil were sampled. The results of these tests and the classification of each soil sample according to both the AASHTO and Unified systems are shown in table 16. The samples tested do not represent the entire range of soil characteristics in the survey area or even within the series sampled. The results of the tests, however, can be used as a general guide in estimating the physical properties of the soils. Tests made were for moisture-density relationships, grain-size distribution, liquid limit, and plasticity index.

In the moisture density, or compaction test, a sample of the soil material is compacted several times with a constant compactive effort, each time at a successively higher moisture content. The moisture content increases until the optimum moisture content is reached. After that the density decreases as moisture content increases. The highest density obtained in the compaction test is the maximum density. Moisture

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density data are important in construction because optimum stability is generally obtained if the soil is compacted to approximately the maximum dry density when it is at approximately the optimum moisture content.

The results of the mechanical analysis, obtained by combined sieve and hydrometer methods, can be used to determine the relative proportions of the different size particles that make up the soil sample. The percentage of fine-grained material determined by the hydrometer method should not be used in determining textural classes of soils.

Liquid limit and plasticity index are discussed in the section relating "Engineering Properties."

The specific gravity of a soil is the ratio of the weight in air of a given volume of soil particles at a stated temperature to the weight in air of an equal volume of distilled water at stated temperature. Most soils have specific gravities in the range of 2.65 or 2.85.

### ***Formation, Morphology, and Classification***

In this section, the factors that have affected the formation and composition of the soils in the survey area are described, and some important morphological features are discussed. The last part of the section deals with the classification of the soils of the survey area.

#### **Formation**

Most soils are formed by weathering and other processes that act on parent material. The characteristics of the soil at any given point depend on the parent material, climate, plants and animals, relief, and time.

The active forces that gradually form a soil from parent material are climate and plant and animal life. Relief strongly influences natural drainage, aeration, runoff, erosion, and exposure to sun and wind, and, as a result, it influences the effectiveness of the active

soil forming processes. Generally, soil forming factors are complex. Each force interacts with others and, slowly but constantly, changes are brought about. A soil passes slowly through stages that can be considered as youth, maturity, and old age. Therefore, the character and thickness of a soil depend upon the intensity of the soil forming processes, the length of time during which the various processes have acted, and the resistance of the parent material to change.

At any stage in formation, a soil can be affected by mechanical agencies and by man. The surface layer can be wholly or partly removed by erosion and the material beneath it can become exposed. The soil-forming forces then begin acting on the exposed material to form a new surface layer. Accelerated erosion caused by improper use can severely limit the use of the soil for many years. Grading, shaping, and leveling by man rearrange the soil horizons and interrupt the effects of soil forming factors. Irrigating a soil when it normally is dry has the effect of placing the soil in a different climate environment. Draining by ditch or tile drains counteracts the effects of relief and climate, thereby changing the relationship among the soil forming factors. Applying amendments and chemicals affects the chemical composition of the soil and the plant and animal life.

The soil forming factors are discussed in the paragraphs that follow.

#### ***Climate***

The climate of the survey area is mainly semi-arid and most of the annual precipitation falls in winter. Climate affects the kind and amount of native vegetation. In parts of this survey area temperature in winter is so low that the soils are frozen for long periods. During these periods many soil-forming processes stop. The average annual air temperature is normally 45° to 52° F at low elevations and decreases to less than 45° at higher elevations within the survey area. The upper few inches of the soil is frozen for some period during winter, and daily freezing and thawing are common on south-facing slopes. Summer temperatures are cool.

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The total precipitation and season of distribution are such that most soils become thoroughly dry in some part of the solum for at least 60 days in most years. The average annual precipitation is 10 to 14 inches in the eastern part of the survey area and about 14 to 30 inches in the forested areas at higher elevations. Precipitation is mainly in the period between October and June. Summer precipitation is spotty and is mostly lost by evaporation. Rainfall is sufficient to only slightly leach or moderately leach the soils.

#### ***Living organisms***

In well drained areas where the precipitation is 10 to 16 inches a year, the natural vegetation is mainly bluebunch wheatgrass, Sandberg bluegrass, Idaho fescue, big sagebrush, and bitterbrush. In these areas, the A horizon is about 10 inches thick and is more than 1 percent organic matter. As precipitation increases to more than 16 inches and elevation increases to more than 3,600 feet, conifer forests replace the grass and shrub vegetation.

Areas that are not well drained have native plants that differ from the types common in well drained areas. On the flood plains of streams, grasses, sedges, and rushes grow in various combinations. This vegetation supplies an abundance of organic matter, and soils in these areas commonly have an A horizon that is thicker than 10 inches.

Animals and insects that burrow in the soil influence soil formation but probably not as much as plants. Badger activity is common on sandy or loamy soils that are relatively free of stones.

#### ***Parent material***

The soils of the survey area formed in residuum from the weathering of bedrock and in colluvium on sloping uplands and plateaus; material transported by water and deposited as unconsolidated deposits of clay, silt, and gravel; pumice and ash from volcanic activity; and loess that has been transported by wind from other areas. Soils formed in residuum and colluvium contain minerals and weathered products that have similar composition to the original rock. Alluvial

and aeolian material has been mixed so that its original mineralogy is no longer distinct.

The size of particles, mineralogy, and thickness of the parent material have greatly influenced the nature of the soils. Some soil characteristics are inherited directly from the parent material. For example, the soils on uplands are generally shallow over bedrock and are stony. Soils that formed in material on alluvial fans and terraces generally are somewhat gravelly or cobbly and in places are high in content of pumice. Soils formed in loess are high in silt and are shallow to deep over bedrock.

Some of the oldest exposed geologic formations in the survey area are those of the Tertiary Period. (3). They are only minor in extent, and most of them have been covered by succeeding formations of the Quaternary Period consisting mostly of tuff and breccia beds. The material weathers readily resulting in soils that are high in content of clay. Sherar and Sinamox soils formed partly in residuum and colluvium weathered from breccia.

The Columbia River Basalt flow has preserved the major ridges adjacent to the Deschutes and Columbia Rivers. Tygh Ridge in the central part of the survey area is representative of the Columbia River Basalt. Bald, Bodell, Bindle, Bakeoven, and Licksillet soils formed partly in residuum and colluvium weathered from this basalt. The basalt is commonly more than 1,000 feet thick.

The Dalles Formation has been deposited over older formations in the western part of the survey area (5). It was built up slowly, as is evidenced by buried soils in the regolith. Cherryhill, Duart, Frailey, Hesslan, Maupin, Skyline, Tygh, Wapinitia, and Watama soils formed partly in residuum and colluvium weathered from materials in this geologic formation.

During recent geologic times a mantle of loess was laid down over the entire survey area, but now it is thickest on north-facing slopes, mostly as a result of preferential erosion. It is a nonstratified and unconsolidated deposit by the wind. It is composed dominantly of silt-sized particles of feldspar, quartz, calcite, and

mica, ordinarily with accessory clay and sand. Typically, loess is very smooth and floury.

The loess probably originated from glacial outwash left in the channel of the Columbia River during the Ice Age, or Pleistocene Epoch. The loess probably accumulated chiefly in warm periods when the glaciers melted, the sedimentation of outwash was at a maximum, and the ground surface was neither frozen nor blanketed with snow. Winds from the northeast that blew across the bare outwash evidently started sand grains moving in a jumping motion. The jumping grains bombarded the surface and kicked silt particles into the air stream. The silt and very fine sand particles were carried toward the southwest and gradually settled throughout a wide area. In this area, there is a relationship between the texture and thickness of the loess. Closer to the source, the deposits are coarser textured and thicker. In a southerly direction farther from the source, the deposits are finer textured and thinner.

Along road cuts in the survey area, the loess stands in vertical banks as much as 10 feet thick. This phenomenon, peculiar to loess and common wherever loess occurs, results when the individual plate-shaped particles are laid down flat, much like the pages of a book. On slopes, however, because of the uniform size of the particles, loess is susceptible to water erosion if not protected by vegetation.

Loess contains a wide variety of easily weatherable minerals and together with other favorable qualities generally results in naturally fertile soils. Anderly, Cantala, Condon, Dufur, Hermiston, Nansene, Pedigo, Walla Walla, Warden, Wato, and Wrentham soils formed mostly in loess.

At one or more times during the deposition of the loess, volcanic ash also was deposited in the survey area. Most likely it came from the now extinct volcanoes of the Cascade Mountains. All of the soils in the survey area probably contain some volcanic ash, which consists of sharp edged, sand to silt sized particles of silica, feldspar, glass, and other materials. The Bins, Bindle, Ketchly, and Wamic soils formed in material high in volcanic ash.

### **Relief**

Aspect, or the direction a slope faces, is one of the most important features of relief that has affected soil formation in this survey area. Soils that have south-facing slopes are warmer and drier than those that have north-facing slopes, have less natural vegetation and a lower content of organic matter, and have retained a thinner mantle of loess and volcanic ash against erosion.

Another important feature is slope gradient. Steep soils commonly have thinner and less distinct soil horizons than gently sloping soils, have a greater erosion hazard, and retain less water.

Most soils in the survey area are well drained. Wet soils are only on flood plains or in depressions on the upland plateaus.

### **Time**

The length of time that soil parent material has been subjected to weathering in combination with other

factors plays a significant role in soil formation. If other factors are equal, younger soils have less horizon differentiation than older soils. For example, Endersby and Hermiston soils formed in recent alluvium, and although leaching has been strong, no B horizon has formed. Licksillet and Sherar soils formed under less precipitation but over a longer period of time and have a distinct B horizon.

### **Morphology**

A soil is not easily studied in its natural position because only the surface is exposed. To see and study a soil, it is necessary to expose a vertical section, or profile. A profile generally consists of several layers, or horizons.

In the survey area, the differentiation of horizons is the result of one or more of the following: accumulation of organic matter in the A horizon, accumulation of silicate clay in the B horizon, retention of calcium, potassium, and magnesium to give high base saturation, accumulation or retention of calcium carbonate in lower horizons, and cementation by alkali soluble materials into a hardpan in well drained soils. Walla Walla soils, for example, reflect the accumulation of organic matters and retention of bases.

Organic matter has accumulated in the surface layer of all of the soils in the survey area to form an A horizon. The content of organic matter is lowest in Warden and Bakeoven soils and highest in Nansene and Wrentham soils. The removal of native vegetation from many soils and the subsequent reduction in organic matter under a summer-fallow system of farming have markedly changed the structure and water absorbing ability of the A horizon. Surface crusting, vesicular porosity, and massive or platy structure are common in the A horizon of soils that are cultivated.

Laboratory data on the content of clay confirms that the Cherryhill soils (table 17) have an argillic horizon. Ketchly, Sherar, Van Horn, and Wapinitia soils also have an argillic horizon, but no data are available on these soils. An argillic horizon results mainly from the translocation of silicate clay minerals and a greater formation of clay from primary minerals within the B horizon than within other horizons.

All of the soils in the survey area have moderate to high base saturation. Although data is not available for all soils, Warden soils probably have the highest base saturation and Bindle and Bins soils the lowest.

There is visible evidence of leaching of carbonates and salts in some soils in the survey area. Warden soils, which have been leached the least, have an accumulation of calcium carbonate below a depth of 21 inches. Bins and Bindle soils have been leached the most and generally contain no free carbonates.

Pedigo soils and wet spots in Hermiston soils have high sodium saturation. This probably has been caused by the sodium in the groundwater replacing other exchangeable cations.

### **Classification**

Soils are classified so that we can more easily remember their significant characteristics. Classification

enables us to assemble knowledge about the soils, to see their relationship to one another and to the whole environment, and to develop principles that help us to understand their behavior and their response to management. First through classification, and then through use of soil maps, we can apply our knowledge of soils to specific fields and other tracts of land.

The narrow categories of classification, such as those used in detailed soil surveys, allow us to organize and apply knowledge about soils in managing farms, fields, and woodland; in developing rural areas; in engineering work; and in many other ways. Soils are placed in broad classes to facilitate study and comparison in large areas.

The system of soil classification currently used was adopted by the National Cooperative Soil Survey in 1965. Readers interested in further details about the system should refer to the latest literature available (16).

The current system of classification has six categories. Beginning with the broadest, these categories are order, suborder, great group, subgroup, family, and series. In this system the differentiae used as a basis for classification are soil properties that can be observed in the field or that can be inferred either from other properties that are observable in the field, or from the combined data of soil science and other disciplines. The properties selected for the higher categories are the result of soil genesis or factors that affect soil genesis. In table 17 soils of Wasco County, Northern Part, are placed in a family or higher taxonomic class of the current system. Categories of the current system are defined briefly in the following paragraphs.

ORDER. Ten soil orders are recognized. The differentiae for the orders are based on the kind and degree of the dominant soil forming processes that have gone on.

SUBORDER. Each order is subdivided into suborders that are based primarily on properties that influence soil genesis and that are important to plant growth, or that were selected to reflect what seemed to be the most important variables within the orders. The names of suborders have two syllables.

GREAT GROUP. Soil suborders are separated into great groups on the basis of close similarities in kind, arrangement, and degree of expression of pedogenic horizons, soil moisture and temperature regimes, and in base status.

SUBGROUPS. Great groups are subdivided into three kinds of subgroups: the central (typic) concept of the great groups (not necessarily the most extensive subgroup) ; the intergrades, or transitional forms to other orders, suborders, or great groups; and extragrade subgroups that have some properties that are representative of the great groups but that do not indicate transitions to any other known kind of soil.

FAMILY. Families are established within a subgroup on the basis of similar physical and chemical properties that affect management. Among the properties considered in horizons of major biological activity below plow depth are particle-size distribution, mineral content, temperature regime, thickness of the soil penetrable by roots, consistence, moisture equivalent, soil slope, and permanent cracks.

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SERIES. The series consists of a group of soils that are formed from a particular kind of parent material and have horizons that, except for texture of the surface soil, are similar in differentiating characteristics and in arrangement in the soil profile. Among these characteristics are color, texture, structure, reaction, consistence, and mineral and chemical composition.

### ***Laboratory Data***

Physical and chemical characteristics of some representative soils in Wasco County, Northern Part, are given in table 18. The procedures used in making the analyses are described in Soil Survey Investigations Report No. 1. (15).

In preparation for laboratory analyses, soil samples were collected from pits. After air drying, the samples



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were crushed and passed through a 2-millimeter, round hole screen. The fraction greater than 2 millimeters in diameter is reported as weighted percentage of the total sample. Analyses were made on soil material less than 2 millimeters in diameter. Results are reported on an oven-dry basis.

The particle size distribution was determined by the pipette method. The amount of water and the bulk density at 1/3 bar tension were determined on plastic-coated clods in a porous-plate pressure cooker. Water held at 15-bar tension was measured on disturbed samples in a pressure membrane apparatus. Reaction is by glass electrode using soil-water ratios indicated. Organic carbon is by the Walkley-Black method. Total nitrogen is by the Kjeldahl method. Electrical conductivity is by method 3a, given in the U.S. Department of Agriculture Handbook "Diagnosis and Improvement of Saline and Alkali Soils" (12). The calcium carbonate equivalent was measured from the amount of carbon dioxide evolved on acidification of the sample. Extractable cations were leached with 1 N NH<sub>4</sub>OAc. Extractable sodium and potassium were determined by flame photometry; calcium by permanganate titra-

tion; and magnesium gravimetrically as pyrophosphate. Extractable acidity, or exchangeable hydrogen, was determined by the triethanolamine-barium chloride method. Cation-exchange capacity (CEC) is the sum of extractable cations and extractable acidity; base saturation is the sum of extractable calcium, magnesium, sodium, and potassium as percentage of the cation-exchange capacity.

The profile description for Chenoweth loam follows. The description for Cherryhill silt loam is on page 16, and for Walla Walla silt loam on page 32.

Chenoweth loam (S67-Ore-33-1 to 10) Wasco County, center of section 10, T. 1 N., R. 13 E.:

- Ap1-0 to 6 inches; very dark brown (10YR 2/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, very friable, slightly sticky, slightly plastic; many roots and pores; abrupt smooth boundary.
- Ap2-6 to 10 inches; very dark brown (10YR 2/2) very fine sandy loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to weak fine granular; slight( hard, friable, slightly sticky, slightly plastic; many roots and fine pores; clear smooth boundary.
- A3-10 to 17 inches; grayish brown (10YR 5/2) loam;

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weak fine granular structure; slightly hard, very friable, slightly sticky, slightly plastic; many roots and fine pores; few noncalcareous nodules as much as 1 inch in diameter, but mainly 1/2 inch in diameter; many earthworm casts; thin patchy clay films on peds and on pores; gradual smooth boundary.

B21-17 to 25 inches; dark brown (10YR 3/3) loam or light very fine sandy clay loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; very friable or friable, sticky, plastic; many roots and fine pores; very few thin clay films on peds and in pores; few earthworm casts; few noncalcareous nodules as much as 1 inch in diameter, but mainly about 1/2 inch in diameter; clay films nearly continuous on nodules; gradual wavy boundary.

B22-25 to 42 inches; dark brown (10YR 3/3) loam or light very fine sandy clay loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, sticky, plastic; many roots and fine pores; few thin clay films on peds and in pores; many noncalcareous very dark grayish brown nodules mainly about 1/2 inch in diameter; clear smooth boundary.

B3-42 to 50 inches; dark yellowish brown (10YR 3/4 and 4 / 4) loam or very fine sandy loam, brown (10YR 5/3) dry; massive and weak fine subangular blocky structure; soft, very friable, slightly sticky, slightly plastic; few nodules; many roots and fine pores; abrupt

smooth boundary.

C1-50 to 70 inches; dark yellowish brown (10YR 3/4) very fine sandy loam, light yellowish brown (10YR 6/4) dry; massive; soft, friable, very slightly sticky, very slightly plastic; some fine roots and fine pores; gradual wavy boundary.

C2-70 to 82 inches; dark yellowish brown (10YR 3/4) very fine sandy loam, pale brown (10YR 6/3) dry; massive; soft, friable, slightly sticky, slightly plastic; few fine roots and fine pores; abrupt wavy boundary.

## ***General Nature of the Area***

This section provides general information about the physiography, climate, history, transportation, and water supply of Wasco County, Northern Part. Census figures were not used from the U.S. Census of Agriculture for this area because the survey area covers only a part of the county.

### **Physiography**

The survey area is partly on the Columbia Plateau physiographic province and partly on the Eastern Cas-

cade Mountain provinces. The Columbia Plateau is a lava-floored plain that has been uplifted since molten basalt flooded the area. That part of the Eastern Cascade province in the survey area is a high upland terrace of coarse alluvial and pyroclastic materials. This terrace is eroded, and wide nearly level ridgetops are between deep V-shaped canyons. Elevation ranges from 1,000 feet along the northern boundary to about 3,500 feet in the southwestern and western parts of the survey area. The Columbia River, which marks the northern boundary, has an average elevation of 97 feet. Escarpments and very steep slopes border the Columbia River and rise abruptly to the upland terraces.

Tygh Ridge, which is at an elevation of 3,150 feet, is 22 miles south of the Columbia River. North of this ridge, drainage is to the Columbia River. South of the ridge, drainage is to White River and then to the Deschutes River, which forms the eastern boundary of the survey area.

The Columbia River Watershed within the survey area, excluding drainage of the Deschutes River, covers about 338,629 acres. In some places narrow sandy terraces parallel the river; in others, vertical basalt escarpments rise from 800 to 1,000 feet. Except for a few acres of Riverwash, there are no large recent alluvial areas. Tributary streams, flowing directly to the river, have rather steep gradients and flow through deep, V-shaped canyons. Rock Creek, Mosier, Rowena, Mill, Three Mile, Five Mile, and Fifteen Mile Creeks terminate at the Columbia River.

The Juniper Flat and Wamic area, which is at an elevation of 1,600 to 3,400 feet, is south of Tygh Ridge. This upland plateau, which forms the southern boundary of the survey area, drains to the Deschutes River.

The Deschutes River and its main stem and tributaries have a watershed of 221,101 acres within the survey area. White River, south of Tygh Ridge, is one of its main perennial tributaries. Wapinitia and Nena Creeks terminate at the Deschutes River.

The elevation of the towns are The Dalles, 98 feet; Dufur, 1,319 feet; Friend, 2,450 feet; Mosier, 100 feet; and Maupin, 902 feet.

#### **Patterned Ground, or "Biscuit Scabland" (14)**

Patterned ground is the general term applied to biscuits or mounds, stone nets, and stone stripes that form distinct patterns on the ground surface (fig. 13). Patterned ground, locally called biscuit scabland, makes up about 35,000 acres. Theories of the origin of such landforms are numerous, and only one simplified explanation is given here.

A common kind of pattern that occurs under glacial influence, mainly in perennially frozen areas, indicates that frozen ground cracks at low temperatures and forms rectangular or polygonal patterns. Ice that forms in these nearly vertical cracks can develop into ice wedges. Commonly, these polygonal structures are the result of the contraction of a layer of homogeneous material, either soil or rock, that is perpendicular to the cooling surface. This is illustrated in the columnar



**Figure 13:** Area of biscuit scabland. The mounds, or biscuits, are Condon soils; surrounding the mounds is the very shallow Bakeoven soil.

jointing of basalt and in the formation of mud cracks.

The chief climatic significance of the soil patterns as landforms in the survey area is that frozen ground apparently existed in front of the continental glacier during glacial invasion. A regular pattern of polygonal fractures could form in ground frozen to a uniform depth as a result of contraction during periods of subfreezing temperature. Ice wedges could form in these if the temperature fluctuated but generally remained below freezing (6). Then as the climate became warmer and the front of the continental glacier retreated northward, the ice wedges began to melt. The runoff waters could have caused the erosion and modification of the polygons or mounds.

The biscuits are round or elongated, erosion-modified, polygonal mounds that are underlain by basalt at a depth of 2 to 3 feet. The soil in these mounds has a more weakly defined profile than adjacent soils, but otherwise it is similar to Condon soils. Frost heaving probably was the cause of mixing of various sized fragments of basalt in the soil and of mixing of genetically formed horizons. The soil in the mounds is lighter colored than the adjacent soils and is somewhat more rapidly drained. The removal of large amounts of mineral soil in the formation of the mounds is obvious from the scabland that surrounds the mounds.

The soils in the scabland formed mainly in remnants of material not removed during the thawing of the ice wedges and in material more recently washed from the mounds.

A less striking feature than the mounds are the stone nets, which in places encircle the mounds, and the stone polygons on the scabland. These stone nets and polygons consist of various sized fragments of basalt as much as 2 feet in diameter. Studies of similar features elsewhere suggest that these may have resulted from frost heaving along the original ice-wedged cracks (8).

Where slope is steep, the stone nets and polygons form sorted stripes, or rows, of rock that vary in length and width. The mounds occupy the gentle upper slopes of many of the minor ridges; the sorted stone polygons, the moderately steep intermediate slopes; and the sorted stripes, the steepest slopes on the lower part of the ridges. In places there are sorted stripes that are not associated with nets, polygons, or mounds (6).

## History

Wasco County, once the largest county in the United States, has been reduced to a fraction of its original size. At inception Wasco County encompassed about 130,000 square miles. It extended from the Cascade Mountains and from the Washington, Idaho, and Montana borders to the California, Nevada, and Utah borders. It now is in north-central Oregon between Hood River, Jefferson, and Sherman Counties, and the Columbia River. The county seat is The Dalles.

Wasco County was formed January 11, 1854, and maintained its original size until February 14, 1859,

By JOHN LUNDELL.

when Oregon gained statehood. Wasco County's eastern border was the Oregon-Idaho state line. Seventeen counties have been formed in Eastern Oregon out of old Wasco County. Baker County was the first in 1862, and Deschutes County petitioned away in 1916.

Indians living along the Columbia River were the first known inhabitants of the survey area, and fishing was their main livelihood. Indians from other tribes in the Pacific Northwest traveled annually to Winquatt (the Indian name for the geographical area now known as Petersburg, Thompsons Addition, the Dalles, and Chenoweth) to trade and barter for fish. The United States Government established the Warm Springs Indian Reservation in 1855, located partly in the southern part of Wasco County.

The Lewis and Clark Expedition came into the survey area on October 25, 1805. Their group camped at what they termed "Fort Rock," which is located near where Mill Creek enters the Columbia River. For about the next 25 years, the travelers in the area were interested in or associated with the fur trading industry. In 1820 the Hudson Bay Company established a temporary trading post at The Dalles. The region was explored by Peter Skene Ogden, Nathaniel Wyeth, and John C. Fremont.

From 1843 to 1848, wagon trains began arriving from the East over the Old Oregon Trail. At The Dalles they had two methods of reaching the Willamette Valley. One was to raft, boat, or float down the Columbia River. The other was to travel overland around Mt. Hood. A toll road was built around the south side of Mt. Hood in 1846. It began near Wamic in the central part of Wasco County. To get to the toll road some immigrant trains chose to leave the Columbia River just west of where the Deschutes River terminates and travel over the rolling hills to Fairbanks on Fifteen Mile Creek. They would then follow the creek up to Fifteen Mile Crossing (Dufur), over Tygh Ridge and down into Tygh Valley, and then up onto Wapinitia Flat to Wamic.

The Whitman Massacre occurred in 1847, and Oregon Territorial Governor Abernathy promptly dispatched a company of troops to The Dalles on December 8, 1847. Thus began what has to be considered the permanent establishment of a community in Wasco County. Dalles City was incorporated June 22, 1857. The military used the remains of the Methodist Mission buildings as quarters. The military maintained their post at Fort Dalles until the end of the Yakima Indian War in 1858 and then finally abandoned it in 1867.

Settlers started to locate in the rural areas of Wasco County along the numerous streams that flowed north and east from the Mt. Hood drainage system.

Discovery of gold in the early 1860's in the eastern and central parts of Oregon further hastened the settlement of Wasco County. Laborers were imported to help with the tedious digging task. Wagon stops were located out of The Dalles at half-day travel intervals. The main travel route went south across Three, Five, Eight, and Fifteen Mile Creeks, up over Tygh Ridge, and down into the Deschutes Canyon at Sherars Bridge. Crossing at the Deschutes River was a pleasant respite

from the hot, dry, dusty trail. On the trail out of the canyon were Bakeoven, Shaniko, and Antelope. So much gold was coming out of the John Day-Canyon City Country that the U.S. Government started construction of a mint at The Dalles. However, the precious metal source dwindled before coins could be minted.

Major transportation along the Columbia River in the Pioneer Period was confined to steamboats. The sternwheelers paddled up and down the river in front of The Dalles from the 1850's to about 1915. Scows were used to transport lumber from sawmills down the Columbia River, such as the one at Mosier, up to The Dalles. Completion of The Dalles-Celilo Canal in 1915 greatly increased water traffic to the Inland Empire Region.

The Dalles-Celilo Portage Railroad started in 1863. In 1882 The Dalles was connected to Portland by rail and to Wallula in 1883. The first branch railroad to the southern part of Wasco County was started in 1898, and it extended from Biggs in Sherman County to Shaniko. In 1905 John Heinrich built the Great Southern Railroad to Dufur and extended it into Friend in 1913. The Great Southern Railroad opened up the small communities and whistletops of Petersburg, Fairbanks, Fulton, Brookhouse, Freebridge, Neabeck, Emerson, Wrentham, Rice, Boyd, Dufur, and Friend to regular rail travel. In 1909 the Union Pacific Railroad and the Spokane, Portland & Seattle fought their way to Central Oregon up the Deschutes River. Maupin became an important part of Wasco County's economy because most goods on the Wapinitia Flat are funneled through Maupin to the Oregon Trunk Railroad.

Automobiles and modern highways have aided residents in getting to and from the market places. The routes used are virtually the same. Only the mode and speed has changed.

Farming became big business in Wasco County in the 1860's. Sheep and cattle raised in the central and southern parts of the county contributed to the stability of the economy. Shaniko was once one of the world's largest wool shipping points. Wool buyers from all over the world came to The Dalles and used the famed Umatilla House as their headquarters. Wheat and other grains gradually gained acreage in the eastern and northern parts of the county. Irrigation made possible several cuttings of alfalfa each year, which are either used by the grower or sold to users in the Pacific Northwest. The fruit industry of cherries, peaches, apricots, and apples find world markets. Large apple orchards at Dufur and Ortley failed miserably.

Attempts to diversify the economy of Wasco County have been initiated primarily by the construction of The Dalles Dam. Until the 1950's the economy was virtually stagnant. A major aluminum plant using electrical power was the first attempt at change. The economy is farm oriented, and goods and services concentrate on that segment of the economy.

## **Climate**

The survey area has very light annual total precipi-

By GILBERT L. STERNES, climatologist for Oregon, National Weather Service, U.S. Department of Commerce.

tation and somewhat extreme temperatures in both summer and winter. Records used in evaluating the temperature and precipitation were from Friend and Dufur for the Columbia Plateau area and from The Dalles located at the eastern end of the Columbia Gorge on the Columbia River flood plain.

## ***Temperature***

Marine air moving up through the Columbia Gorge and spreading into the inland Columbia Basin has a significant moderating effect on the more extreme temperatures of both summer and winter. The occasional low winter temperatures are the result of strong invasions of very cold continental air from the northeast. Excessively warm temperatures are similarly the result of occasional high pressure during the summer stagnating either over the inland Columbia or Great Basins.

Temperatures have ranged from -30° to 115° F above, both recorded at The Dalles. In most years temperature is not more than 107° or lower than -3° (table 19).

The dates of low temperatures in spring or before which they will occur in fall are given in table 20. These temperatures are significant to various crops. The number of days between the average spring and fall dates of 32° temperature is often referred to as the growing season (table 21).

## ***Precipitation***

The average annual precipitation ranges from nearly 10 inches on the eastern edge of the survey area to about 30 inches on the higher slopes of the western part. Between 70 and 80 percent of the annual precipitation occurs in November to March. Only 5 to 10 percent occurs in June to August. The rest is fairly evenly divided between April and May and September and October. While most of the precipitation is in the form of rain, there is substantial snowfall almost every winter, particularly in the higher reaches of the western part of the survey area. The greatest 3-day total ever recorded in Oregon, other than in high mountain areas, was 54 inches at The Dalles. Measurable precipitation can be expected on about 75 days a year.

In table 22 is a summary of certain monthly and annual precipitation data.

## ***Sunshine and cloudiness***

There are about 100 to 120 clear, 80 to 90 partly cloudy, and 165 to 185 cloudy days a year. Actual sunshine records have never been made in the survey area, but in a study in which records of cloudiness in the area and of sunshine at surrounding points were analyzed, it is estimated that the sun shines about 20 to 30 percent of the time in December and January; 55 to 65 percent in April, May, and June; 75 to 85 percent in July, August, and early in September. Then it gradually decreases to the winter average.

## ***Relative humidity***

In the early morning hours when the air temperature is the lowest, relative humidity of 90 to 100 percent occurs in the summer and is quite frequent almost

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any time of the day late in fall and in winter. In contrast, during the warmest part of the day in summer, it is not unusual to have a relative humidity of 10 to 20 percent. Occasionally it is even lower, although the average is 35 percent.

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## Glossary

**Alluvium.** Material, such as sand, silt, or clay, deposited on land by streams.

**Area reclaim.** An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

**Available water capacity.** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. In this survey, the range in inches of water is given for each series. This amount is based on the minimum and maximum depths of profiles (to a maximum of 60 inches) and takes into account the different amounts of water held in the ranges of texture given for the profile.

**Base saturation.** The degree to which material having base exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the exchange capacity.

**Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

**Colluvium.** Soil material, rock fragments, or both moved by creep, slide, or local wash and deposited at the bases of steep slopes.

**Concretions.** Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxides are common compounds in concretions.

**Consistence, soil.** The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are-

*Loose.*-Noncoherent when dry or moist; does not hold together in a mass.

*Friable.*-When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

*Firm.*-When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

*Plastic.*-When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.

*Sticky.*-When wet, adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.

*Hard.*-When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

*Soft.*-When dry, breaks into powder or individual grains under very slight pressure.

*Cemented.*-Hard; little affected by moistening.

**Crop year.** The year in which a crop is harvested. It contrasts with the fallow year, the year in which no crop is grown and the soil accumulates moisture from the crop year.

**Cross-slope farming.** Plowing, cultivating, planting, and harvesting across the general slope, but not on the contour.

**Cutbanks cave.** Unstable walls of cuts made by earthmoving equipment. The soil sloughs easily.

**Depth to rock.** Bedrock at a depth that adversely affects the specified use.

**Diagnostic horizon.** A combination of specific soil characteristics that indicate certain classes of soils. Those at the surface are called epipedons; those below the surface, diagnostic subsurface horizons.

**Drainage class (natural).** Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

*Excessively drained.*-Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related to wetness.

*Somewhat excessively drained.*-Water is removed from the soil rapidly. Many somewhat excessively drained soils are

sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.

*Well drained.*-Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well drained soils are commonly medium textured. They are mainly free of mottling.

*Moderately well drained.*-Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically for long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum, or periodically receive high rainfall, or both.

*Somewhat poorly drained.* Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.

*Poorly drained.*-Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough during the growing season that most mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, nearly continuous rainfall, or a combination of these.

*Very poorly drained.*-Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients, as for example in "hillpeats" and "climatic moors."

**Dryfarming.** Producing crops that require some tillage in a subhumid or semiarid region, without irrigation. Dryfarming usually involves using periods of fallow during which enough moisture accumulates in the soil to allow production of a cultivated crop.

**Duripan.** A subsurface silica-cemented horizon.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Eolian soil material.** Earthy parent material accumulated throw wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

**Erosion.** The wearing away of the land surface by running water, wind, ice, or other geologic agents and by such processes as gravitational creep.

*Erosion (geologic).* Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

*Erosion (accelerated).* Erosion much more rapid than geologic erosion, mainly as a result of the activities of man or other animals or of a catastrophe in nature, for example, fire, that exposes a bare surface.

**Excess fines.** Excess silt and clay. The soil does not provide a source of gravel or sand for construction purposes.

**Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grains are grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

**Favorable.** Favorable soil features for the specified use.

**Frost action.** Freezing and thawing of soil moisture. Frost action can damage structures and plant roots.

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**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gravel.** Rounded or angular fragments of rocks up to 3 inches (2 millimeters to 7.5 centimeters) in diameter. An individual piece is a pebble.

**Horizon, soil.** A layer of soil, approximately parallel to the Surface, having distinct characteristics produced by soil-forming processes. The major horizons of mineral soil are as follows

*O horizon.*-An organic layer, fresh and decaying plant residue, at the surface of a mineral soil.

*A horizon.*- The mineral horizon, formed or forming at or near the surface, in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon most of which was originally part of a B horizon.

*A2 horizon.*-A mineral horizon, mainly a residual concentration of sand and silt high in content of resistant minerals as a result of the loss of silicate clay, iron, aluminum, or a combination of these.

*B horizon.*-The mineral horizon below an A horizon. The B horizon is in part a layer of change from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics caused (1) by accumulation of clay, sesquioxides, humus, or a combination of these; (2) by prismatic or blocky structure; (3) by redder or browner colors than those in the A horizon; or (4) by a combination of these. The combined A and B horizons are generally called the solum, or true soil. If a soil lacks a B horizon, the A horizon alone is the solum.

*C horizon.*-The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the A or B horizon: The material of a C horizon may be either like or unlike that from which the solum is presumed to have formed. If the material is known to differ from that in the solum the Roman numeral II precedes the letter C.

*R layer.*-Consolidated rock beneath the soil. The rock commonly underlies a C horizon, but can be directly below an A or a B horizon.

**Illuviation.** The accumulation of material in a soil horizon through the deposition of suspended material and organic matter removed from horizons above. Since part of the fine clay in the B horizon (or subsoil) of many soils has moved into the B horizon from the A horizon above, the B horizon is called an illuvial horizon.

**Large stones.** Rock fragments 10 inches (25 centimeters) or more across. Large stones adversely affect the specified use.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess.** Fine grained material, dominantly of silt-sized particles, deposited by wind.

**Low strength.** Inadequate strength for supporting loads.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mottling, soil.** Irregular spots of different colors that vary in number and size. Mottling generally indicates poor aeration and impeded drainage. Descriptive terms are as follows: abundance-few, common, and many; size-fine, medium, and coarse; and contrast-faint, distinct, and prominent. The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).

**Munsell notation.** A designation of color by degrees of the three single variables-hue, value, and chroma. For example, a notation of 10YR 6/4 is a color of 10YR hue, value of 6, and chroma of 4.

**Nutrient, plant.** Any element taken in by a plant, essential to its growth, and used by it in the production of food and tissue. Plant nutrients are nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, zinc, and perhaps other elements obtained from the soil; and carbon, hydrogen, and oxygen obtained largely from the air and water.

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Percs slowly.** The slow movement of water through the soil adversely affecting the specified use.

**Permeability.** The quality that enables the soil to transmit water or air, measured as the number of inches per hour that water moves through the soil. Terms describing permeability are very slow (less than 0.06 inch), slow (0.06 to 0.2 inch), moderately slow (0.2 to 0.6 inch, moderate (0.6 to 2.0 inches), moderately rapid (2.0 to 6.0 inches), rapid (6.0 to 20 inches), and very rapid (more than 20 inches).

**Piping.** Moving water forms subsurface tunnels or pipelike cavities in the soil.

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

**Reaction, soil.** The degree of acidity or alkalinity of a soil, expressed in H values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degree of acidity or alkalinity is expressed as

	pH		pH
Extremely acid	Below 4.5	Neutral	6.6 to 7.3
Very strongly acid	4.5 to 5.0	Mildly alkaline-	7.4 to 7.8
Strongly acid	5.1 to 5.5	Moderately alkaline	7.9 to 8.4
Medium acid	5.6 to 6.0	Strongly alkaline	8.5 to 9.0
Slightly acid	6.1 to 6.5	Very strongly alkaline	9.1 and higher

**Rooting depth.** Shallow root zone. The soil is shallow over 4 layer that greatly restricts roots.

**Runoff.** The precipitation discharged in stream channels from a drainage area. The water that flows off the land surface without sinking in is called surface runoff; that which enters the ground before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeter in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay, and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

**Seepage.** The rapid movement of water through the soil. Seepage adversely affects the specified use.

**Shrink-swell.** The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Slope, soil.** Amount of deviation of a surface from the horizontal, usually expressed in percent. A 5-foot fall or rise per 100 feet of horizontal distance is a slope of 5 percent. The

slope classes used in this survey are: 0 to 7 percent, nearly level or gently sloping; 7 to 12 percent, moderately sloping; 12 to 20 percent, moderately steep; 20 to 45 percent, steep; and 45 to 70 percent, very steep

**Small stones.** Rock fragments 3 to 10 inches (7.5 to 25 centimeters) in diameter. Small stones adversely affect the specified use.

**Soil depth.** The depth to which ant roots penetrate; the depth to the underlying bedrock, hardpan, or other restrictive layer. The depth classes used in this survey area are: 4 to 20 inches, shallow; 20 to 40 inches, moderately deep; more than 40 inches deep.

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in mature soil consists of the A and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and other plant and animal life characteristics of the soil are largely confined to the solum.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates that are separated from adjoining aggregates. The principal forms of soil structure are-platy (laminated), prismatic (vertical axis of aggregates longer than horizontal), columnar (prisms with rounded tops), blocky (angular or subangular), and granular. Structureless soils are either single grained (each grain by itself, as in dune sand) or massive (the particles adhering without any regular cleavage, as in many hardpans).

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.

**Surface soil.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

**Thin layer.** Otherwise suitable soil material too thin for the specified use.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Water-supplying capacity.** Water stored in the soil at the beginning of plant growth in the spring, plus rainfall not in excess of evapotranspiration during the growing season, less runoff.

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All tables have been updated and are available as a separate document.

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slope classes used in this survey are: 0 to 7 percent, nearly level or gently sloping; 7 to 12 percent, moderately sloping; 12 to 20 percent, moderately steep; 20 to 45 percent, steep; and 45 to 70 percent, very steep

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**Thin layer.** Otherwise suitable soil material too thin for the specified use.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Water-supplying capacity.** Water stored in the soil at the beginning of plant growth in the spring, plus rainfall not in excess of evapotranspiration during the growing season, less runoff.

## **ATTACHMENT D – EXHIBIT 13**

“Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon”



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**

GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.



## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty

Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.



Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:

<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0



Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity (MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.

A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	



Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.

These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.



#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.

Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.

The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.



Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.

Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

## VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.



Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.



## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.

selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other



important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.

XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.



FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.



## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.

KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982

## **ATTACHMENT D – EXHIBIT 14**

“Soil Survey Single Phase Interpretation Sheets in Oregon”



## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES											
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLASTICITY INDEX		
				10	20	40	60				
0-7 IL		IML CL-ML	A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5	
7-28 IL, SIL		IML CL-ML	A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5	
28-44 IL, SCL		IML	A-4	0	195-100	95-100	90-95	55-75	30-35	5-10	
44 IUB											
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERME- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTOR (K)	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE
0-7	115-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2 MODERATE LOW
7-28	118-27	1.10-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43			
28-44	120-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43			
44											
FLOODING											
HIGH WATER TABLE				CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDROLYTIC	
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	INITIAL (IN)	TOTAL (IN)	GROUP	ACTION
NONE			26.0					10-60	HARD	-	B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY			ROADFILL	FAIR-AREA RECLAIM, THIN LAYER		
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK			GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE			TOPSOIL	FAIR-SLOPE		
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE			EMBANKMENTS, DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE			EXCAVATED PONDS, AQUIFER FED	SEVERE-NO WATER		
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE			DRAINAGE	DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE			GRASSED WATERWAYS	SLOPE, ERODES EASILY		

MODERATE-SLOPE, DUSTY		RECREATIONAL DEVELOPMENT		SEVERE-SLOPE	
CAMP AREAS			PLAYGROUNDS		
MODERATE-SLOPE, DUSTY				SEVERE-ERODES EASILY	
PICNIC AREAS		PATHS AND TRAILS			
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)					
CAPABILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)			
4E	35	1.5			
Severe limitations (e) erosion					
WOODLAND SUITABILITY					
ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	POTENTIAL PRODUCTIVITY COMMON TREES	TREES TO PLANT
14A	MODERATE	SLIGHT	MODERATE	SEVERE	PONDEROSA PINE OREGON WHITE OAK
<p>Handwritten notes:</p> <p>1.2 cu. yd. per tree / 100 trees = 120 cu. yd. H. and logs.</p> <p>= 4 cubic metres / hectare / yr. = 57.2 43/100</p> <p>A = slight or no limitations</p> <p>Gr. Avg. = 41 43/100</p>					
WINDBREAKS					
SPECIES		HT	SPECIES		HT
NONE					
WILDLIFE HABITAT SUITABILITY					
POTENTIAL FOR HABITAT ELEMENTS			POTENTIAL AS HABITAT FOR:		
GRAIN	GRASS	WILD	HARDWOOD	CONIFER	SHRUBS
SEED	LEGUME	HERB	TREES	PLANTS	WETLAND
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)					
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)			
IDAH0 FESCUE	FE10	45			
BLUEGRASS	AGSP	10			
SANDBERG BLUEGRASS	POSE	5			
ARROWLEAF BALSAMROOT	BASA3	2			
ANTELOPE BITTERBRUSH	PUTR2	10			
OREGON WHITE OAK	QUGA4	5			
PONDEROSA PINE	PIPO	5			
POTENTIAL PRODUCTION (LBS./AC. DRY WT):		950			
FAVORABLE YEARS		800			
NORMAL YEARS		450			
UNFAVORABLE YEARS			FOOTNOTES		
SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.					



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES									
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLASTICITY INDEX	SHRINK- SWELL FACTORS	EROSION GROUP	CORROSIVITY
0-7 IL	ML, CL-ML	IA-4	0	195-100 95-100 90-95 55-75	20-25	NP-5	1.491 4	1-2	MODERATE
7-28 IL, SIL	ML, CL-ML	IA-4	0	195-100 95-100 90-95 55-75	20-25	NP-5	1.431		
28-44 IL, SCL	ML	IA-4	0	195-100 95-100 90-95 55-75	30-35	5-10	1.431		
44 UUB									
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM3)	PERME- ABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION GROUP	CORROSIVITY
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.491 4	1-2
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.431	
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.431	
44									
FLOODING									
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)
NONE			26.0				140-60	HARD	

SANITARY FACILITIES					CONSTRUCTION MATERIAL				
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE			ROADFILL	FAIR-AREA RECLAIM	THIN LAYER	SLOPE	
ABSORPTION FIELDS									
SEWAGE LAGOON AREAS	SEVERE-SLOPE				SAND	IMPROBABLE-EXCESS FINES			
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE			GRAVEL	IMPROBABLE-EXCESS FINES			
SANITARY LANDFILL (AREA)	SEVERE-SLOPE				TOPSOIL	POOR-SLOPE			
DAILY COVER FOR LANDFILL	POOR-SLOPE				POND RESERVOIR AREA	SEVERE-SLOPE			
BUILDING SITE DEVELOPMENT					WATER MANAGEMENT				
SHALLOW EXCAVATIONS	SEVERE-SLOPE				EMBANKMENTS	SEVERE-PIPING			
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE				EXCAVATED PONDS	SEVERE-NO WATER			
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE				DRAINAGE	DEEP TO WATER			
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE				IRRIGATION	SLOPE, ERODES EASILY			
LOCAL ROADS AND STREETS	SEVERE-SLOPE				TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY			
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE				GRASSED WATERWAYS	SLOPE, ERODES EASILY			

SEVERE-SLOPE		RECREATIONAL DEVELOPMENT				SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS					
SEVERE-SLOPE		PATHS AND TRAILS				SEVERE-ERODES EASILY	
PICNIC AREAS							
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)							
CAPABILITY	WHEAT	GRASS HAY					
(BU)	(TONS)						
INIRR	INIRR	INIRR	INIRR	INIRR	INIRR	INIRR	INIRR
4E	35	1.5					
WOODLAND SUITABILITY							
ORD	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY		
SYM	EROSION	EQUIP.	SEEDLING	WINDTH.	PLANT	COMMON TREES	TREES TO PLANT
	HAZARD	LIMIT	MORTY.	HAZARD	COMPT.	ISITE	INDEX
4A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	170 PONDEROSA PINE
SPECIES INT. SPECIES INT. SPECIES INT. SPECIES INT.							
NONE							
WILDLIFE HABITAT SUITABILITY							
POTENTIAL FOR HABITAT ELEMENTS							
GRAIN	SPASS	WILD	HARDWD	CONIFER	SHRUBS	WETLAND	SHALLOW
SEED	LEGUME	HERB.	TREES	PLANTS	PLANTS	WATER	WILDLF
POOR	FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR
POTENTIAL AS HABITAT FOR:							
WOODLD WETLAND RANGELD							
WILDLF WILDLF WILDLF							
IV. POOR IV. POOR IV. POOR							
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)							
COMMON PLANT NAME	PLANT SYMBOL	PERCENTAGE COMPOSITION (DRY WEIGHT)					
IDAH0 FESCUE	FEID	45					
SANDBERG BLUEGRASS	POSE	5					
BLUEBUNCH WHEATGRASS	AGSP	10					
NARROWLEAF BALSAMROOT	BASA3	2					
ANTELOPE BITTERBRUSH	PUTR2	10					
OREGON WHITE OAK	QUGA4	5					
PONDEROSA PINE	PIPO	5					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):							
FAVORABLE YEARS		950					
NORMAL YEARS		800					
UNFAVORABLE YEARS		450					

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

510\* WAMIC-SKYLINE COMPLEX, 2 TO 20 PERCENT SLOPES  
SKYLINE PART

THE SKYLINE SERIES CONSISTS OF SHALLOW WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS MIXED WITH COLLUVIUM ON MOUNTAINOUS AREAS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN VERY COBBLY LOAM 9 INCHES THICK. THE SUBSOIL IS DARK BROWN GRAVELLY LOAM ABOUT 5 INCHES THICK. DEPTH TO BEDROCK IS 12 TO 20 INCHES. ELEVATION IS 500 TO 3500 FEET. THE MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. THE MEAN ANNUAL AIR TEMP IS 47 TO 49 DEGREES F. THE FROST-FREE PERIOD IS 110 TO 140 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT
0-9	ICBV-L	IGM	1A-2, A-4	100-50	155-65	50-60	40-55	30-45	25-30	100-50	155-65	50-60	40-55	30-45
9-14	IGR-L	IGM, SM, GM	1A-4, A-2	5-15	165-80	60-75	50-70	35-55	25-30	5-15	165-80	60-75	50-70	35-55
14	IWB													
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK SWELL POTENTIAL	EROSION FACTORS	WIND EROSION	ORGANIC MATTER	CORROSIVITY	STEEL	CONCRETE
0-9	12-18	1.10-1.25	0.6-2.0	0.10-0.15	6.6-7.3	-	-	LOW	1.10	1	-	1-4	MODERATE	LOW
9-14	12-18	1.20-1.35	0.6-2.0	0.10-0.15	6.6-7.3	-	-	LOW	1.20	1	-	1-4	MODERATE	LOW
14														
FLOODING														
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS	DEPTH (IN)	HARDNESS	DEPTH (IN)	HARDNESS	DEPTH (IN)	HARDNESS	DEPTH (IN)
NONE			26.0											

SANITARY FACILITIES										CONSTRUCTION MATERIAL									
SEPTIC TANK	SEVERE-DEPTH TO ROCK									POOR-AREA RECLAIM									
ABSORPTION FIELDS																			
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES									IMPROBABLE-EXCESS FINES									
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, LARGE STONES									IMPROBABLE-EXCESS FINES									
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK									POOR-AREA RECLAIM, SMALL STONES									
DAILY COVER FOR LANDFILL	POOR-AREA RECLAIM, SMALL STONES																		
BUILDING SITE DEVELOPMENT										WATER MANAGEMENT									
SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK									SEVERE-PIPING, LARGE STONES									
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE, DEPTH TO ROCK									SEVERE-NO WATER									
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK									DEEP TO WATER									
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE									LARGE STONES, DEPTH TO ROCK, SLOPE									
LOCAL ROADS AND STREETS	MODERATE-DEPTH TO ROCK, SLOPE, FROST ACTION									SLOPE, LARGE STONES, DEPTH TO ROCK									
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-LARGE STONES, THIN LAYER									LARGE STONES, SLOPE, DEPTH TO ROCK									

CAMP AREAS		SEVERE-LARGE STONES,DEPTH TO ROCK		RECREATIONAL DEVELOPMENT		PLAYGROUNDS		SEVERE-LARGE STONES,SLOPE,SMALL STONES	
PICNIC AREAS		SEVERE-LARGE STONES,DEPTH TO ROCK		PATHS AND TRAILS				MODERATE-LARGE STONES,DUSTY	
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)									
CAPABILITY									
NIRPIRR	NIRRI	IRR	NIRRI	IRR	NIRRI	IRR	NIRRI	IRR	NIRRI
75									
WOODLAND SUITABILITY									
ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY		TRESSES TO PLANT		
	EROSION EQUIP.	SEEDLING WINDTH.	PLANT HAZARD	COMPET.	COMMON TREES	SITE INDEX			
					NONE				
WINDBREAKS									
SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT		
NONE									
WILDLIFE HABITAT SUITABILITY									
POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:			
GRAIN & GRASS	WILD HARROW	CONIFERS	SHRUBS	WETLAND	SHALLOW OPENLD	WOODD	WETLAND	RANGELAND	
SEED LEGUME	HERB	TREES	PLANTS	PLANTS	WATER	WILDF	WILDF	WILDF	
IV. POOR	IV. POOR	FAIR	IV. POOR	-	IV. POOR	IV. POOR	IV. POOR	Poor	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)									
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)							
BLUEBUNCH WHEATGRASS	AGSP	70							
SANDBERG BLUEGRASS	POSE	20							
POTENTIAL PRODUCTION (LBS./AC. DRY WT):									
FAVORABLE YEARS		950							
NORMAL YEARS		800							
UNFAVORABLE YEARS		400							



SOIL INTERPRETATIONS RECORD

10E- BODELL COBBLY LOAM, 5 TO 45 PERCENT SLOPES

THE BODELL SERIES CONSISTS OF SHALLOW WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS MIXED WITH COLLUVIUM ON MOUNTAINOUS AREAS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN COBBLY LOAM ABOUT 5 INCHES THICK. THE SUBSOIL IS DARK BROWN VERY COBBLY LOAM AND VERY COBBLY CLAY LOAM ABOUT 15 INCHES THICK. DEPTH TO BEDROCK IS 12 TO 20 INCHES. ELEVATION IS 200 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 20 TO 30 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 51 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 140 DAYS.

DEPTH (IN.)	USDA TEXTURE	ESTIMATED SOIL PROPERTIES									
		UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLASTICITY INDEX		
0-5	CB-L			100	100	100	100	25-30	10-15		
5-18	CB-L, CB-CL, CBV-L	1ML, SM	A-4	120-30	70-85	70-80	50-70	35-55	25-30		
18	UWB	1GM	A-4	145-70	155-65	50-60	45-55	35-50	25-35		

DEPTH (IN.)	(PCT)	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK-SWELL POTENTIAL	EROSION FACTORS	WIND EROSION	ORGANIC MATTER	CORROSIVITY	
											STEEL	CONCRETE
0-5	18-27	1.10-1.20	0.6-2.0	0.06-0.14	6.6-7.3	-	LOW	1.17	1	-	MODERATE	LOW
5-18	18-30	1.10-1.30	0.6-2.0	0.06-0.11	6.6-7.3	-	LOW	1.10	1	-	MODERATE	LOW

FLOODING			HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDROLYTIC	
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	DEPTH (IN)	HARDNESS	DEPTH (IN)	HARDNESS	INITIAL	TOTAL	GROUP	ACTION
NONE			26.0			-		12-20	HARD	-	-	MODERATE

SANITARY FACILITIES			CONSTRUCTION MATERIAL		
SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		ROADFILL	POOR-AREA RECLAIM, LARGE STONES, SLOPE	
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		SAND	IMPROBABLE-EXCESS FINES, LARGE STONES	
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		GRAVEL	IMPROBABLE-EXCESS FINES, LARGE STONES	
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK, SLOPE		TOPSOIL	POOR-AREA RECLAIM, LARGE STONES, SLOPE	
DAILY COVER FOR LANDFILL	POOR-AREA RECLAIM, LARGE STONES, SLOPE		POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK, SLOPE	

BUILDING SITE DEVELOPMENT			WATER MANAGEMENT		
SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK, LARGE STONES, SLOPE		EMBANKMENTS	SEVERE-LARGE STONES	
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE, DEPTH TO ROCK, LARGE STONES		EXCAVATED PONDS	SEVERE-NO WATER	
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		IRRIGATION	DEEP TO WATER	
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE, DEPTH TO ROCK, LARGE STONES		TERRACES AND DIVERSIONS	LARGE STONES, DROUGHTY, DEPTH TO ROCK	
LOCAL ROADS AND STREETS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		GRASSED WATERWAYS	SLOPE, LARGE STONES, DEPTH TO ROCK	
LAUNDS, LANDSCAPE AND GOLF FAIRWAYS	SEVERE-THIN LAYER			LARGE STONES, SLOPE, DROUGHTY	



Board of County Commissioners Agenda Packet  
March 16, 2022

## **ATTACHMENT D – EXHIBIT 15**

A copy of the “Applicant Site Map”, “Aerial Photo”, and ALL MAPS created for this Staff Report.



# Aerial Photo







**Labels**

*Not to Scale*

□ = Septic

— = Water

— = Power

— = Tel/Com



Backup Drain Field

Septic Drain Field

Pump House

Well

Septic Drain Field

Lean To

Power Pole

← Road = 20' Wide

Barn

Homestead

Pond

Transformer

Barn

Log Cabin

Old Barn

Trailer Site

Well

Septic Drain Field

Pond (Seasonal)

Former Bird Sanctuary

Transformer

Trailer Site

Trailer Site

Hand Dug Spring

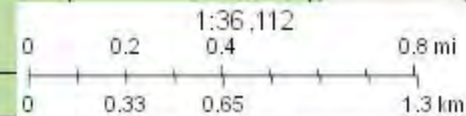
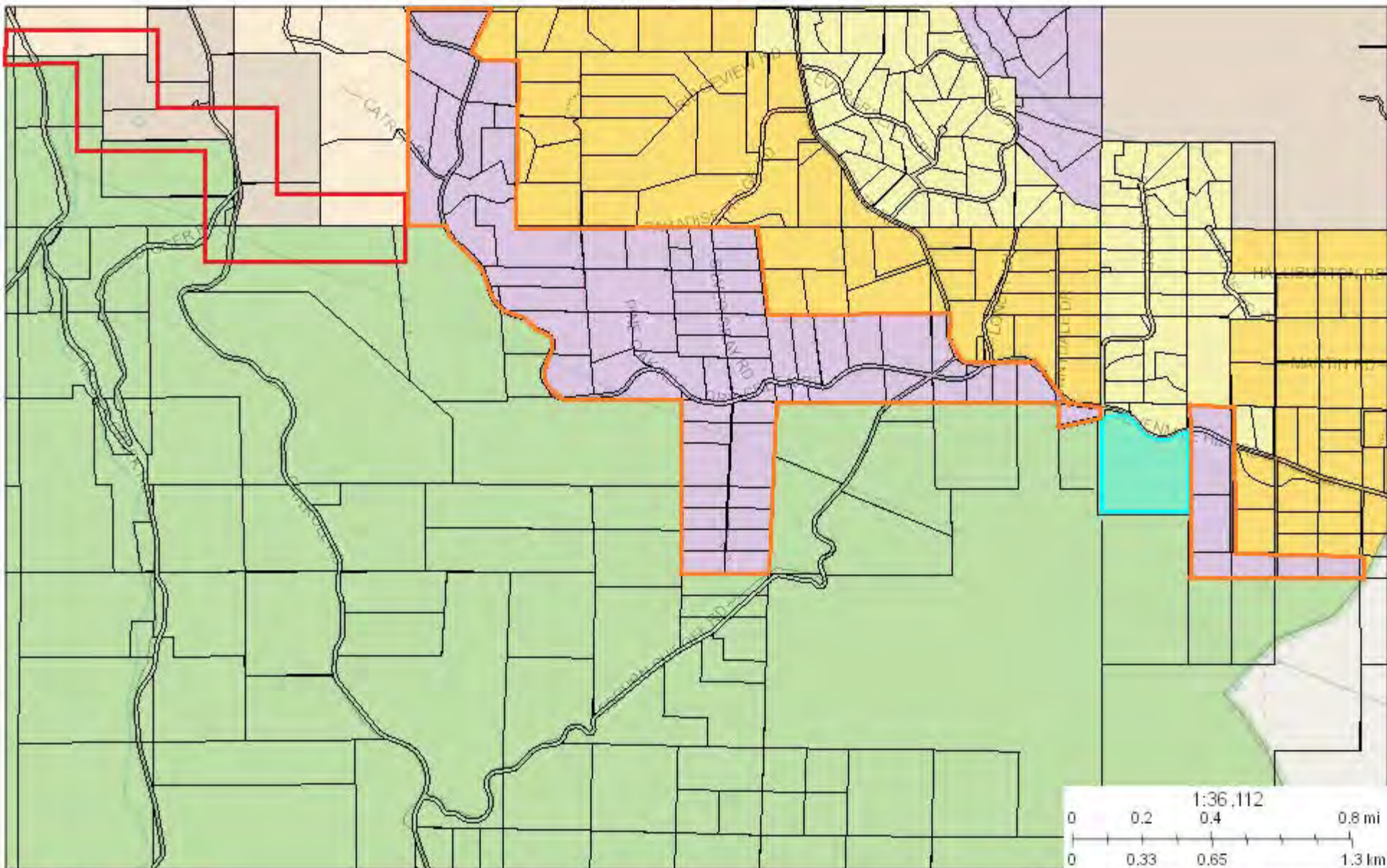


### Power Line Distance Estimate





# Border between F-2(80) & Residential Lands



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11/22/2021, 12:02:08 PM

## WC-Zone



Board of County Commissioners Agenda Packet  
March 16, 2022

Border between lands zoned for resource use

Border between lands zoned for resource use and residential use



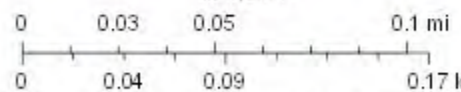
This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary information sources to ascertain the usability of the information.



# Physical Development Map



1:4,514



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Wasco County Planning

**Subject Parcel**

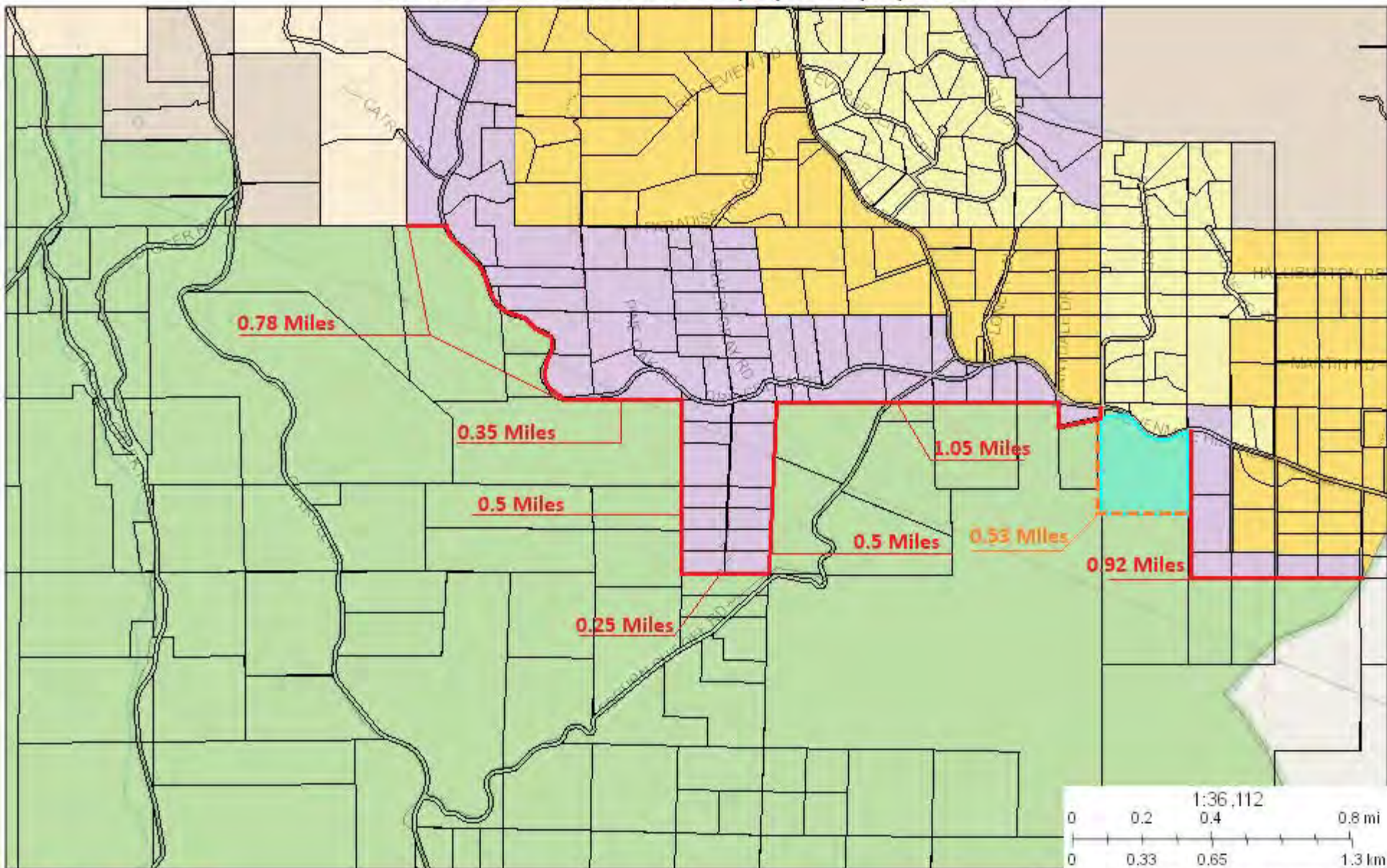
**Developed Areas**



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should view or consult the primary data and information sources to ascertain the usability of the information.

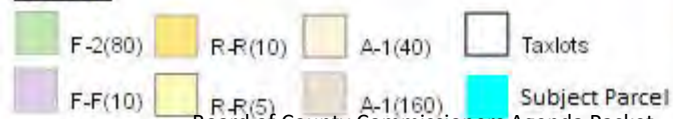


# Border Distance between F-F(10) & F-2(80) Zoned Lands



11/22/2021, 12:02:08 PM

## WC-Zone



Board of County Commissioners Agenda Packet  
March 16, 2022

4.35 Miles F-F(10) & F-2(80) Border

0.53 Miles (subject parcel) property line

If rezoned, F-F(10) & F-2(80) Border would  
increase to approximately 4.88 Miles.

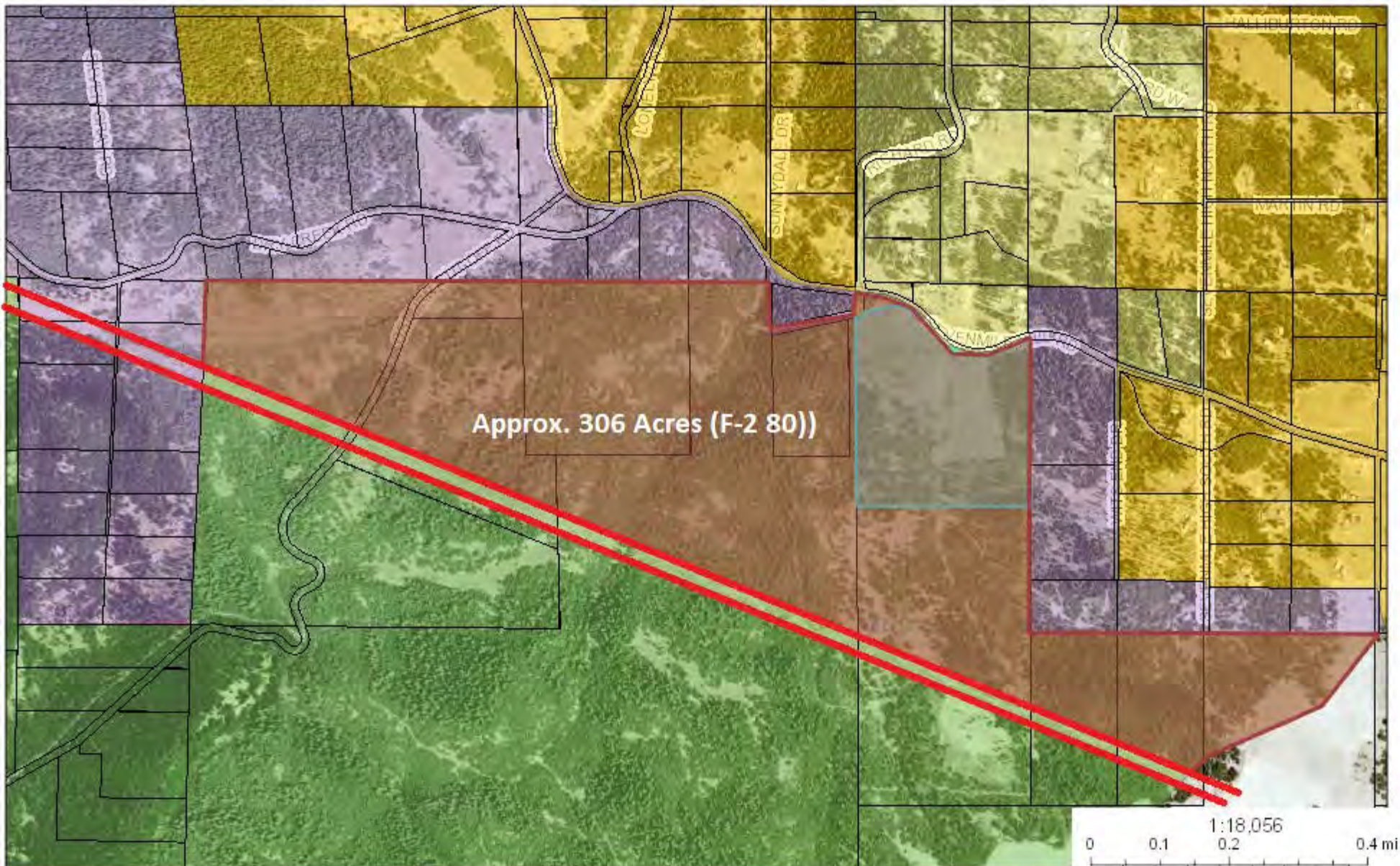
© OpenStreetMap (and contributors), CC-BY-SA, Wasco County GIS,  
Lane County, Assessor, Wasco County GIS



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and has not been prepared for, or be  
suitable for legal, engineering, or  
surveying purposes. Users of this  
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primary information sources to  
ascertain the usability of the information.



# Forest Lands North of the BPA Line



11/22/2021, 2:09:44 PM

## WC-Zone



BPA-Line

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# Infrastructure & Soil Map

7100 7 Mile Hill Rd

49C  
0.19 AC

49C  
4.88 AC

50D  
1.42 AC

49C  
0.86 AC

10E  
3.92 AC

50D  
3.35 AC

Infrastructure  
7.76 AC

49C  
3.85 AC

50D  
3.37 AC

51D  
7.61 AC

10E  
1.38 AC

51D  
4.69 AC



Subject Parcel



Generally Unsuitable Soils (Class 7 & 8)  
Total = 20.79 Acres



Generally Suitable Soils (Class 4 & 6)  
Total = 19.34 Acres



Power Line Maintenance Easement



Access Fire Fuel Break Areas



Public Road Maintenance Area



Fire Fuel Break for Physical Development  
& Infrastructure Soil Mapping Unit Area

18% Physically Developed

51.8% Mapped Soils = Generally Unsuitable



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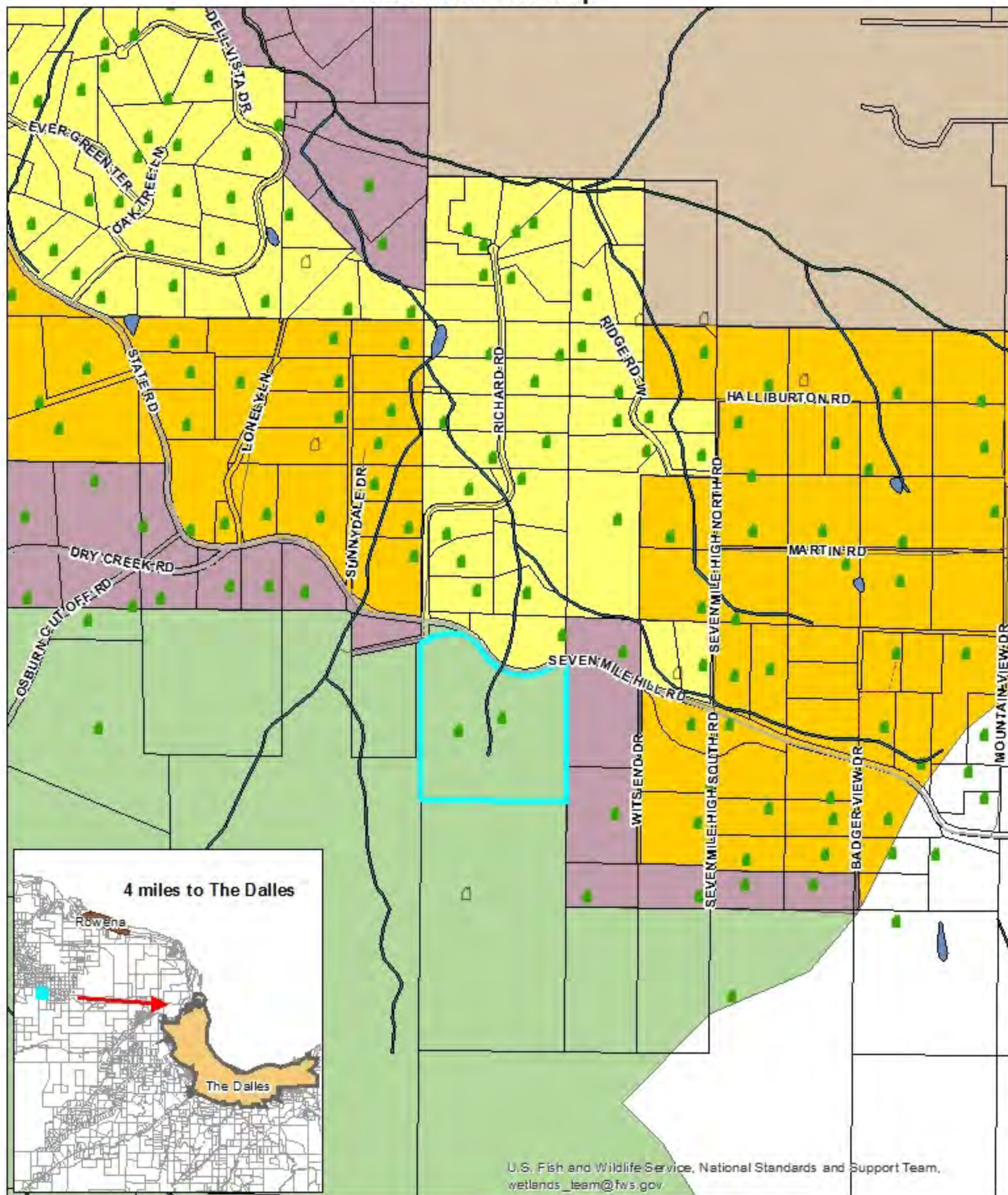
BOCC 1 - 526

11-21-2021

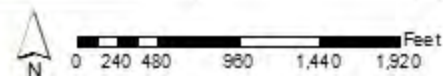
Source: "Wilson - Order 1 Soil Survey"



# Location & Zone Map



- |          |         |                   |                 |
|----------|---------|-------------------|-----------------|
| A-1(160) | R-R(10) | Riverine          | Wilson Property |
| F-2(80)  | R-R(5)  | Freshwater Pond   | Taxlots         |
| F-F(10)  |         | Unknown Addresses |                 |
|          |         | Addresses         |                 |



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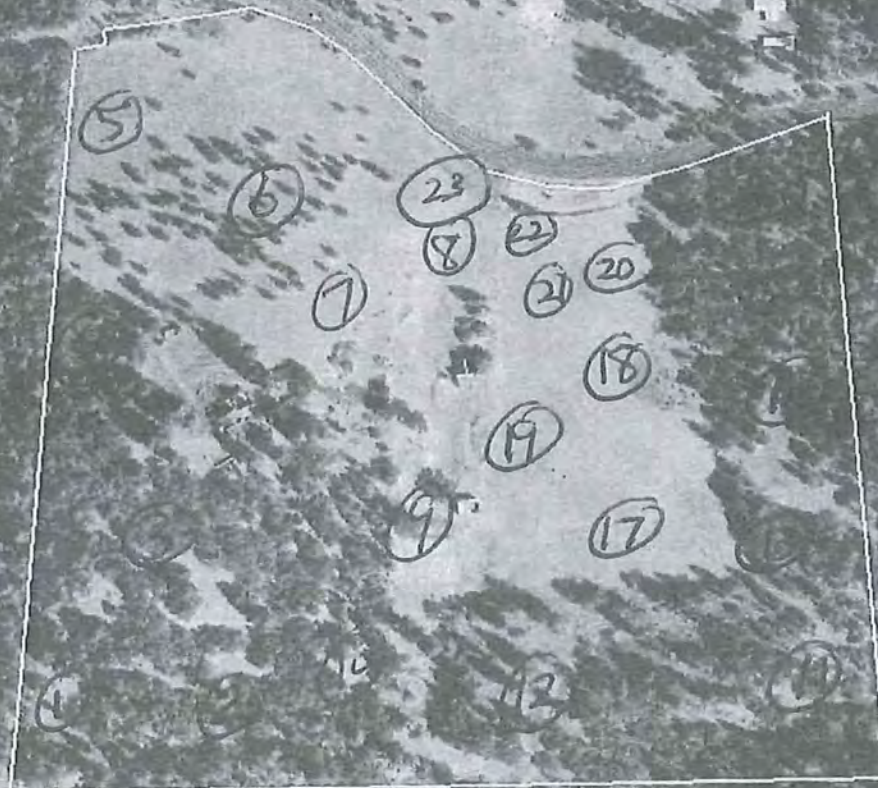


Wilson

T2N R12E Sec. 23C TL# 4400

Site Condition Map

7100 7 Mile Hill Rd







7100 7 Mile Hill Rd

49C  
0.19 Ac.

49C  
4.88 Ac.

49C  
0.92 Ac.

50D  
1.42 Ac.

Infra.  
0.06 Ac.

10E  
3.92 Ac.

50D  
1.35 Ac.

Infrastructure  
1.48 Ac.

10E  
1.76 Ac.

49C  
5.76 Ac.

51C  
0.86 Ac.

49C  
1.85 Ac.

Infra.  
0.03 Ac.

10E  
0.38 Ac.

51D  
4.69 Ac.

50D  
2.97 Ac.

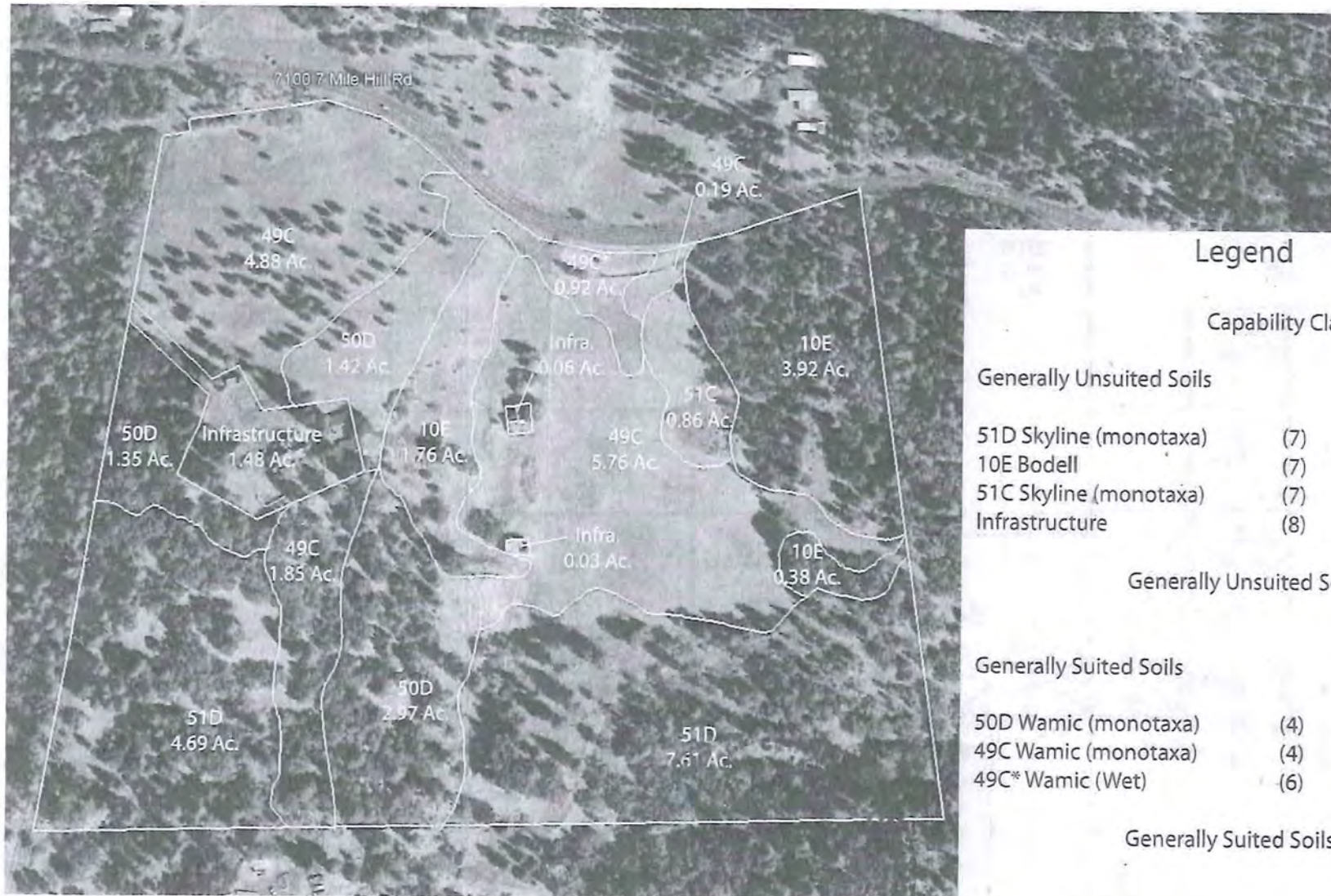
51D  
7.61 Ac.



# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



### Legend

Capability Class    Acreage

#### Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsited Soils = 20.79 Acres

#### Generally Sited Soils

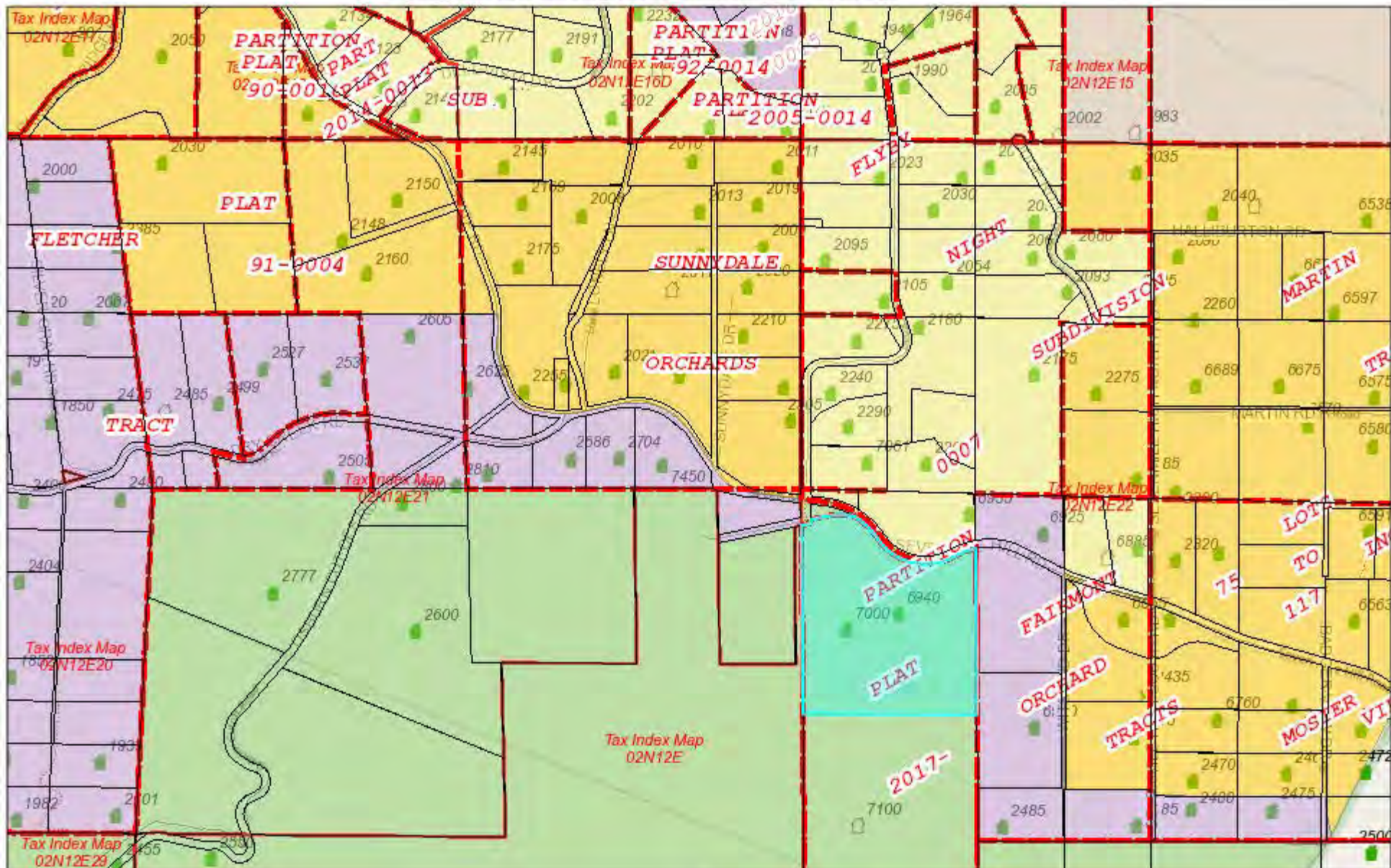
50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Sited Soils = 19.34 Acres

Total Acres: 40.13 Acres  
Percentage of Generally Unsited Soils: 51.8%



### Subdivision & Registered Addresses Map



11/21/2021, 4:24:47 PM

 Taxlots       Subdivision Line

Board of County Commissioners Agenda Packet

March 16, 2022

16, 2022  
Registered Dwellings



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# Wetland Map




Statewide Wetlands Inventory

 Riverine

National Hydrography Dataset

 Waterbody - Large Scale (Pond)

 Flowline - Large Scale (Stream)

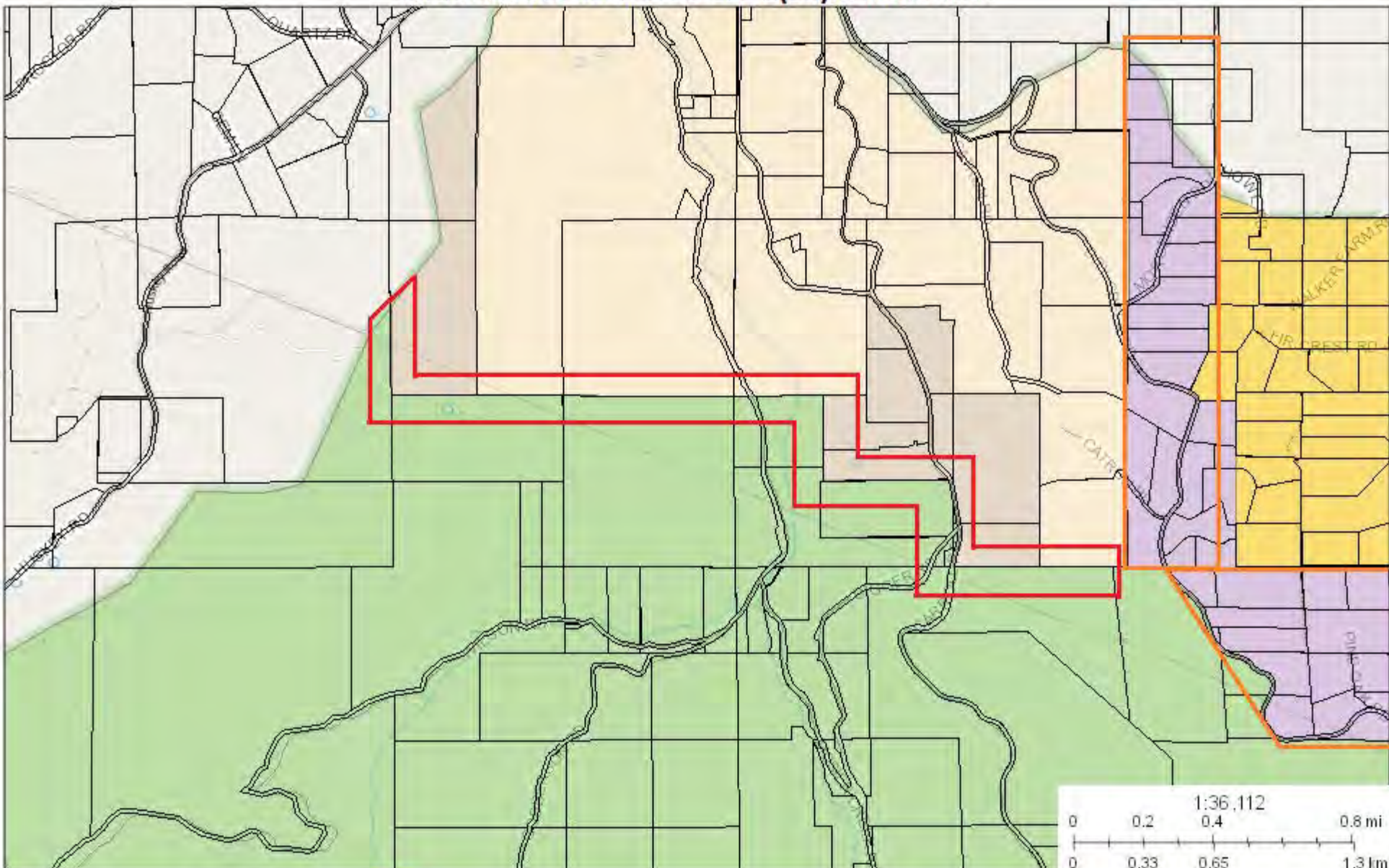
© OpenStreetMap (and) contributors, CC-BY-SA, USGS TNM - National Hydrography Dataset, Data Retrieved October, 2021., Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team, Wasco County GIS, Lane County Assessors, Wasco County GIS



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# Border between EFU A-1 & F-2(80) Zoned Lands



11/22/2021, 12:02:08 PM

WC-Zone



Board of County Commissioners Agenda Packet  
March 16, 2022



Border between lands zoned for resource use



Border between lands zoned for resource use and residential use

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Lane County, Assessor, Wasco County GIS

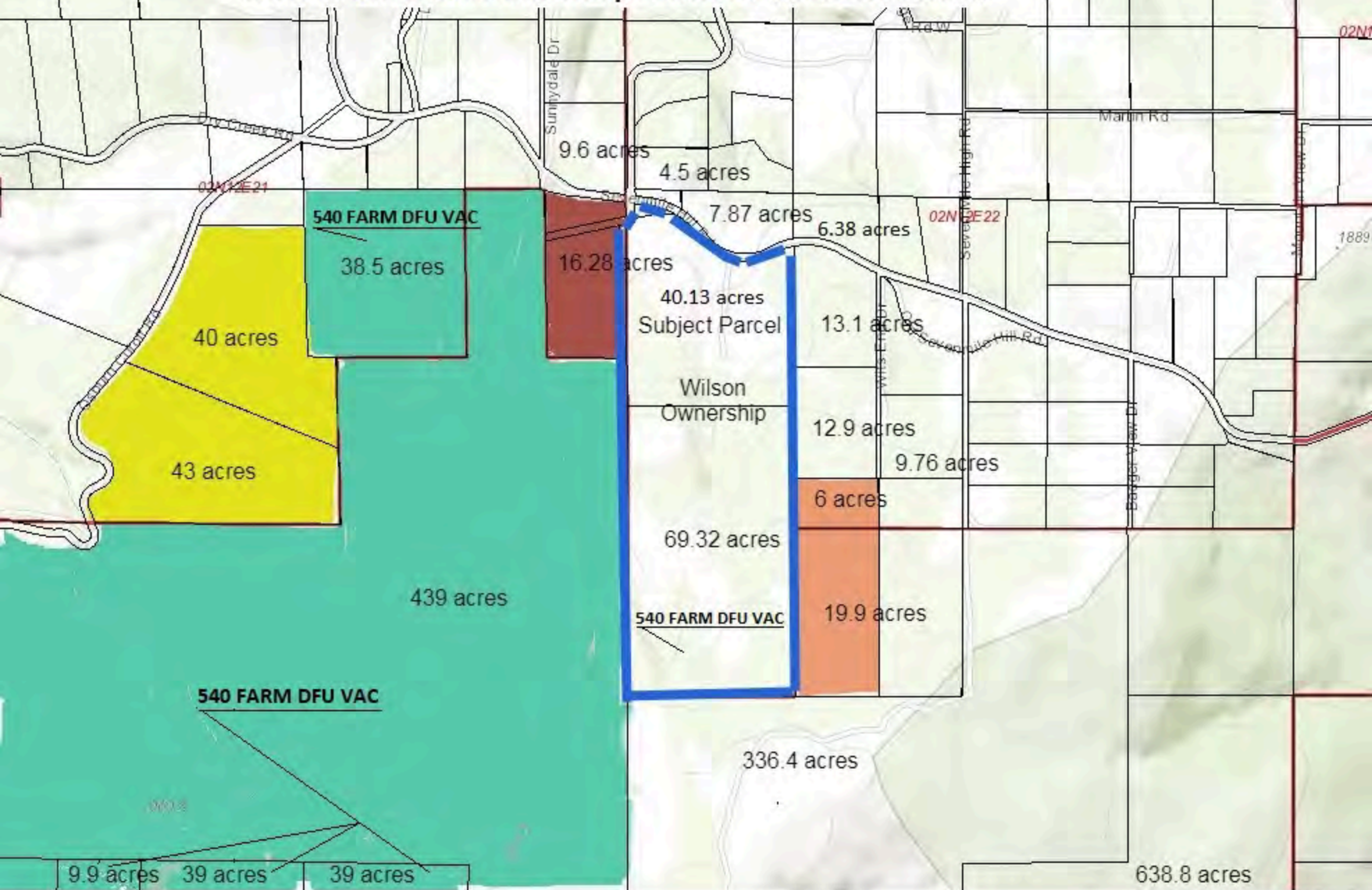


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BOCC 1-533



# South Resource Zone Ownership Pattern & Tax Deferral Status



11-24-2021

Contiguous Ownership



Not colored = No contiguous ownership

540 FARM DFU VAC = In tax deferral

Single Parcel (Split-Zone)

Board of County Commissioners Agenda Packet  
F-F(10-21-2022)  
March 16, 2022

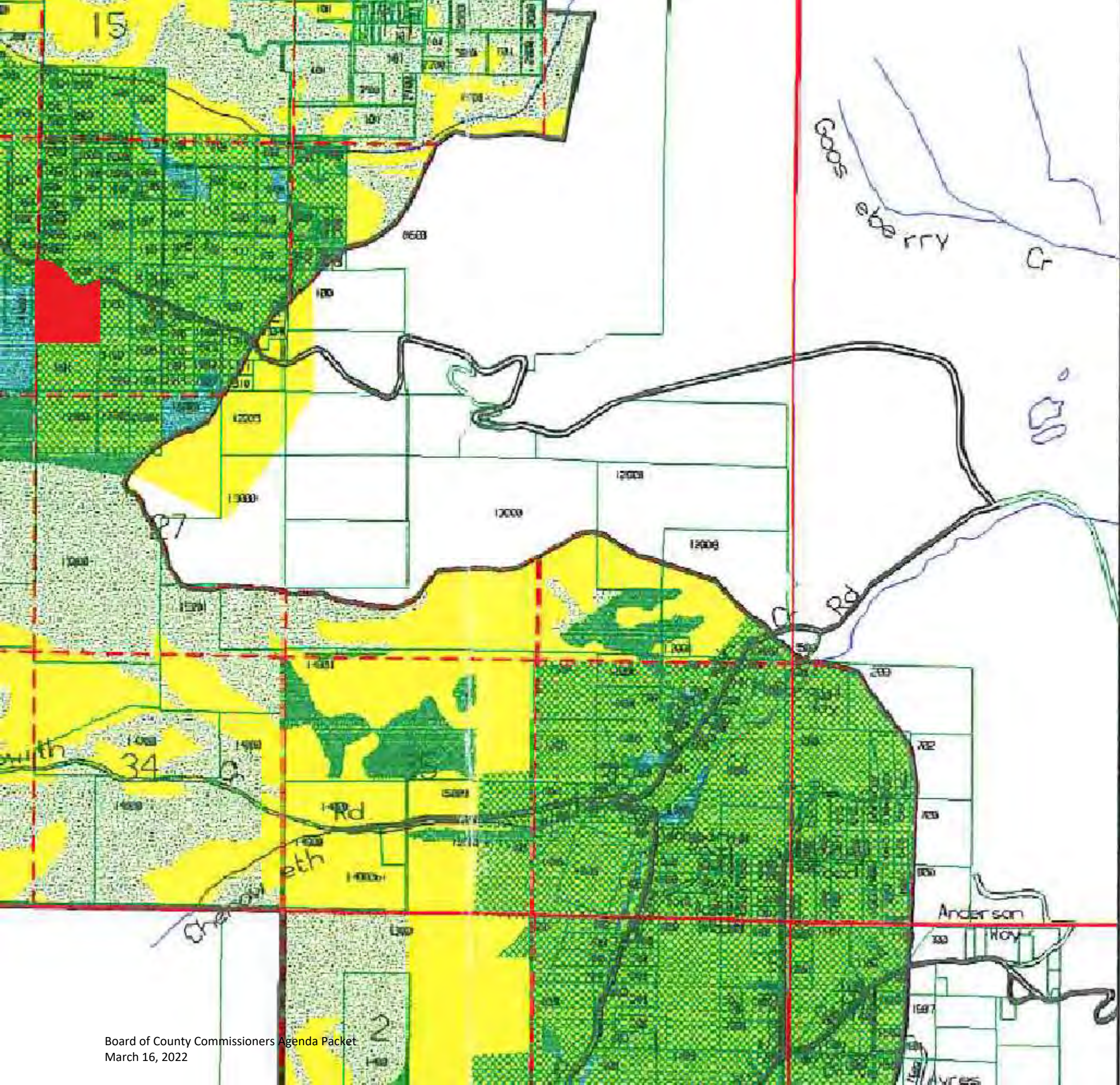
Map Data  
WC-Assessor, WC-GIS



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BOCC 1 - 534





# Value Comparison

Forest & Agriculture Values      Development Values

L/L

0-1-2

0-1-2-3

L/H

0-1-2

4-5-6-7

**2N 12E 22 4400**

H/L

3-4-5-6-7

0-1-2-3

H/H

3-4-5-6-7

4-5-6-7

F&A-Dev Medium Ranges

M/M

3-3, 3-4, 4-3, 4-4



Low

High



# COMBINED LAND USE VALUES

(based on resource composite &  
development composite  
map values)

## Transition Lands Study Area

### Value Comparison

Forest & Agriculture Values      Development Values

L/L      0-1-2      0-1-2-3

L/H      0-1-2      4-5-6-7

H/L      3-4-5-6-7      0-1-2-3

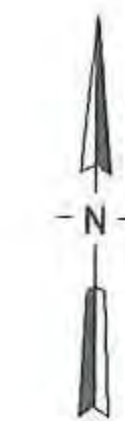
H/H      3-4-5-6-7      4-5-6-7

F&A-Dev Medium Ranges

3-3, 3-4, 4-3, 4-4

2N 12E 22 4400

0 1 2 3 4 5 6 7  
Low High



Miles  
0 1 2 3

Wasco County Transition  
Lands Study Area

FIGURE  
11

WASCO COUNTY  
Planning and Economic Development



June 1997

BOCC 1-536  
9/12/97



# Soil Suitability Map



Subject Parcel



Generally Unsuitable Soils (Class 7 & 8)

- 51D Skyline = 12.30 Acres
- 10E Bodell = 6.06 Acres
- 51C Skyline = 0.86 Acres
- Infrastructure = 1.57 Acres

Total = 20.79 Acres (51.8% of parcel)



Generally Suitable Soils (Class 4 & 6)

- 50D Wamic = 15.74 Acres
- 49C Wamic = 12.68 Acres
- 49C Wamic (Wet) = 0.92 Acres

Total = 19.34 Acres (48.2% of parcel)



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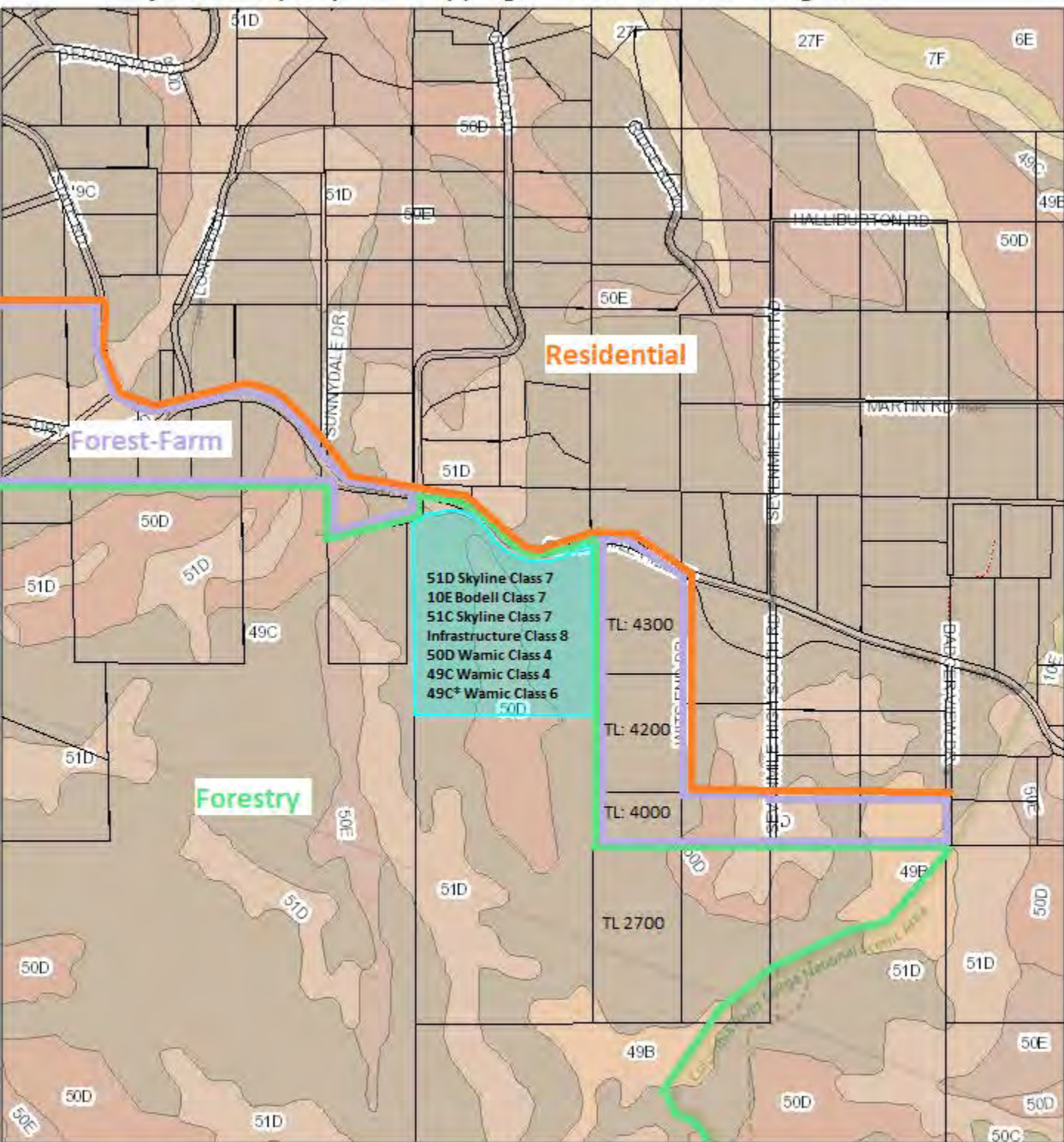
BOCC 1 - 537

11-21-2021

Source: "Wilson – Order 1 Soil Survey"



# Adjacent Property Soil Mapping Units & Land Use Designation



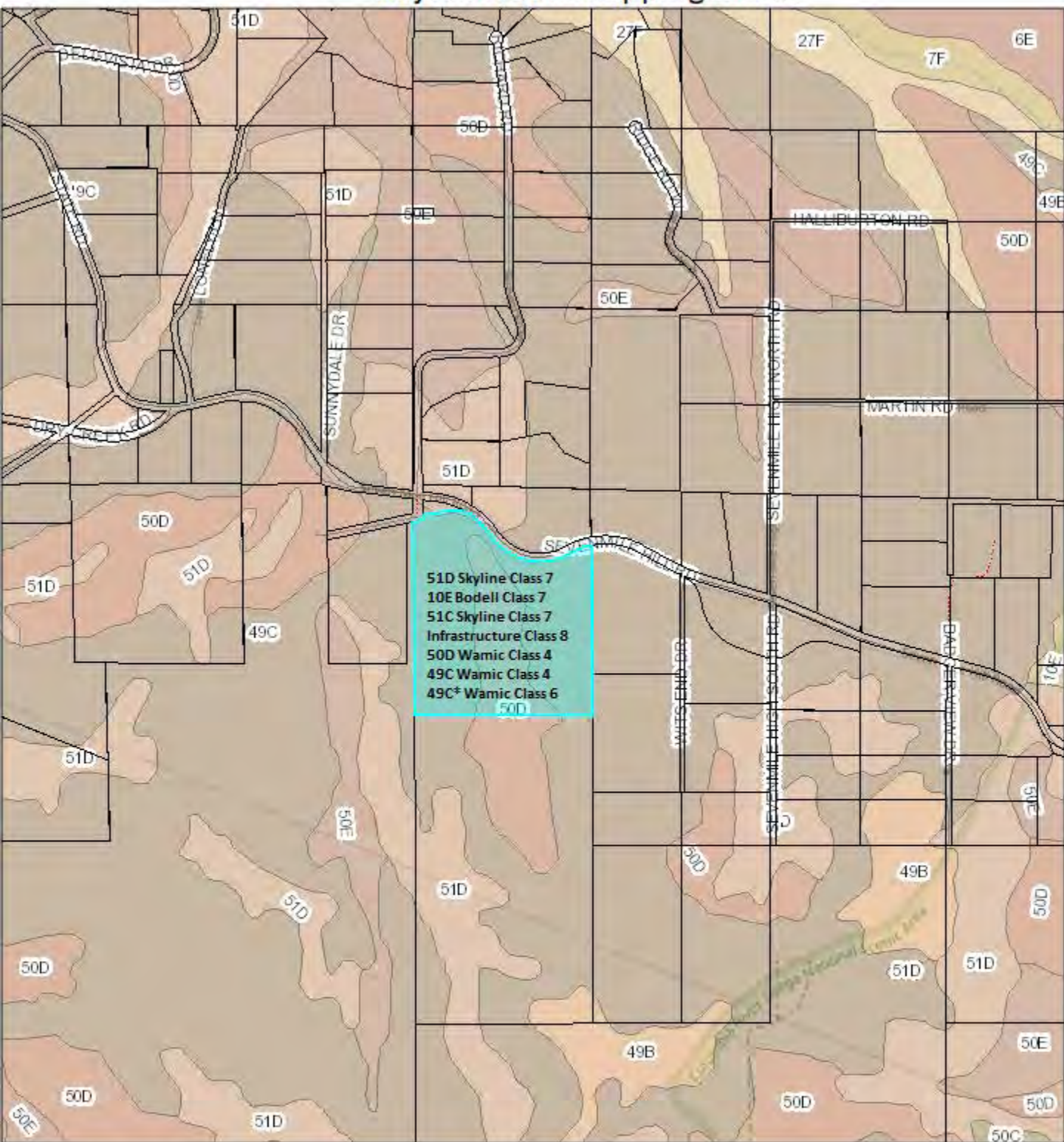
- 50D Wamic Loam
- 49C Wamic Loam
- 51D Wamic-Skyline complex
- 50E Wamic Loam
- 49B Wamic Loam
- Subject Parcel
- Forestry
- Forest-Farm
- Residential

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1:18,056  
0 0.1 0.2 0.4 mi  
0 0.15 0.3 0.6 km  
BOCC 1-538  
OpenStreetMap (and) contributors, CC-BY-SA, NRCS, Lane County, Assessor, Wasco County GIS



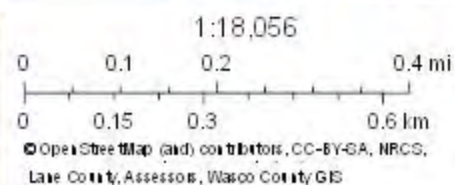
# Adjacent Soil Mapping Units



- 50D Wamic Loam
- 49C Wamic Loam
- 51D Wamic-Skyline complex
- 50E Wamic Loam
- 49B Wamic Loam



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



## **ATTACHMENT D – EXHIBIT 16**

All created diagrams for this Staff Report.



# Legend

Capability Class      Acreage

## Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsited Soils = 20.79 Acres

## Generally Sited Soils

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

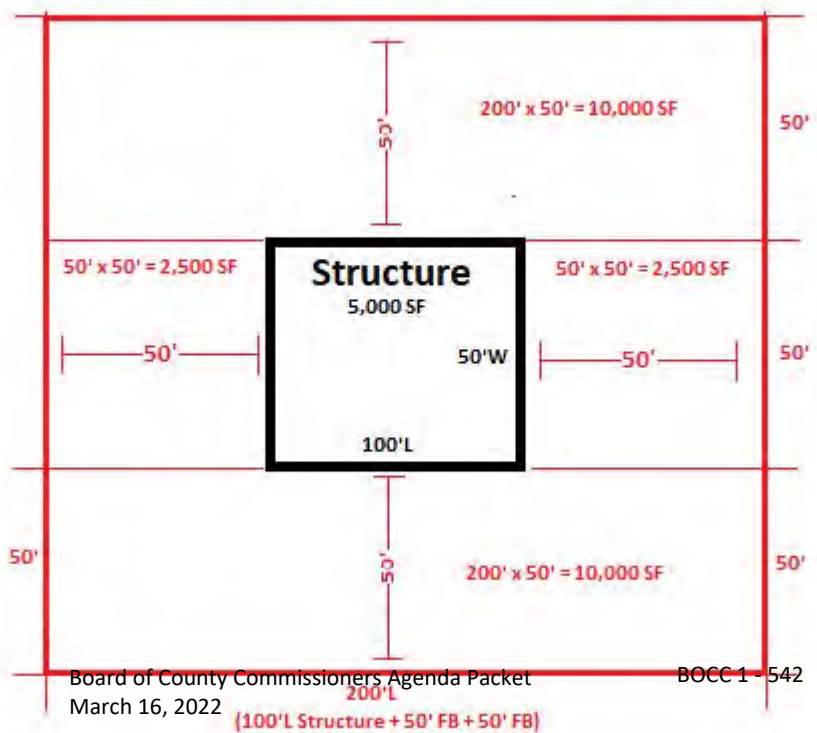
Generally Sited Soils = 19.34 Acres

Total Acres: 40.13 Acres

Percentage of Generally Unsited Soils: 51.8%



25,000 Square Feet (Approximate Total Fire Fuel Break Buffer Area)



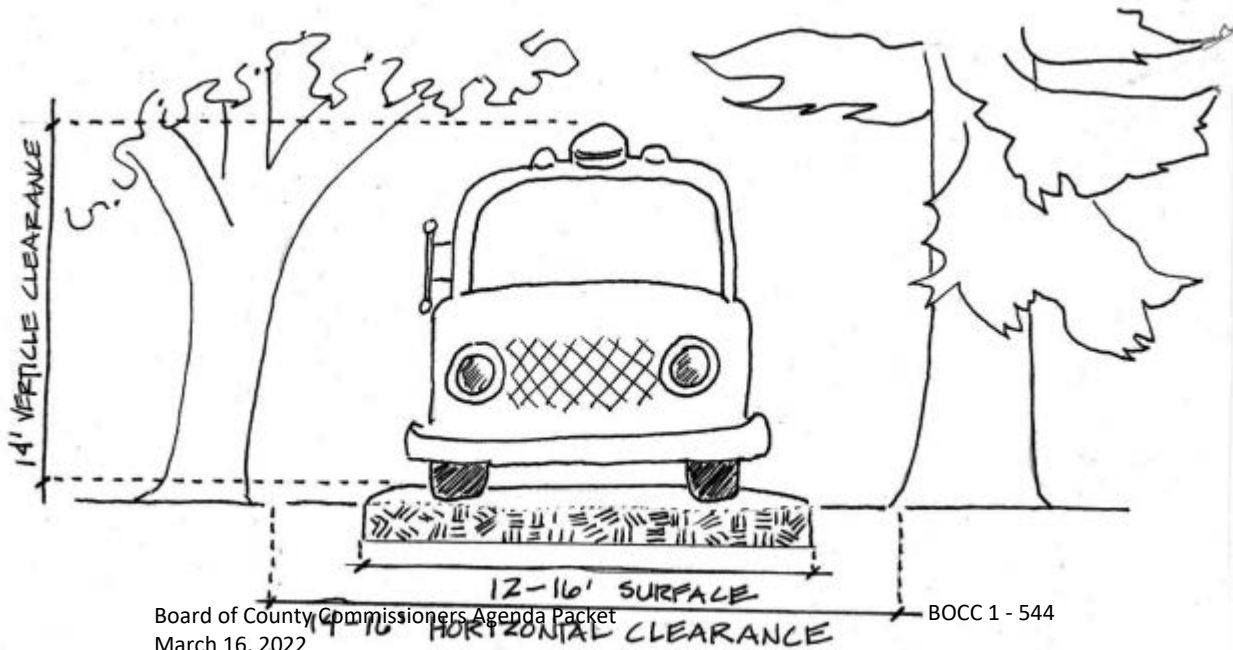
Is your building surrounded by a 50-foot wide fire fuel break?

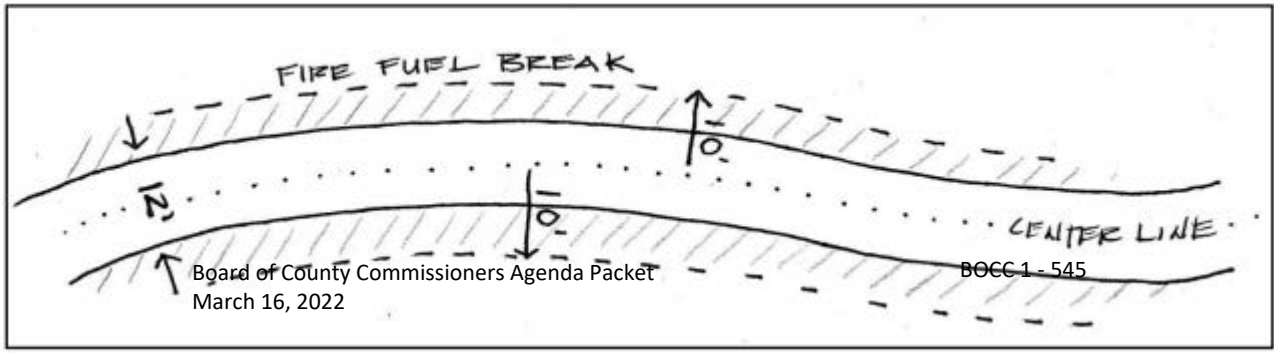


Fire Fuel Break Area Plan View  
Illustration



Fire Fuel Break Area Sample





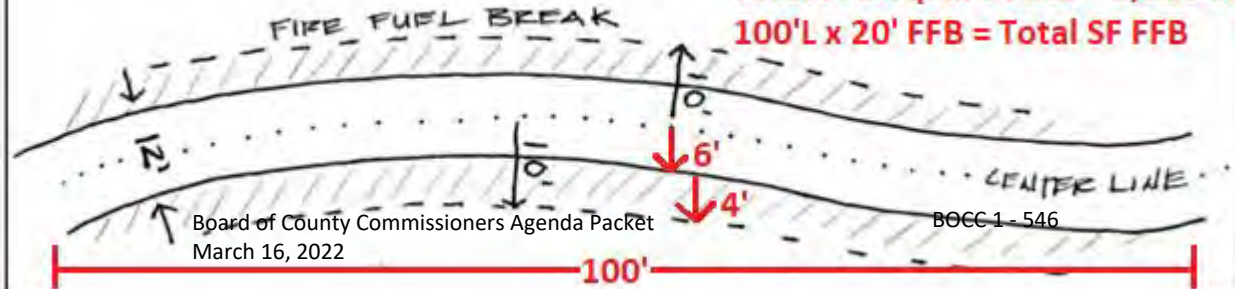
FIRE FUEL BREAK

CENTER LINE

Board of County Commissioners Agenda Packet  
March 16, 2022

BOCC 1 - 545

Total FFB Square Feet = 2,000 SF  
 $100' L \times 20' FFB = \text{Total SF FFB}$





## **ATTACHMENT D – EXHIBIT 17**

Pertinent deeds and minor partitions for this Staff Report.

BOOK 114 PAGE 176

KNOW ALL MEN BY THESE PRESENTS, That We, Wm. M. Howell and Lila

C. Howell, husband and wife,

in consideration of Ten and no/100ths Dollars,

and other good and valuable considerations

to us paid by C. J. Marshall and Sarah Marshall, husband and wife,

do hereby remise, release and forever QUITCLAIM unto the said C. J. Marshall and Sarah Marshall, and not as tenants in community property husband and wife, as tenants by the entirety/ and unto their heirs and assigns

all our right, title and interest in and to the following described parcel of real estate, together with the tenements, hereditaments and appurtenances, situate in \_\_\_\_\_, County of

Wasco, State of Oregon, to-wit:

North half of Northwest Quarter (N $\frac{1}{2}$ NW $\frac{1}{4}$ ) of Section Twenty-seven, Township Two North, Range 12 East of the Willamette Meridian. Also Tracts Two(2), Three (3), Five (5) and Six (6) of Fairmont Orchard Tracts. ALSO the West half of the Southwest Quarter (W $\frac{1}{2}$ SW $\frac{1}{4}$ ) Section 22, Township 2 North Range 12 East of the Willamette Meridian, SAVE AND EXCEPT therefrom all that part of Tract "C", Fairmont Orchard Tracts, lying West of that certain spring situated in said Tract "C", the East line thereof to run parallel with the West boundary line of said Tract "C".

Subject to enough water for household purposes for Iva E. McConnell, her successors or assigns to serve the Westerly part of said Tract "C", not hereby conveyed.

This deed is given for the purpose of correcting a mistake in the description of property as described in deed executed between the parties hereto and recorded in Book 109, Deed Records of Wasco County, Oregon, at Page 185.

TO HAVE AND TO HOLD the same to the said C. J. Marshall and Sarah Marshall, as tenants by the entirety husband and wife / and to their heirs and assigns forever.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 5<sup>th</sup>

day of August A. D. 1948

Executed in the presence of

(SEAL)

(SEAL)

(SEAL)

(SEAL)

STATE OF OREGON,

County of Clackamas

38.

BE IT REMEMBERED, That on this 5th day of August A. D. 1948

before me, the undersigned, a notary public

in and for said County and State, personally appeared the within named Wm. M. Howell and

Lila C. Howell, husband and wife,

who are known

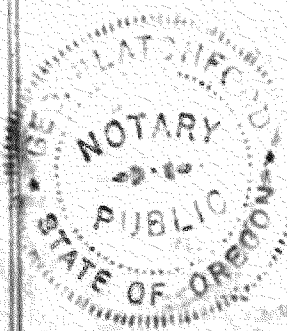
to me to be the identical individual s. described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal the day and year last above written.

*Geo. Blatzford*  
Notary Public for Oregon.

My Commission expires Sept. 18, 1949

MY COMMISSION EXPIRES SEPT. 18, 1949



69400

# QUITCLAIM DEED

Wm. M. Howell and Lila C. Howell, husband and wife,

TO

C. J. Marshall and Sarah Marshall, husband and wife.

STATE OF OREGON, ss  
County of Wasco,

I, D. V. BOLTON, County Clerk and ex officio Recorder of Conveyances, in and for said county, do hereby certify that the within instrument of writing was received for record and recorded in the record of

DEEDS

of said county at

FILED  
COUNTY CLERK'S OFFICE

1948 AUG 13 PM 1 50

D. V. BOLTON  
COUNTY CLERK

In Book

On Page

114



Witness my hand and seal of office at  
Wasco, Oregon, this 13th day of August 1948.  
By *[Signature]* Deputy  
Return to *[Signature]* Agency  
Street 410 1/2 S. 2nd St.  
City The Dalles, Or.

*PLANNING AND ECONOMIC DEVELOPMENT OFFICE*  
WASCO COUNTY

2705 EAST SECOND STREET

THE DALLES, OREGON 97058

KIMBERLY J. JACOBSEN, Director

PHONE: (503) 298-5169

FAX: (503) 296-3769

June 30, 1992

Harry Ketchum  
Ketchum Realty  
700 East 3rd St.  
The Dalles, OR 97058

RE: Lot-of-Record Status of Property Described as Township 2 North, Range 12 East,  
Tax Lot 11691

Dear Harry:

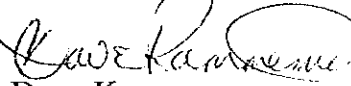
This letter is to confirm this offices recent decision that the above described tax lot is considered a lot-of-record as defined by the Wasco County Land Use and Development Ordinance.

Upon review of the minor partition which resulted in the creation of this parcel, it was discovered the subject parcel in question was an isolated parcel, not a parcel of the partition. However, since this oversight was not identified and corrected at the time of application, November 1984, it is current office policy to recognize the result of this oversight.

As such, this parcel shall be afforded all the rights of any other lot-of-record in the applicable zone.

If you have any questions or if I can be of further assistance please feel free to call me at 298-5169

Best regards,



Dave Kammerman  
Planner

cc: Kimberly Jacobsen, Planning Director  
file #MIP-84-118-WAF24-A

# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

DANIEL C. DUROW, Director of Planning

PHONE: (503) 298-5169

November 14, 1984

Garth Davis, P.R.  
Earl L. Davis EST  
c/o 508 Washington St.  
The Dalles, OR 97058

*11P-84-118-1 AF24*

Dear Mr. Davis:

This letter will serve as your official notification that your minor partition has been accepted by the Planning Office. This partition applies to property located in Township 2 North, Range 12 East, Section(s) 21 & 28 Tax Lot(s) 11600, 11690, and is zoned "F-2 (40)" Forest zone.

We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on November 14, 1984.

Sincerely,



Dan Durow

Director of Planning

Encl. (Copy-Minor Part. Plan)

dm





Parcel #1

PARCEL ONE

The Southwest quarter, Section 21, Township 2 North, Range 12 East of the Willamette Meridian in Wasco County, Oregon, excepting therefrom the following: Beginning at the Northeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon; thence South along the East line of the Southwest quarter 285 feet; thence West, parallel with the North line of said Southwest quarter, a distance of 700 feet, more or less to the center line of Cutoff County Road; thence Northeasterly along said center line, to the intersection of the North line of said Southwest quarter; thence East along said North line 550 feet, more or less to the point of beginning.

PARCEL TWO

Beginning at the Southeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, thence East along the South boundary of said Section a distance of 227.7 feet; thence North and parallel to the East line of said Section, 1,320 feet more or less to the South line of the Northwest quarter of the Southeast quarter of said Section; thence West and parallel to the South line of said Section, 227.7 feet to the East line of said Section; thence South along the East line of said Section to the point of beginning.

Subject to all encumbrances of record including but not limited to Federal tax liens and real property taxes.

## PARCEL #2

### PARCEL I

The South half of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, EXCEPTING THEREFROM the following described property: Commencing at the Southeast corner of the Southwest quarter of said Section 21, thence East along the South line of said Section a distance of 227.7 feet to a point; thence North and parallel to the West line of said Section a distance of 1,320 feet more or less to the South line of the Northwest quarter of the Southeast quarter of said Section; thence West along the South line of the Northwest quarter of the Southeast quarter of said Section to the East line of the Southwest quarter of said Section; thence South along said East line to the point of beginning.

### PARCEL II

The Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, EXCEPTING THEREFROM two parcels as conveyed by Warranty Deed Earl L. Davis, et al to Earl L. Davis et ux., dated May 9, 1980, recorded May 13, 1980, Wasco County, Oregon, Microfilm No. 80-1353, said two tracts being more particularly described as follows:

#### Tract 1

That portion of the East half of the Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying South of the Southerly right of way of the existing 60 foot wide county road, excepting therefrom the East 50 feet thereof.

#### Tract 2

A tract of land in the Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, more particularly described as follows: The East one-half of the Northeast one-quarter of the Southeast one-quarter lying North of the Northerly right-of-way of the existing 60 foot wide county road.

TOGETHER WITH a tract of land in the West one-half of the Northeast one-quarter of the Southeast one-quarter of said Section 21, Township 2 North, Range 12 East of the Willamette Meridian, lying Northerly and Easterly of the easterly right-of-way of the existing 60 foot wide county road.

PARCEL III

The North half and the Northeast quarter of the Southeast quarter of Section 28, Township 2 North, Range 12 East of the Willamette Meridian.

PARCEL IV

Lot 13, SUNNYDALE ORCHARDS, Wasco County, Oregon

All in the County of Wasco and State of Oregon.  
SUBJECT TO all easements and encumbrances of record.

<b>RECEIPT</b>				Date <u>11-13</u> 19 <u>84</u> 6132	
Received From <u>Waco Co. Sheriff</u>					
Address <u>508 Wagon St. The Dalles, Id.</u>					
For <u>Voluntary Partition - Davis Estate</u>				Dollars \$ <u>20.00</u>	
ACCOUNT			HOW PAID		
AMT. OF ACCOUNT			CASH		
AMT. PAID			CHECK		
BALANCE DUE			MONEY ORDER		
			By <u>Waco Co. Sheriff</u>		
			<u>Lindell</u>		

REC-100 (10)



## APPLICATION FOR MINOR PARTITION

## APPLICANT:

Earl L. Davis Estate - Garth Davis P.R. 296-5474  
 (Last Name) (First) (Middle) (Telephone)  
508 Wash. St. The Dalles OR 97058  
 (Street or P.O. Box) (City or Town) (State) (Zip)

## LOCATION OF SUBJECT PROPERTY:

Township: 2N Range: 12 Section: 21 + 28 Tax Lot: 11600 11690 S  
 Legal Owner: Earl L. Davis Beulah Lundell Elna Klepper Dora E. Findley  
 (If not legal owner, state interest in property)

## Size of Parcel:

600 acres  
 (Total contiguous acreage owned by the applicant)

## Existing Zoning:

R2-40

## Minimum Lot Size:

10 ac.

## Existing Land Use:

Pastureland

## Approximate acreage of proposed parcels being partitioned (up to 3 parcels):

PARCEL #1 160 Acres

Dimensions:

Width: ~2700'

Depth: ~3000'

(not square)

Name of Road providing public access:

Osborn Cutoff County Road

PARCEL #2 440 Acres

Dimensions:

Width: 1 mile

Depth: ~6550'

(not square)

Name of Road providing public access:

Osborne Cutoff Rd.

PARCEL #3 \_\_\_\_\_ Acres

Dimensions:

Width: \_\_\_\_\_

Depth: \_\_\_\_\_

Name of Road providing public access: \_\_\_\_\_

Suitability Statement, if applicable: (See Brochure, #7, "Information Required on Tentative Plan")

Not Applicable No investigation has been made of the suitability of any given parcel by an authorized representative of the DEQ; no warranty is made that any parcel will be usable for subsurface sewage disposal.

ACCEPTED BY  
 DIRECTOR OF PLANNING

Board of County Commissioners Agenda Packet  
 March 16, 2022

11-14-84

-1-

RECEIVED

NOV 13 1984

BOCC 1-557  
 Wasco Co. Planning Office

KNOW ALL MEN BY THESE PRESENTS, That Henry Streiff and Clara O. Streiff, husband and wife, grantor, in consideration of Ten dollars, (\$10.00) Dollars, to them paid by Melvin C. Doyle and Maxine Doyle, husband and wife, grantees, do hereby grant, bargain, sell and convey unto the said grantees, their heirs and assigns, all the following real property, with the tenements, hereditaments and appurtenances, situated in the County of Wasco and State of Oregon, bounded and described as follows, to-wit:

The Northwest quarter of the Southeast quarter, (NW $\frac{1}{4}$ SE $\frac{1}{4}$ ) of Sec. Twenty one (21) Township Two North (2N) Range Twelve (12) East of the Willamette Meridian, Wasco County, State of Oregon, containing in all forty acres more or less.

The consideration for this deed is less than \$100.00

To Have and to Hold the above described and granted premises unto the said grantee, their heirs and assigns forever.

And we the grantor, do covenant that we are lawfully seized in fee simple of the above granted premises free from all encumbrances,

and that we will and our heirs, executors and administrators, shall warrant and forever defend the above granted premises, and every part and parcel thereof, against the lawful claims and demands of all persons whomsoever.

Witness our hands and seal, this 25th day of September, 1961

Clara O. Streiff (SEAL)  
Henry Streiff (SEAL)  
(SEAL)

STATE OF OREGON,

County of Wasco,

ss.

On this 25th day of September, 1961,

before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Henry Streiff and Clara O. Streiff, husband and wife, who are

known to me to be the identical individual, described in and who executed the within instrument, and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

John M. Stapleton  
Notary Public for Oregon.

My commission expires Feb. 2nd 1962.

WARRANTY DEED

Henry Streiff et Ux.

Grantors.

TO

Melvin C. Doyle et Ux.

Grantees.

AFTER RECORDING RETURN TO

STATE OF OREGON,  
County of Wasco,

I, D. V. BOLTON, County Clerk and ex officio Recorder of Conveyances, in and for said county, do hereby certify that the within instrument of writing was received for record and recorded in the records of

DEEDS of said county at 1961 SEP 29 PM 4 01

In Book 144 On Page

Witness my hand and seal of office affixed at the date of recording

D. V. BOLTON, County Clerk

By Deputy

Return to Melvin C. Doyle

Street 229 S. E. 1st St.

City The Dalles, Oregon

# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

PHONE: (503) 298-5169

March 12, 1985

Forrester Brokers, Inc.  
By: Karl A. Johnson  
1096 Canyon Way W.  
The Dalles, OR 97058

*MIP-85-103-WAF#4*

Dear Karl:

This letter will serve as your official notification that your minor partition has been accepted by the Planning Office. This partition applies to property located in Township 2 North, Range 12 East, Section(s) 21, Tax Lot \_\_\_\_\_, and is zoned "F2 (40)" Forest.

We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on March 12, 1985.

Sincerely,



Dan Durow  
Director of Planning

Encl. (Minor Partition Plan Application - copy)

dm

APPLICATION FOR MINOR PARTITION

APPLICANT: Forrester Brokers Inc. by

JOHNSON KARL A. 478-3526  
 (Last Name) (First) (Middle) (Telephone)  
1096 Canyon WayW., The Dalles, OREGON, 97053  
 (Street or P.O. Box) (City or Town) (State) (Zip)

LOCATION OF SUBJECT PROPERTY:

Township: T2N Range: 12E Section: 21 Tax Lot: \_\_\_\_\_  
 Legal Owner: Contract Purchaser  
 (If not legal owner, state interest in property)  
 Size of Parcel: 160 acres  
 (Total contiguous acreage owned by the applicant)

Existing Zoning: F-2(40) Minimum Lot Size: 40 acres

Existing Land Use: Grazing

Approximate acreage of proposed parcels being partitioned (up to 3 parcels):

PARCEL #1 40 acres Acres Dimensions: Width: IRREGULAR  
 Depth: \_\_\_\_\_

Name of Road providing public access: Osborn Cut-Off County Road

PARCEL #2 40 acres Acres Dimensions: Width: IRREGULAR  
 Depth: \_\_\_\_\_

Name of Road providing public access: Osborn Cut-Off County Road

PARCEL #3 \_\_\_\_\_ Acres Dimensions: Width: \_\_\_\_\_  
 Depth: \_\_\_\_\_

Name of Road providing public access: \_\_\_\_\_

Suitability Statement, if applicable: (See Brochure, #7, "Information Required on Tentative Plan")

No investigation has been made of the suitability of any given parcel by an authorized representative of the DEQ. No warranty is made that any parcel will be usable for sub-surface sewage disposal.

ACCEPTED BY  
 DIRECTOR OF PLANNING

3-11-85  
[Signature]  
 BOCCT-560

Contiguous property owners to the proposed Minor Partition, and those which may be affected by the partition:

NAME

ADDRESS

Estate of Earl Davis- Beulah Lundell

115 W. 14th St., The Dalles, Ore. 97058

Jim Foote

2505 Dry Creek Road, Mosier, Ore. 97040

NOTE: Submit two (2) copies of a tentative plan, approximately to scale, on 8½" by 11" paper. See instructions for additional information needed on the tentative plan.

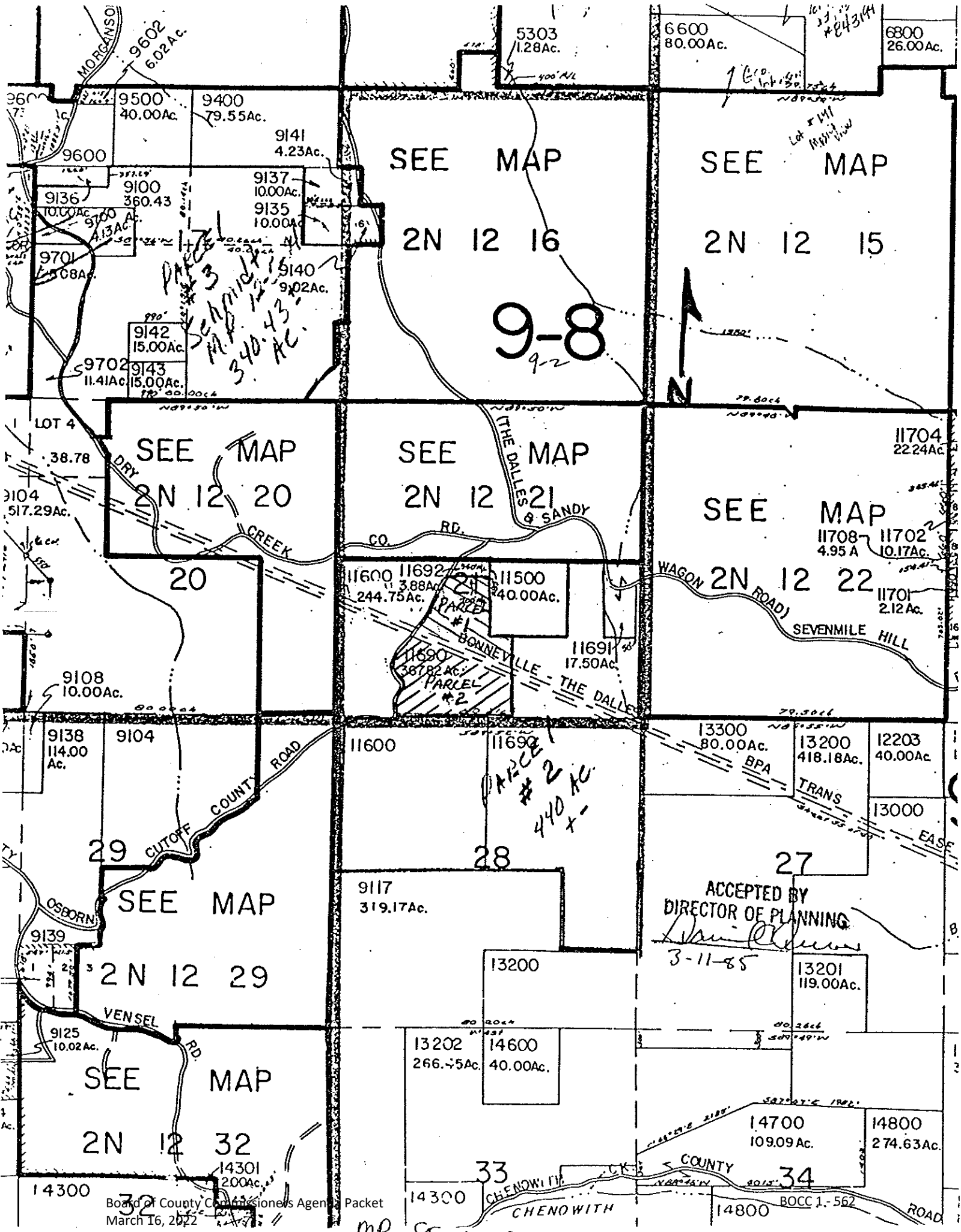
Karl Johnson  
Petitioner

March 1, 1985  
Date

FILING FEE (\$20.00) : \_\_\_\_\_

Make checks payable to the WASCO COUNTY PLANNING OFFICE





PARCEL #1

Property Description  
14-29921

EXHIBIT A

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, County of Wasco and State of Oregon, which lies Easterly of the Osborn County Cutoff Road and Northeasterly of the Southerly right-of-way line of the Bonneville-The Dalles Bonneville Power Administration Transmission Line Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Augusta P. Crosby, et al., a copy of which was recorded in the Deed Records of Wasco County, Book 91, Page 56 and amended by Amended Judgment on Declaration of Taking, a copy of which was recorded in the Deed Records of Wasco County, Book 91, Page 436.

EXCEPTING THEREFROM beginning at the Northeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon; thence Southalong the East line of the Southwest quarter 285 feet; thence West, parallel with the North line of said Southwest quarter, a distance of 700 feet, more or less to the center line of Cutoff County Road; thence Northeasterly along said center line, to the intersection of the North line of said Southwest quarter; thence East along said North line 550 feet, more or less to the point of beginning.

J

## PARCEL #2

That portion of the Southwest quarter of Section 21, T2N, R12E of W.M., County of Wasco, State of Oregon that lies Easterly of the Osborn County Cutoff Road and Southerly of the Southerly right-of-way line of the Bonneville-The Dalles Bonneville Power Adm. Transmission Line Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Augusta P. Crosby, et al, a copy of which was recorded in the Deed Records of Wasco County, Oregon, Book 91, Page 56 and amended by Amended Judgment on Declaration of Taking, a copy of which was recorded in the Deed Records of Wasco County, Oregon, Book 91, Page 436.

ALSO, beginning at the Southwest corner of the Southwest quarter, Southeast quarter of Section 21; thence East 227.7 feet on the South border of said Section 21; thence North on a line that is parallel to the quarter section line to a point that is 189 feet perpendicular distance to the centerline of the Bonneville-The Dalles Bonneville Power Administration Transmission Line Easement; thence Northwesterly along said parallel line to a point *on quarter sec* perpendicular distance of 189 feet from centerline of said easement; thence South along said quarter section line to the point of beginning. *with a chat is line*

# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

DANIEL C. DUROW, Director of Planning

PHONE: (503) 298-5169

March 26, 1986

*M/P 36-103 WAF24*

*~~M/P 87-110 WAF24~~*

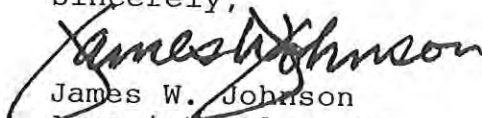
Forrester Brokers, Inc.  
c/o Karl Johnson  
1096 Canyon Way W  
The Dalles, OR 97058

Dear Karl:

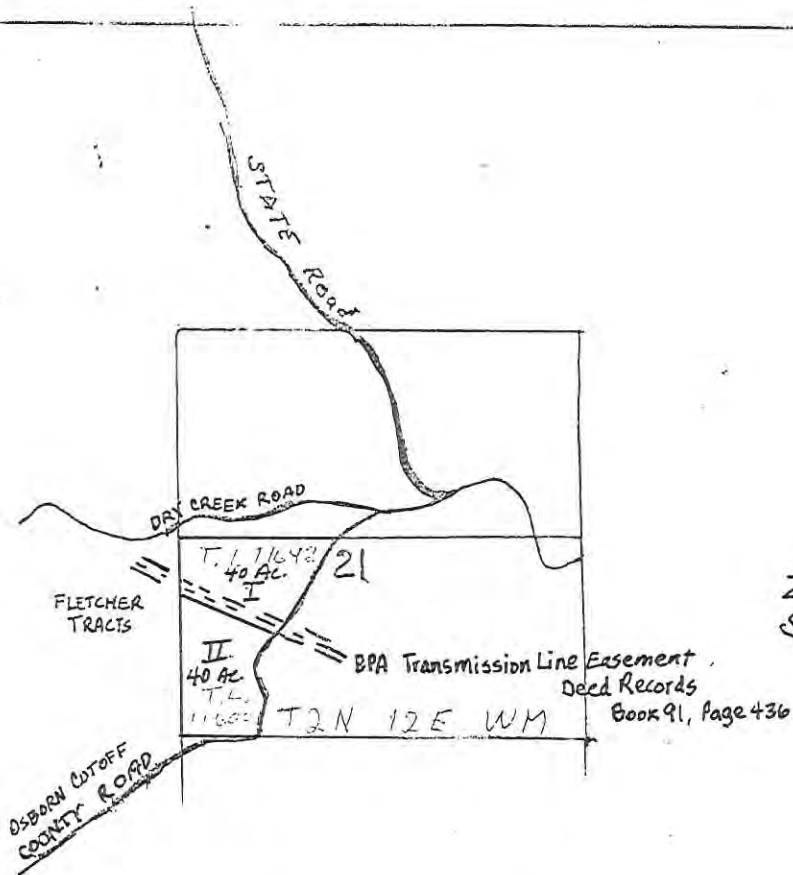
This letter will serve as your official notification that your preliminary and final minor partition has been approved by the Planning Office. This partition applies to property located in: Township 2 North, Range 12 East, Section 21, Tax Lot(s) 11600 & 11604, and is zoned "F-2(40)" Forest Zone.

We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on March 25, 1986.

Sincerely,

  
James W. Johnson  
Associate Planner

Encl: (Minor Part. Plan Final-copy)



Zoning F-2 (40) Forest Zone  
Scale 1" = 2,000'

Deed Records  
Book 91, Page 436

Minor Partition  
for  
Forrester Brokers Inc.  
3/19/86

We, the owners of the land  
shown herein, hereby de-  
clare that this division  
of land has been made with  
our free consent and in  
accordance with our desire

FORRESTER BROTHERS INC  
Ruth L. Johnson 3/19/86  
OWNER DATE

OWNER DATE

Subscribed and sworn before  
me on this 19th day of  
March, 1986.

Notary Public for the State  
of Oregon  
JLANI KARE  
My Commission Expires  
NOTARY PUBLIC - OREGON  
9-15-89

I hereby, certify that this  
partition was examined and  
approved this 25 day  
of March, 1986.

N/A  
Wasco Co. Surveyor

I hereby certify that this  
partition was examined and  
approved this 25 day  
of March, 1986.

Daniel A. Duro  
Wasco Co. Planning Dir.

RECORDING INFORMATION  
File Number 86-0002  
Instrument Received on  
the 25th day of March  
1986 at 1:50 P. M.

Sue A. Proffitt  
Wasco Co. Clerk

No investigation has been made by a  
representative of the Department of  
Environmental Quality and no warranty is  
made that any parcel will be usable  
for subsurface sewage disposal.



FILED Wasco Co  
THU MAR 25 1 50 PM '22

Parcel I

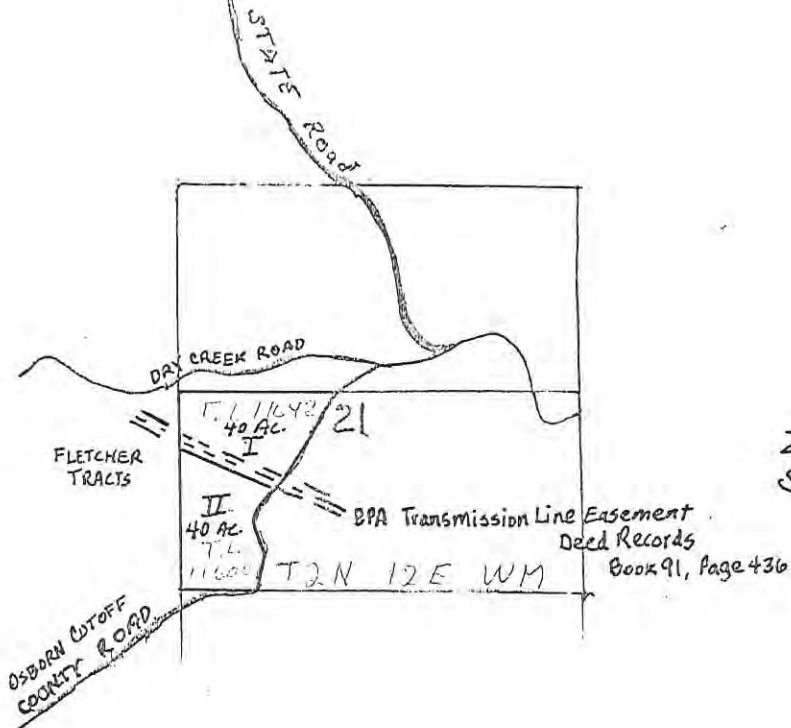
SUE A. PROFFITT

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County Oregon, lying west of the Osborn Cutoff County Road except that property lying southerly of the south boundary of the Bonneville Power Easement.

Parcel II

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying southerly of the south boundary of the Bonneville Power Eastment and westerly of the Osborn Cutoff County Road.

ACCEPTED  
DEPARTMENT OF PLANNING  
*[Signature]*  
3-25-22



Zoning F-2 (40) Forest Zone  
Scale 1" = 2,000'

Deed Records  
Book 91, Page 436

Minor Partition  
for  
Forrester Brokers INC.  
3/19/86

No investigation has been made by a representative of the Department of Environmental Quality and no warranty is made that any parcel will be usable for subsurface sewage disposal.

We, the owners of the land shown herein, hereby declare that this division of land has been made with our free consent and in accordance with our desires.  
FORRESTER BROTHERS INC.  
With L. Johnson 3/19/86  
OWNER DATE

OWNER DATE

Subscribed and sworn before me on this 19th day of March, 1986.

Notary Public for the State of Oregon  
My Commission Expires 9-15-89  
NOTARY PUBLIC - OREGON

I hereby, certify that this partition was examined and approved this day of 19.

N/A  
Wasco Co. Surveyor

I hereby certify that this partition was examined and approved this 25 day of March, 1986.

Daniel C. Duro  
Wasco Co. Planning Director

RECORDING INFORMATION  
File Number 86-0008  
Instrument Received on the 25th day of March 1986 at 1:50 P.M.

Sue A. Proffitt  
Wasco Co. Clerk

WASCO TITLE, INC.

TITLE INSURANCE - ESCROWS

TELEPHONE (503) 296-2495

512 WASHINGTON STREET

THE DALLES, OREGON 97058

February 26, 1986

Karl Johnson  
1096 Canyon Way West  
The Dalles, Oregon 97058

Order No. 14-30488

Dear Mr. Johnson:

This company is prepared to issue title insurance policy, in standard form, as of February 26, 1986 at 8:00 o'clock A.M., insuring the title to:

*Parcel II* That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying southerly of the south boundary of the Bonneville Power Easement and westerly of the Osborn Cut-Off County Road;

*Parcel I* in That portion of the SW 4 Sect 21, Twp 2 N R 12 E W 1/4 Wasco Co, lying west of the Osborn cut off Co Rd except that property lying southerly of the B. P. Easement, FORRESTER BROTHERS, INC., a Washington corporation;

subject to the usual printed exceptions and conditions contained in said policy, and

1. The usual reservations as contained in patent issued by the United States of America.
2. The rights of the public in and to the portions thereof included within the boundaries of roads and highways.
3. Public utility easements, if any shall be found to exist on the premises.
4. Easement in favor of the United States of America, including but not limited to the following: "Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Agusta P. Crosby, et al., in the U. S. District Court for Oregon, No. 176, a copy of which was filed in the Deed Records of Wasco County, Oregon, Book 91, Page 56, on October 5, 1939. Said decree was amended by Amended Judgment on Declaration of Taking, a copy of which was filed in the Deed Records of Wasco County, Oregon on April 11, 1940, Book 91, Page 436. (Affects Secs. 21 & 28)
5. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Imo G. Klepper, lessor, to Husky Oil Company, lessee, dated December 6, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0764. (Affects additional property also)

*Bonneville*  
*643-2457*



Karl Johnson  
Page 2  
February 26, 1986

6. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Deulah E. Lundell, lessor, to Husky Oil Company, lessee, dated December 5, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0765. (Affects additional property also)
7. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Earl L. Davis, lessor, to Husky Oil Company, lessee, dated December 4, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0763. (Affects additional property also)
8. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Dora C. Findley, lessor, to Husky Oil Company, lessee, dated December 6, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0766. (Affects additional property also)
9. Trust Deed, including the terms and provisions thereof, executed by Forrester Brokers, Inc., to Wasco Title, Inc. as trustee for the Estate of Earl L. Davis, dated December 17, 1984, recorded December 21, 1984, Wasco County, Oregon, Micro-Film No. 84-3169, given to secure the sum of \$36,000.00 and interest thereon. (Affects additional property also)
10. Electric Line Right of Way Easement, including the terms and provisions thereof, Forrester Brokers, Inc., (Karl A. Johnson), grantor, to Wasco Electric Cooperative, Inc., grantee, dated December 31, 1984, recorded March 15, 1985, Wasco County, Oregon, Micro-Film No. 85-0505.
- out 11. Contract, including the terms and provisions thereof, between Forrester Brokers, Inc., a Washington corporation, seller, and William C. Daley and Rebecca P. Daley, buyer, dated and recorded May 8, 1985, Wasco County, Oregon, Micro-Film No. 85-0949.
- out 12. Easement for ingress and egress as reserved in Contract between Forrester Brokers, Inc., and William C. Daley and Rebecca P. Daley, recorded May 8, 1985, as Micro-Film No. 85-0949, shown above.
- out 13. 9.2 2N 12 11600 1985-86 taxes, \$197.24 and interest, unpaid.  
9.2 2N 12 11604 1985-86 taxes, \$306.06 and interest, unpaid.

There are no unsatisfied judgments against Paul J. Bonneau or Waiyee Bonneau.

Sincerely,

Wasco Title, Inc.

  
Pat McLoughlin, President

PMcL/dw  
cc: Bonneau



SEE MAP

SEE MAP

2N 12 6

2N 12 5

(PIONEER)

9-6

SEE MAP

SEE MAP

SEE MAP

2N 12 7

2N 12 8

2N 12 9

2N 12 10

BEHRENS

MORGANSON

ROWENA

SEE MAP

SEE MAP

2N 12 18

2N 12 16

9-8

DIGGER RD.

SEE MAP

SEE MAP

SEE MAP

2N 12 20

2N 12 21

2N 12 19

20

CREEK

CREEK

LITTLE DALLIES

SANDY



WASCO COUNTY PRELIMINARY MINOR PARTITION APPLICATION

APPLICANT:

SURVEYOR: (If Applicable)

Forrester Brokers INC

(Last) (Middle) (Last)

(Last) (First) (Middle)

1096 Canyon Way West

(Street or P.O. Box)

(Street or P.O. Box)

The Dalles Ore 97058

(City) (State) (Zip)

(City) (State) (Zip)

Telephone: 478 3526

Legal Owner: Forrester Brokers INC

If applicant is not legal owner, state interest in property:

LOCATION OF SUBJECT PROPERTY:

Township: 2 N Range: 12 E Section: 21 Tax Lot: 11600, 11604

PROPERTY CHARACTERISTICS:

Size of Parcel: 40 ACRES  
(Total contiguous acreage owned by applicant)

Existing Zoning: FR-40 Plan Designation: Forest

Existing Land Use:

PROPOSED PARTITION:

Parcel #1 40 Acres

Dimensions: Width: Irregular  
Depth: V

Name of road providing public access: Osborn cut off Co Rd

ACCEPTED BY  
DIRECTOR OF PLANNING

[Signature]

3-25-86

Preliminary Minor Partition Application  
Page 2 of 3

Parcel #2 40 Acres Dimensions: Width: Irregular  
Depth: \_\_\_\_\_  
Name of road providing public access: Osborne Ct Off Co. Rd  
Parcel #3 \_\_\_\_\_ Acres Dimensions: Width: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Name of road providing public access: \_\_\_\_\_

Proposed Water Supply: Drilled Well  
Proposed Sewage Disposal: Septic Tank  
(See Note #5)

NOTE: The following supporting documents shall be attached:

1. Preliminary plan map of the partition showing:
  - a. boundaries of the total contiguous ownership
  - b. boundaries of each proposed tract
  - c. the number assigned to each tract
  - d. acreage of each tract I 40 ± II 40 ±
  - e. location and name of existing roads
  - f. any private roads or easements and all relative restrictions or reservations Bonneville The Dalles Transmission line
  - g. location of water supply and sewage disposal on each tract
  - h. predominant natural features, such as water courses and their flows, marshes, rock outcroppings, and areas subject to flooding, sliding or other natural hazards
  - i. north point, scale and date
2. A vicinity map of such scale to clearly locate the proposed partition in relation to adjacent subdivisions, partitions, roadways and other land parcels.
3. Draft of any proposed restrictions and covenants affecting the partitioned land.
4. Legal description for each of the proposed tracts.
5. If not sewerred and located in an "F-1", "F-2", "A-1" and "FF-40" zones, a statement signed by an authorized representative of the

Preliminary Minor Partition Application  
Page 3 of 3

Department of Environmental Quality, State of Oregon, or County Sanitarian regarding the suitability of each parcel to be partitioned for subsurface sewage disposal; or a signed statement shown on the face of the final partition plan that no investigation has been made of representative of the Department of Environmental Quality, and that no warranty is made that any parcel will be usable for subsurface sewage disposal;

If not sewered and located in an "FF-10", "AR", "RR", "R-1", "R-2", "R-3", "RHM-2", "R-C", "C-1", "M-1", "M-2", or "M-3" zone; as statement signed by an authorized representative of the Department of Environmental Quality approving each parcel to be partitioned for subsurface sewage disposal; or a officer of a public sewer district or corporation warranting the availability of sewer hook-ups for each parcel to be partitioned.

FORRESTER BROTHERS, INC.

Ruth L. Johnson  
(Petitioner)

3-19-86

(Date)

NO INVESTIGATION HAS BEEN MADE OF REPRESENTATIVE  
OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY,  
AND THAT NO WARRANTY IS MADE THAT ANY PARCEL  
WILL BE USABLE FOR SUBSURFACE SEWAGE DISPOSAL.

## **ATTACHMENT D – EXHIBIT 18**

William H. Sumerfield, Attorney for the Applicant David Wilson

Gary Kitzrow, M.S., Certified Soil Classifier (See also Exhibit 10)

David W. Rogers

Steve Hunt

Letter from former Wasco County Planner Karen Mirande added on March 2, 2022, by David Wilson.

# PHILLIPS REYNIER SUMERFIELD & CLINE, LLP

DEBORAH M. PHILLIPS  
RONALD H. REYNIER  
WILLIAM H. SUMERFIELD  
JULIE L. CLINE

ATTORNEYS AT LAW  
P. O. BOX 758  
718 STATE STREET  
HOOD RIVER, OREGON 97031

(541) 386-4264  
FAX: (541) 386-2557  
E-MAIL: [bill@phillipsreynier.com](mailto:bill@phillipsreynier.com)

Licensed in Oregon & Washington

March 2, 2022

Daniel Dougherty, Associate Planner  
Wasco County Planning Department  
2705 E. Second Street  
The Dalles, OR 97058  
[danield@co.wasco.or.us](mailto:danield@co.wasco.or.us)

RE: David Wilson zone change, comprehensive plan amendment, and goal exception applications – BOC remand hearing

Mr. Dougherty,

I am responding to the comments submitted by Ms. Dooley, Ms. Barker, and Mr. Sargetakis. Some of the comments were submitted literally minutes prior to the December 7, 2021, Planning Commission hearing, and I was not able to respond or even review them prior to that hearing. My comments are as follows:

## Soils Study and Map

This application previously proceeded using the NRCS soils map and data, which showed that the subject property consisted predominantly of two types of Class 4 soils. LUBA relied on this information in its remand decision: “[G]iven the undisputed evidence that the soil types on the property support Ponderosa Pines, the county’s findings are inadequate to explain why the remaining open portion of the subject property could not be planted and uses for forestry purposes” and “given the soil types on the property, the county’s findings do not establish that forest use of the property is impracticable or explain why trees could not be planted on the property.”<sup>1</sup>

The NRCS map is a broad-brush representation of estimated soil types for area properties. Given budget and time constraints, not every property may be individually surveyed. DLCD recognizes the limitations of the NRCS data, and on its website outlines a process landowners may use to challenge the data as it applies to their property:

NRCS does not have the ability to map each parcel of land, so it looks at larger areas. This means that the map may miss a pocket of different soils. DLCD has a process landowners can use to challenge NRCS soils information on a specific property. Owners who believe soil on their property has been incorrectly mapped may retain a “professional soil classifier...certified by and in good standing with the Soil Science Society of America” ([ORS 215.211](#)) through a process

---

<sup>1</sup> LUBA opinion at 14 and 15



administered by DLCD. This soils professional can conduct an assessment that may result in a change of the allowable uses for a property.

\*\*\*\*\*

DLCD maintains a list of soils professionals who are qualified to help landowners prepare a property-specific soil assessment. Other soil consultants may be qualified but are not allowed to take part in the program unless they apply to DLCD. A property owner must select a professional from the list below in order to use non-NRCS soils data in a land use application. The soils professional conducts a site investigation and prepares a soils assessment for review by DLCD.

DLCD will review the soils assessment upon receiving a completed [application form](#) and the \$625 fee. Occasionally soils assessments are audited by a DLCD soils consultant who may need to go to the subject site to investigate. The owner's soils professional is given an opportunity to correct any issues identified by DLCD. DLCD does not submit a soils assessment to a local government without applicant consent and a completed Soils Assessment [Release Form](#).<sup>2</sup>

Following that procedure, Mr. Wilson hired soils specialist Gary Kitzrow from DLCD's approved list. Mr. Kitzrow conducted a soils study at the subject property on December 18 & 19, 2020, and found that the property consisted predominantly of unsuitable Class 7 soils, and Class 8 infrastructure. Mr. Kitzrow submitted his report to DLCD, which reviewed the report and found that "this soils assessment is complete and consistent with reporting requirements for agricultural soils capability." DLCD forwarded the accepted report to the county.

Mr. Kitzrow's study is comprehensive. Using a backhoe, he took samples at 23 separate locations on the subject property. He analyzed each sample, finding some areas of Class 4 soil types, but predominantly Class 7 soils. He put his professional reputation and approved status at DLCD on the line by signing and submitting his reports. Relying on drive by photos from the roadside and vague, hearsay, anecdotal reports of bountiful crops of alfalfa, Ms. Barker and Ms. Dooley attempt to question Mr. Kitzrow's expertise, report, and conclusions. Ms. Dooley argues with the infrastructure calculation, alleging that the property contains an "illegal dwelling." This is pure nonsense; there are no illegal structures on the property. The original homestead exists as an unoccupied outbuilding, which is permissible and proper. Mr. Sargetakis takes his own shots at Mr. Kitzrow, using satellite images to argue that Mr. Kitzrow's soil suitability map is inaccurate and calling the soil types found by Mr. Kitzrow "*if accurate*, seemingly anomalous."

These arguments are frankly offensive. Mr. Kitzrow's professional qualifications are undisputed. His report is thorough, professional, and unassailable. The soil types found are consistent with testimony at the prior hearings as to the unsuitability of the subject property for

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<sup>2</sup> <https://www.oregon.gov/lcd/FF/Pages/Soils-Assessment.aspx>

resource use, and with the testimony of Steve Hunt that recent efforts to grow grass hay on the property were unsuccessful.

## LEGAL ANALYSIS

### **Impracticability of Property For Forest Uses**

The unsuitable soil types on the subject property weigh heavily here. Mr. Sargetakis argues that the burden of showing impracticability cannot be overcome if the property is capable of generating a gross income, citing *1000 Friends of Oregon v. Benton County*, 32 Or App 413 (1976). This position was unequivocally rejected by the Oregon Supreme Court in *Wetherell v. Douglas County*, 342 Or 666, 680 (2007):

We therefore reject the alternative definitions offered by the Court of Appeals and by petitioners. Nothing in the words of ORS 215.203(2)(a) requires, or provides any support for, the Court of Appeals' definition of the word "profit" to mean "gross income." *Evidence* of the gross income that has been or could be generated from the farm use of a parcel of land may well be relevant in determining whether the land is or could be employed for the "primary purpose of obtaining a profit," but, to put it bluntly, "profit" does not mean "gross income."

Mr. Sargetakis, and LUBA, fault the county for failing to adequately consider the relationship of the subject property to adjacent uses, specifically the adjacent lands zoned for forest use. But both take this criterion in isolation, and fail to consider how the development patterns of the area "has cast a mold for future uses." *1000 Friends of Oregon v. LCDC (Curry County)*, 301 Or 447, 501 (1986). That development pattern has cast a mold which is solidly residential, at least for properties adjoining Seven Mile Road. If that pattern were the only criterion, and if the subject property contained suitable soils, this argument might have some resonance. But the soils study is a game changer in this context. It is the *combination* of the unsuitable soils, the proximity to residential properties in a predominantly residential area, and the fact that it is the only property on Seven Mile Road zoned for resource use which make this property unique, and which distinguishes it from the property in each and every case cited by Mr. Sargetakis.

### **Unsuitability for Farm Use**

Nor is the subject property suitable for farm use. "Agricultural Land" as defined in Goal 3 includes:

(A) Lands classified by the U.S. Natural Resources Conservation Service (NRCS) as predominantly Class I-IV soils in Western Oregon and I-VI soils in Eastern Oregon;

(B) Land in other soil classes that is suitable for farm use as defined in ORS 215.203(2)(a), taking into consideration soil fertility; suitability for grazing; climatic conditions; existing and future availability of water for farm irrigation purposes; existing land use patterns; technological and energy inputs required; and accepted farming practices; and

(C) Land that is necessary to permit farm practices to be undertaken on adjacent or nearby agricultural lands.<sup>3</sup>

Since we now know that the subject property consists predominantly of generally unsuitable Class 7 soils, and because it is not necessary to support adjacent farm practices, it will only qualify as agricultural land if it is otherwise suitable for farm use after taking into account the factors in Section B.

As used here, “farm use” means the current employment of land for the primary purpose of obtaining a *profit* in money by raising, harvesting and selling crops.<sup>4</sup> The evidence in this record establishes that the subject property has not generated any income, much less a profit. All evidence is to the contrary.

### **Approval Does Not Set Precedent**

The Planning Commission was very concerned about the precedential value a decision favorable to Mr. Wilson might have, seemingly fearing a flood of zone change applications from suddenly emboldened owners of resource zoned lands. A favorable decision will have no precedential value whatsoever. While Mr. Kitzrow opined that the NRCS maps may overrepresent Wamic soils in the area, any landowner seeking a change from resource land based on a soils analysis will have to commission their own soils study, submit it to LCDC for approval, and then go through the same exhaustive, hideously expensive, contentious process as Mr. Wilson has, with no guaranteed outcome. And this application turns on much more than just the unsuitability of the soils. At the risk of flogging an already thoroughly deceased horse, the *combination* of factors in the case of the subject property are truly unique. No other property will be able to piggy-back on this decision without showing identical factors.

Please add this letter to the record on remand.

Sincerely,



William H. Sumerfield

cc: client

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<sup>3</sup> OAR 660-033-0020 (1)

<sup>4</sup> ORS 215.203 (2)





# GSEA

*Growing Soils Environmental Associates*

Gary A. Kitzrow, M.S., C.P.S.S./S.C.

Certified Professional Soil Classifier/Certified Professional Soil Scientist

541-817-4749

458-292-6442

P.O. Box 18  
Oakland, OR 97462

To: Wasco County Board of Commissioners  
RE: Dave Wilson Remand Hearing/Zone Change

kitzrowga@gmail.com

Commissioners,

My name is Gary A. Kitzrow. I performed the soil assessment (Order I Soil Survey) for Dave Wilson's property. My business address is P.O. Box 18, Oakland, Oregon 97462. My phone number is 458.292.6442. I am a Master of Science, Certified Professional Soil Classifier and Certified Professional Soil Scientist #1741, and Principal Soil Taxonomist. I am one of 5 soil professionals currently certified by Oregon's LCDC to assist landowners with a property-specific soil assessment. I want to address issues raised regarding my study by several commenters to Mr. Wilson's zone change application. As a former USDA-NRCS Soil Scientist here in Oregon, I have complete and detailed knowledge of the requirements to perform an Order I and Order III Soil Survey. I have completed such an Order I Soil Survey for this subject property.

In preparing for field work at Mr. Wilson's property, I studied the USDA Order 3 (general) soil map for Wasco County (the NRCS map). An Order 3 map is very broad and non-specific in make-up by definition. The current USDA Soil Survey for the study-acres was completed at an *Order 3 level*. The associated USDA soil maps were published at a scale of 1: 24,000. Order 3 soil surveys are general, non-site-specific soil inventories designed to be used by ranchers, farmers and timber operators and oftentimes in Wasco County yield soil maps showing two or more non-specific soil mapping units (51D Wamic-Skyline Complex is a good example). The intent of these surveys was NOT to provide site specific soil capability information for small, finite land bases undergoing zoning and land use change. As I stated in my report,

No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order I Soil Survey for the current subject property, Wamic soils appear to be over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region and on this lot of record as well. Wamic soils are mapped on virtually every landform in this area of Wasco County. Although a pervasive soil series, there are many other soils in



this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

Indeed, Wamic soils are very dominant in this region as a whole. Nonetheless, given the natural variability of landforms and geomorphic surfaces within the subject property, it makes perfect sense that our Order I Soil Survey for this property would be able to and in fact has delineated out several different and contrasting soil mapping units. This is exactly the case. The poorer capability (Class 7) soils Skyline and Bodell are prominent soils within the subject property. Because there are trees present on these two soils is NOT the governing factor to determine *Soil Capability Class*. The actual soil morphology and genesis of the soil profiles examined and classified for this report govern the Soil Capability Rating. Morphologically, Bodell and Skyline soils both have severe limiting factors which limit plant growth as compared with the Wamic soil series (Mapping Unit).

In short, the NRCS map scale is too broad (1:24,000) (Order III) covers too much area with too little data in the area of Mr. Wilson's property and adjacent properties. In my field study of Mr. Wilson's property, I analyzed 23 separate test sites on various areas of the property. I found the NRCS map was accurate in its mapping ONLY to an Order 3 scale of reporting. While there are Wamic soils present, the majority of the property consists of shallow, generally unsuited Class 7 Skyline and Bodell soils and Class 8 infrastructure. The better capability and generally suited Wamic soils comprise a minority of this lot of record. The infrastructure area along the western limits (1.48 Ac map unit) includes area of cut and fill and may also be labeled 'Impact Areas' since no outbuildings are present. Nonetheless, this Impact area has been degraded by severe disturbance over a long period of time hence the compaction etc. we confirmed has permanently degraded this small portion of the ownership. This area is Class 8.

I explained my soil findings in an email to County Planner Daniel Dougherty on November 26, 2021:

Skyline units on my report are MONOTAXA units meaning one soil per delineation. Wamic soils are NOT found within those mapping units except as an inclusion. Order I Soil Surveys (such as the current one) separates out soil "Complexes" into their component parts. Order I Soil Surveys are Site Specific Soil Surveys with a high degree of confidence in the final delineations correlated. I have mapped over 1 million acres of soils in the USA and in 2 foreign countries. I use the same USDA-protocols in all jurisdictions I have published Soil Survey Reports in (8) states. The goal of Order I Soil Surveys is to make every soil mapping unit a monotaxa element.



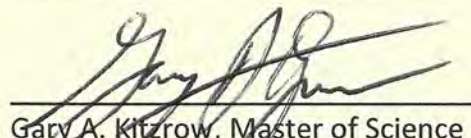
I also explained to Mr. Dougherty why there were no "green sheets" available for the Skyline complex soils found on Mr. Wilson's property:

The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a Non-Commercial Forest Soil. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

I am frustrated by comments questioning the accuracy of my work and impugning my integrity. The assessment form I submit to DLCD requires that "I hereby certify that the attached soils assessment I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department." I take that certification seriously, as my professionalism and credibility is vital to maintain my recognition by DLCD. I suspect the commenters simply fail to understand the complexity of this work, the limitations inherent in the NRCS mapping, or the high degree of variability of soils found in this area. It is not possible to determine soil types and distributions on a property from roadside pictures or satellite views. There is NO substitute for on-the-ground field verification of all soils present, their distribution and effects on the Capability of the overall lot of record when considering a *preponderance* of the site. The fact that trees may be growing on portions of the property does not mean that it is suitable for forest practices, or can support any kind of generally suitable resource use. The detailed and comprehensive Soil Survey completed by myself is valid and accurate and reflects the soil mapping unit elements present on the property at a very site-specific reporting basis.

Mr. Wilson's property consists predominantly of Class 7 soils and Class 8 infrastructure. The property is *generally unsuited* for resource use by preponderance.

Dated this 2nd day of March, 2022.



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Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier  
Certified Professional Soil Scientist  
Principal Soil Taxonomist, GSEA

Bill@phillips, reynolds, com

David W. Rogers  
6855 Seven Mile Hill Road  
The Dalles, Or 97058

Dated Mar. 2, 2022

Re: #921-18-000086-PLNG

Dear Wasco County Commissioners,

It has become clear to me after wading through 800 plus pages of filings and opinion that this issue has become an animus attempt to render a qualifying parcel through due process from being divided per Oregon Law.

The subject property referred to has already undergone extensive scrutiny that has exposed personal opinion and recollection that is surmised by some parties so as to be believed as truth. Unsubstantiated facts that are proposed to be the truth have no doubt clouded the waters of this issue.

As stated in correspondence from Mike Sargetakis 7-7-2021 David Wilson manipulated numbers. These number changes were made per LUBA request due to clarity.

Developed Exception. Opinions offered by Dec. 7<sup>th</sup> 2021 letter have clearly accused applicant of some form of obscuring tactics. The record clearly shows that the parcel in question has had as many as three residences at one time occupying the land. They stated that Goal 4 constitutes the denial of application. The OAR 660-004-0025 also clearly states that exceptions to Goal 4 can be found through other OAR Goals objectives. I walked this property to make sure the maps were accurate.

Irrevocably Committed Exception. As to the relationship between subject parcel and adjacent property OAR 600-004-0028(2) allows exception through proof that connecting properties render subject parcel impracticable for resource land. Given the small amount of land that could grow dryland crops and the undoubtable and undisputable poor quality of soils (substantiated by professional soil scientist) this parcel would be better qualified for residential development. Existing properties on ALL 4 sides are developed, being developed, or can be developed through due process. To make the statement that this property could make a gross income to support a family is inconsistent with findings supported by Case evidence shown in LUBA findings. Further reading of this OAR allows avenues to substantiate the exception through Goal 2 and Goal 14. Regardless of parcel size to the south this property is better suited to residential use and not for resource use. It is not surrounded by "active forest use" parcels. It is simply indigenous plant and tree species on parcels owned by residents. Not sustainable tree farms. Some deterring tax implications through zone specifics. There is no "managed forest property" to the south until you get to 5-mile area. Ten miles as the crow fly's per google.

I have lived in Wasco County 54 years of my life. Farming and Timber management have been in our family and still exist on lands owned in this County since 1964. As we all know we need more land available for residents. In order for our County to keep growing economically and financially we can not be stymied by the boondoggle created in our system that is not comprehensive to most people that do not work in the land uses area.

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And finally addressing past use of the property. In the mid 1980's I was a process server for various entities in this Wasco and Hood River Counties. In my tenure in that capacity I "served" papers to residents in homes that were located in the areas indicated on the evidence map submitted by David Wilson. In 1977 an application for a building permit was issued and approved. In 1992 Wasco County (Kimberly Jacobsen) sent a letter to the then resident stating that this parcel is legally a lot-of-record and be afforded the same development as any other lot-of-record F-2(40). Must have been as much confusion as there is presently.

Conclusion. This issue, after reading so many pages and sitting through 2 hours 40 minutes of virtual meeting time it was quite difficult for complete comprehension of the rules and legitimate facts. Given our Planning dept. did an excellent job of presenting this to the Commission I am still not convinced everybody understood it all. Simple reasons indicated to unrelated case law and unsubstantiated fact has not proven that the applicant has failed to meet the requirements of developed, or a committed exception and draft findings are sufficient to a Decision that approves this application.

Respectfully,

David W. Rogers





To: Wasco County Board of Commissioners

RE: Dave Wilson Remand Hearing/Zone Change

Commissioners,

My name is Steve Hunt. I live at 5922 Cherry Heights Road, The Dalles, Oregon 97058. My phone number is 541.980.1158. I am writing regarding Dave Wilson's remand hearing for a zone change of his property. I want to address an issue raised regarding the suitability of Dave's property for farm use.

I understand that that there is an allegation that Dave's property produced 3 crops of alfalfa each year in the past. That is not consistent with my experience. I hay a property in Mosier each year. Because my swather and baler are over width, using a pilot car I drive over 7 Mile Hill Road to access the Mosier property. My route takes me past Dave's property which adjoins 7 Mile. As a favor to Dave, I cut and baled his hay field once each year for approximately 3 years, I think 6-8 years ago. The field was grass hay, not alfalfa, and the yield was approximately 3 ton of low-quality grass hay. Only 1 cutting was possible each year. I used the hay to feed my cattle, and did not sell any of it.

After a few years, I told Dave that it wasn't worth my time and diesel to bale his field. I think Dave may have also had Joe Whitesell bale it once or twice, but it just isn't worth doing for the yield and hay quality. Dave's primary motive in having me cut the field was for fire suppression. I understand that Dave has continued mowing the field after I quit baling it, again for fire suppression reasons.

Dated this 17 day of February, 2022.



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Steve Hunt

**PLANNING AND ECONOMIC DEVELOPMENT OFFICE**  
**WASCO COUNTY**

2706 EAST SECOND STREET THE DALLES, OREGON 97058

KIMBERLY J. JACOBSEN, Director

PHONE: (503) 298-5169

FAX: (503) 296-3769

Donald Hendershot  
7000 Seven Mile Hill Rd  
The Dalles, OR 97058

September 16, 1992

Property described as Township 2 North Range 12 East W.M. Section 22 Tax Lot 900

Dear Mr. Hendershot,

Regarding our conversation about the status of the above referenced property we have determined the following. The Assessors office records show that the parcel (tax lot 900) was created after the county's adoption of a partitioning ordinance which established a process for dividing land in Wasco County. The date of that ordinance was June of 1973. As such, this parcel was not legally created and does not have standing as a "legal lot-of-record". Realizing this, no land use action on the property could or would be approved by this office. However, through further research we found a building permit application for a dwelling on that property dated 9-14-77 which was approved by this office. Since this approved permit application has been uncovered and improvements made on the property, it is only fair and reasonable to assure their value is upheld. Thus it is the position of this office to recognize the property described as a lot-of-record as defined by the wasco County Land Use and Development Ordinance, and be afforded the same development opportunity as any other lot-of-record within Wasco County. Further improvements to the property can be made in accordance with the development standards of the F-2(40).

If you have any questions please feel free to call me at 298-5169.

Regards,



Karen Mirande  
Planner

cc:  
Kim Jacobsen, Director of Planning

BOCC 1 - 589

## **ATTACHMENT D – EXHIBIT 19**

Gary Casady  
Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker  
Sheila Dooley  
Jillian Barker  
Phil Swaim

Regarding: Dave Wilson Zone Change Request : File # 921-18-000086-PLNG

Commits submitted by Gary Casady, residing at 2500 Badger View Dr., The Dalles.

Date submitted: February 21, 2022

I address the matter of what has been referred to in previous reports and hearings as "scrub oak". (I have a BS degree in Wildlife Biology and have worked briefly in both state and federal agencies as a Biologist.) The official habitat designation of scrub oak is White Oak or Wasco Oak Savanna. Sevenmile Hill is a significant part of this Wasco Oak Habitat from the Columbia River to Mt Hood. It is well known that habitat is the key factor in managing wildlife well.

I request that you consider the following three factors in your decision:

1. Direct protection of habitat. The following studies and recommendations should be taken seriously:
  - The Oregon Habitat Journal says that Oak Woodland in the state is so threatened that 99% of it is gone.
  - The Oregon Habitat Joint Venture for Bird Conservation in eastern Oregon gives Wasco Oaks the highest priority for conservation.
  - ODFW and Oregon Conservation Strategy identify Wasco Oaks as important habitat for as many as 300 species.
  - The Lewis Woodpecker, Townsend's Big-eared bat, Western pond turtle, and Mt Hood Vetch are some of the species dependent upon this habitat type that are listed as sensitive-critical.
  - All agencies recommend limited development and restoration of Wasco Oak Habitat.
2. The big game winter range overlay may be a factor. Questions have been raised as to whether this applies to the Wilson parcel. Please clarify this.
3. An approval of Dave Wilson's request may set a precedent. There are numerous parcels in this zone similar to the Wilson parcel. It is unknown how many owners would request a similar zone change, but it seems likely. When there are doubts, it seems the better part of wisdom to set resource protection as a priority over potential compromise of valuable resources. Are we not living in an age where we are being called to aggressively steward the limited resources of our planet?

WASCO COUNTY  
PLANNING DEPARTMENT  
FEB 24 2022  
RECEIVED



February 23, 2022

Dear Wasco County Board of Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I am pleased to provide the following comments as a supplement to the comments submitted to the Planning Commission dated November 24<sup>th</sup>. These comments are in response to the new evidence submitted by the applicant.

1. Soil Assessment

Photo 1: The log house and two hay barns total 4,880 square feet (.11 acre) and are located in an area of class 4 soils. The 1.48 acre area that includes the buildings is classified as infrastructure class 8 in the Soil Assessment, which is misleading as it is 1.37 acres more than the actual development.



Photo 2: View to west. The tallest trees in the center back are in the area incorrectly labeled as class 8 infrastructure in both the Soil Assessment and Physical Development Map.



**There are no class 8 soils on the property. The class 8 infrastructure label is based not on the soil type, which is class 4 in these areas, but on structures. There is a total of less than 5,000 square feet of usable structures** (based on the application site plan, Complete LUBA Record, p.9, December 7, 2021 Planning Commission packet, PC 1-613.).

The applicant's Soil Assessment incorrectly labels a total of 1.57 acres of class 4 soils as infrastructure class 8. The 1.48 infrastructure area to the west is shown in Photo 1. It includes the 2,660 square foot log house and the 2 hay barns (1,110 square feet each) for a total of .11 acres of actual infrastructure and 1.37 acres of undeveloped land. The area includes vacant land that appears to be in a corral and areas with conifers. In addition to this 1.37 acres, there are .09 acres in the center of the property, also on class 4 soils that are mislabeled as infrastructure. This area is for the abandoned decommissioned farmhouse and the dilapidated unused metal barn with no roof. Both buildings are in poor, unusable condition and the farmhouse is missing an exterior wall and windows.

On page 3 (PC 1-639) of the Soil Assessment it states that a slim majority (preponderance) of the lot or 51.8% is made up of generally unsuited soils Class 7 and Class 8 infrastructure. The Legend on page 13 (PC 1-649) breaks this down:

20.79 acres generally unsuited soils and 19.34 acres generally suited soils

**Adjusting the totals for the class 4 areas misclassified as class 8 infrastructure reverses the percentages:**

<b>20.79 generally unsuited soils</b>	<b>19.34 generally suited soils</b>
<b>- 1.46 (.09 and 1.37)</b>	<b>+ 1.46 (.09 and 1.37)</b>
<b>= 19.33 acres 48.2% unsuited</b>	<b>= 20.80 acres 51.8% suited</b>

The percentage of suited soils is actually much higher based on the conditions on the ground as evidenced in the photographs.

Other considerations were addressed in the earlier testimony including the margin of error involved and the map dimensions favoring the supposedly unsuited soil areas.

The applicant also included a 50' tree free buffer zone around structures which is not required in the Wasco County LUDO (December 7, 2021 Planning Commission packet, PC 1-614). The fire fuel break requirement is that trees within the buffer zone be limbed up 8'. **Rather than prohibit trees, the LUDO encourages trees in the buffer zone to provide shade and ground cooling.**

The Soil Assessment Completeness Review (Page 1) (PC 1-630) from DLCD states that "the county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only."

The Soil Scientist was hired by the applicant to find a preponderance of unsuited soil. The Soil Assessment was done with the stated goal of securing a Plan Amendment Zone Change (page 2 of Soil Assessment Release Form) (PC 1-627). This was to be accomplished by finding a preponderance of unsuited soil. The county does not have the means to determine the accuracy of the soil survey.

There are also discrepancies with 2 of the soil types identified in the survey and classified as class 7:

a. The soil survey of the applicant's property includes a soil type 51C not found in Northern Wasco County according to *Soil Survey of Wasco County, Northern Part*. This document is included in the staff report to the Planning Commission with soil types listed on PC 1-425 (December 7, 2021 Planning Commission packet).

b. The soil type 10E Bodell was identified in areas containing Ponderosa Pine and Oregon White Oak, trees that should not be growing on this soil type according to the Wasco County Soil and Water Conservation District (December 7, 2021 Planning Commission Packet, PC -581-582).

## 2. Aerial Photo of Subject Property and Adjoining Area

In the Remand Request letter on page 3 (PC 1-627), the applicant states "there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property, and lands immediately adjacent to the south and west of the subject property." He states that his aerial photo shows a "moonscape" south of the property. His photograph submitted in the Remand Request has been deliberately overexposed. Areas to the south and east include productive forest, hay

and grazing land, including that formerly owned by Grant Robbins. The moonscape the applicant refers to is not evident on Google maps of the surrounding area.

**According to his rezone application, David Wilson continued the farm use growing grass hay that is baled each year** (December 7, 2021 Planning Commission, PC 1-45). The property also contains merchantable timber (Staff finding in Complete LUBA Record page 1128, PC 1-1129)

The subject property is part of a 109-acre tract owned by the applicant. The 40-acre subject property has historically been used for farming alfalfa hay and grazing. It contains merchantable timber (Complete LUBA Record, staff report, pg. 1128, PC 1-1129). The fact that the applicant has chosen to not farm this parcel beyond growing grass hay, plant trees or let them come back naturally, or get a farm or forest deferral, does not make it less valuable as farm or forest land.

Adjoining this property to the south is a 69-acre parcel owned by the applicant and in farm deferral. The subject property is part of this 109-acre tract. As stated in my earlier testimony, in 2018 the applicant stated that he needed a 7,000 square foot building and a 2,500 square foot agricultural exempt building to support his agricultural/farm use. In January 2018 the Wasco County Planning Commission approved his request on appeal (PLAAPL-17-10- 001 Wilson Appeal).

At the January 2, 2018 hearing Mr. Sumerfield stated that “Applicant makes substantial income from farm production each year the property has been in deferral.” (Planning Commission meeting minutes of January 2, 2018, page 20). The applicant stated that he planned to farm an additional 20 acres (page 4) and was waiting to plant more alfalfa (page 5). He was plowing additional land adjacent to his 6 acres of barley/oats and planning to expand the farm use and increase the number of cattle grazed (page 16).

The Planning Commission found that “the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan.” (January 23, 2018 meeting minutes, page 3).

(Planning Commission meeting minutes of January 2, 2018 and January 23, 2018 are in December 7, 2021 Planning Commission packet, PC 586-611).

### 3. Physically Developed Map & Area Calculations

Attached is the letter from DLCD and ODF in opposition to an earlier rezone application that included the subject property.

In his Remand Request letter on page 4 (PC 1-629), the applicant states that there are 10,024 linear feet of power lines on the property. The LUBA Record on page 9 with his site plan shows overhead power lines running the length of the property, approximately 1,320 linear feet not 10,024 feet. These are the only power lines shown on the site plan submitted with his application.

The map submitted with the Remand Request (PC 1-679) does not match either the site plan in the application that went to LUBA or the Remand Request Letter. It shows a total of 3,820 linear feet of power lines. The additional power lines are nonexistent and are not visible from the road. If there are buried power lines they are not all in use and include lines to unused and nonexistent development. There is no required setback from an underground line.

b. Structures: buffer of 50' each side from the following structures: Log home, barn #1, barn #2, lean to, old homestead home, and old homestead barn

Response: **The Wasco County LUDO does not prohibit trees within 50 feet of a structure.** The 50-foot wide fire fuel break maintenance standards include having trees limbed up approximately 8 feet from the ground and removing underbrush but does not prohibit trees in the buffer zone. **The LUDO encourages trees in the buffer zone to provide shade and cooling.**

None of the square footage of the structures in the original site plan in the LUBA Record (page 9) match the square footage listed in the Remand Request Letter (PC 1-629).

The dimensions of the log house are shown as 80 x 100 or 8,000 square feet in his letter calculations but only 2,660 on the site plan. At the December 7<sup>th</sup>, 2021 Planning Commission hearing the applicant stated that the difference was due to decks surrounding the house. According to the Complete LUBA Record (pg. 1382, PC 1-1383), the house with decks totals 2,680 square feet, not 8,000.

As the entire record, including the new evidence does not demonstrate that the property is either physically developed to such an extent that it is no longer available for resource use or irrevocably committed to non-resource uses, the rezone request should be denied.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040

Attachment 1: DLCD and ODF letter

Attachment 2: Testimony dated November 24, 2021 with 8 exhibits



November 24, 2021

Dear Wasco County Planning Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

The following comments are in response to the new evidence submitted by the applicant.

1. Soil Assessment

In William Sumerfield's letter to Interim Director Kelly Howsley-Glover, dated July 9, 2021 on page 2, last sentence, he states: "With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use."

Photographs of the subject parcel contradict this statement as numerous Ponderosa Pine, Oregon White Oak and fir trees are present on the property in the areas that haven't been mowed LUBA Record photographs on pages 977-982 show this. On Google maps (7000 Seven Mile Hill Rd., The Dalles) you can clearly see the furrows/lines where the applicant has mowed. Furthermore the property across the road contains similar soil according to the USDA. In the past it was used to grow alfalfa hay and is now used as a tree farm.

Photo 1: Tree farm across road





The subject property has historically been used for farming, starting from at least the '60s if not earlier. Sam Decker farmed property on both sides of the road and had 3 cuttings of alfalfa per year in the mid-70s according to the neighbors. When the property was sold to Larry Black in the late '70s he purchased Mr. Decker's farm equipment (**bill of sale attached as Exhibit 1**) and continued farming the land and also had cattle grazing there in the late '70s. David Wilson continued the farm use up to the present time as evidenced by the mowing lines.

In the Planning Commission Agenda Packet from the initial approval of this application, staff noted that the USDA soil survey identified two soil types on the subject parcel: 49C and 50D (Wamic Loam – See Exhibit 5) and that both are Class IV soils, type 4a. LUBA Record at p. 1338. The staff report goes on to note that the site index for both is 70 which is an indication of the potential productivity and translates to the high end for potential yield for Class 6 for Ponderosa Pine.

The soil survey done by the USDA found the soils to be more productive than average (p. 821 of LUBA Record) and suited to growing Ponderosa Pine and Oregon white oak. These trees as well as fir trees are growing on the areas not mowed and are visible in the aerial photographs.

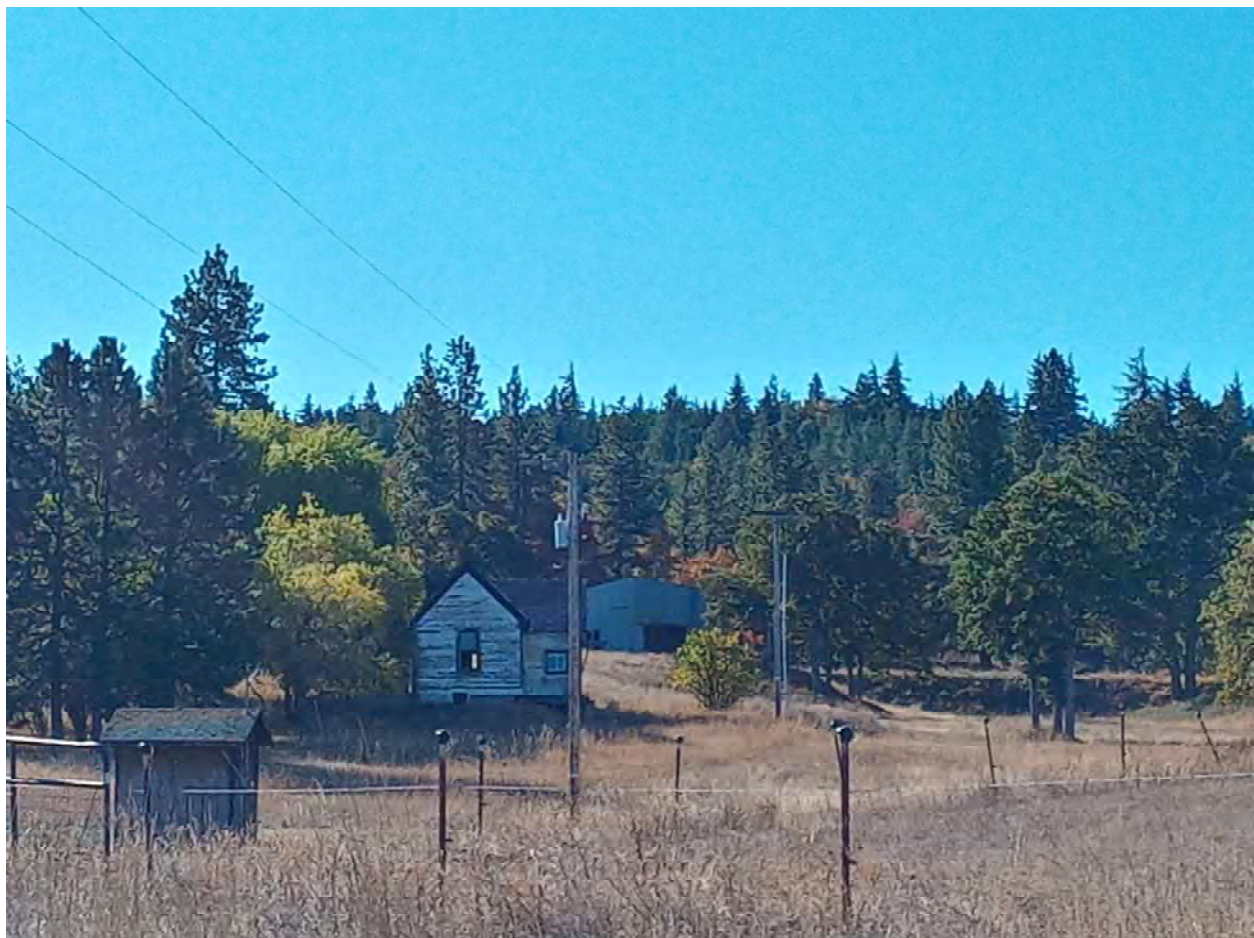


On page 3 of the applicant's Soil Assessment it states that "the subject property is complex and diverse." According to the Wasco County Soil and Water Conservation District staff, there are inclusion areas that could help account for this assessment showing poorer soil than what the USDA maps show. Inclusion areas contain other soil types within a soil type. There may be many inclusions present on this property according to WCSWCD.

The areas not used to grow hay on this property are similar in appearance to much of the other Mosier area forest zone properties. Oak, fir and pine trees are often seen growing together throughout the Mosier area. Oak and pine trees are similar in their soil requirements according to the Wasco County Soil and Water Conservation District staff. The oak and pine habitat is a unique habitat of high value to many animal, bird and insect species.

The applicant's Soil Assessment incorrectly states that the soils on the south side of the property are mostly unsuited soils (51D). The photograph taken from the county road facing south clearly shows conifer and Oregon White Oak trees growing throughout this area. The applicant's map shows that these areas are tree covered.

Photo 2: View to south



The area on the east side of the property and the southwest corner that are labeled as unsuitable soils are also tree covered. Approximately 90% of the areas that are labeled by the applicant's lawyer in his recent letter as unsuitable have trees growing on them.

Photo 3: View to east and south





According to the Wasco County Soil and Water Conservation District, the areas that have been used to grow alfalfa hay and oats can also grow trees. If you can grow alfalfa or oats on the soil, you can grow trees.

Photo 4: View to west





Photo 5: View to west



Photo 6: View to west



The applicant's Soil Assessment also incorrectly labels a total of 1.57 acres as infrastructure. The 1.48 acre infrastructure area includes the 2,660 square foot house and a couple of outbuildings. This area also includes vacant land that appears to be in a corral and areas with conifers. The other .09 acres labeled as infrastructure are for the illegal dwelling and a dilapidated unused barn with no roof. These are the only areas classified as Class 8 in the survey.

On page 3 of the Soil Assessment it states that a slim majority (preponderance) of the lot or 51.8% is made up of Class 7 and 8 soils. The Legend on page 13 breaks this down:

20.79 acres generally unsuited soils

19.34 acres generally suited soils

Removing the illegal and unusable buildings changes this to 20.70 unsuited acres and 19.43 suited acres, a difference of 1.27 acres out of 40.13 total acres. If the vacant land and treed areas labeled as infrastructure are instead added to the suited acreage, there is a preponderance of suited soils.

Another consideration is that a total of 23 locations were tested with the results extrapolated to apply to the areas around them. There is also the margin of error to consider especially when inclusion areas containing different soil types are involved.



On page 13 of the Soil Assessment, the map used to calculate the soil type areas does not contain 90 degree angles on the south side. As a result, the supposedly unsuited soil areas are overrepresented.

The Soil Assessment Completeness Review (Page 1) included with the Soil Assessment states that “the county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only.” The Soil Assessment was done with the stated goal of securing a Plan Amendment Zone Change (page 2 of Soil Assessment Release Form). This was to be accomplished by finding a preponderance of unsuited soil.

## 2. Aerial Photo of Subject Property and Adjoining Area

In the Remand Request letter on page 3, the applicant states “there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property, and lands immediately adjacent to the south and west of the subject property.” He states that his aerial photo shows a “moonscape” south of the property. This is not evident on Google maps of the surrounding area.



The only line of demarcation between his property and the surrounding properties is to the northwest due to his mowing of the subject property. He has also cleared an area around the house. Soil types don't follow property lines.

Adjoining this property to the south is a 69-acre parcel owned by the applicant and in farm deferral. The subject property is part of the 109-acre tract that he owns. In 2018 the applicant stated that he needed a 7,000 square foot building and a 2,500 square foot agricultural exempt building to support his agricultural/farm use. In January 2018 the Wasco County Planning Commission approved his request on appeal (PLAAPL-17-10- 001 Wilson Appeal) and overturned the Planning Director's denial of retroactive approval of a 7,000 square foot agricultural exempt building located on his adjoining 69 acre parcel. **(See attached Exhibit 2: Planning Commission meeting minutes of January 23, 2018 page 3)**

At the January 2, 2018 hearing Mr. Sumerfield stated that "Applicant makes substantial income from farm production each year the property has been in deferral." **(See attached Exhibit 3: Planning Commission meeting minutes of January 2, 2018, page 20)**

The Planning Commission found that "the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan." (January 23, 2018 meeting minutes, page 3)

South of that is commercial forest land zoned F-2 80. Pages 4 and 5 of the LUBA Final Opinion and Order describe the property and surrounding area in detail. In regards to the property south and west, the record states "To the south of that 69-acre parcel for approximately five miles is that zoned F-2 and managed for forestry and grazing. Record 25. To the west of the subject property lies a split-zoned 16.3 acre property with 5 acres zoned F-F 10, and the remaining approximately 11 acres zone F-2, and a 439-acre parcel zoned F-2 and managed for commercial forestry. All of the parcels that are immediately adjacent to west, east and south of the subject property possess similar soil types and slopes as the subject property."

### 3. Physically Developed Map & Area Calculations

The 40-acre parcel is part of a 109-acre tract zoned F-2 80 and owned by the applicant. On page 12 of the applicant's Soil Assessment, he has submitted a map of the tax lots in the surrounding area. This map is misleading as many of these tax lots to the south, southeast and west are part of larger tracts, in commercial forestry, zoned F-2 80 and therefore unbuildable. (LUBA Record Vicinity Map, page 8) **(Also see attached Exhibit 4: Tract map)**

In 2013 there was an application to rezone this property and several adjacent parcels to FF-10. The application was denied by the County Commission after the County received a letter from the Department of Land Conservation and Development (DLCD) and Oregon Department of Forestry (ODF) in strong opposition to this rezone due to its value as forest land. (Supplement to Complete LUBA Record pages 788-790)

DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained. At the County Commission hearing there were also concerns expressed by the Board of County Commissioners regarding fire safety and water supply.

In his Remand Request letter (page 3), the applicant stated that he is taking LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. The letter goes on to identify the following buffers, most of which are not actually required buffers:

a. Power Lines: buffer of 15 ' either side from center line

Response: The Wasco Electric Coop usually trims tree limbs so that they do not touch the power lines. Photos 7 and 8 on following pages are examples of trees recently trimmed by the Wasco Electric Coop. These are not on the applicant's property.







Note: These examples of trees trimmed by Wasco Electric Coop are not on applicant's property.

In his Remand Request letter on page 3, the applicant states that there are 10,024 linear feet of power lines on the property. The LUBA Record on page 9 with his site plan shows overhead power lines running the length of the property, approximately 1,320 linear feet not 10,024 feet. These are the only power lines shown on the site plan submitted with his application. **See attached Exhibit 5: Site Plan.**

The map submitted with the Remand Request does not match the site plan in the application that went to LUBA. It contains proposed, not current, development. The additional power lines are nonexistent and are not visible from the road. The three trailer sites were not part of the original site plan either and I question whether these trailers would be permitted on F-2 80 property. It appears that the applicant is adding this proposed development to make a physically developed case after the fact. LUBA ruled that the property was not physically developed based on the evidence.

b. Structures: buffer of 50' each side from the following structures: Log home, barn #1, barn #2, lean to, old homestead home, and old homestead barn

Response: The Wasco County LUDO does not prohibit trees within 50 feet of a building. The 50-foot wide fire fuel break maintenance standards include having trees limbed up approximately 8 feet from the ground and removing underbrush. **(See attached Exhibit 6: LUDO Section 10.120: Defensible Space-Clearing and Maintaining a Fire Fuel Break.)**

In addition the applicant's buffer calculations include illegal and unusable buildings that should not be included. The old homestead home was replaced by the log home and is an abandoned illegal dwelling. What he refers to as the old homestead barn is an unusable dilapidated metal building with no roof.

The dimensions of the log house are shown as 80 x 100 or 8,000 square feet in his calculations but only 2,660 on the site plan.

c. 50' buffer along 7 Mile Hill Road

Response: Wasco County Public Works Director Arthur Smith (October 28, 2021 email) said that there is no defined or statutory setback for roads. "In Mosier, we have trees and other vegetation within 2 feet of the road shoulder...We would be cutting down trees for 100 years to clear every county road for 50 feet." **See attached Exhibit 7: Arthur Smith October 28, 2021 email**

D. 50' buffer along driveway easement

Response: There is no 50' buffer requirement along the driveway easement. A minimum driveway width of 20 feet is required (Wasco County LUDO Section 10.140 – Access Standards). **See attached Exhibit 8: Wasco County LUDO Section 10.140.** As roads are uses allowed by Goal 4, they are not considered as physical development.

As the entire record, including the new evidence does not demonstrate that the property is either physically developed to such an extent that it is no longer available for resource use or irrevocably committed to non-resource uses, the rezone request should be denied.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040

AFFIDAVIT

STATE OF OREGON     )  
                              ) ss.  
County of Wasco     )

I, LARRY BLACK, being first sworn depose and say:

That I did on or about the 26th day of January, 1977  
receive from Samuel A. Decker and Betty J. Decker a  
Bill of Sale, the original of which is attached hereto,  
conveying to me the items listed thereon.

That the consideration for the conveyance was part  
of the ranch sale transaction wherein I purchased from  
Samuel and Betty Decker certain real property as well as  
the personal property itemized on the Bill of Sale.

*Larry Black*



SUBSCRIBED AND SWORN to before me this 16th day of  
February, 1978.

*Meredith D. [Signature]*  
Notary Public for Oregon  
My Commission expires: 1-4-84

780515(3)

620 RV-2



KNOW ALL MEN BY THESE PRESENTS, That SAMUEL A. DECKER AND BETTY J. DECKER  
the part IES of the first part, for and in consideration of the  
sum of TEN Dollars,  
to THEN in hand paid by LARRY BLACK

the part Y of the second part, the receipt whereof is hereby acknowledged, do by these presents,  
bargain, sell and deliver unto the said part Y of the second part, HIS executors, administrators  
and assigns, all of the following described personal property, to-wit:

ONE CASE WHEEL TRACTOR  
ONE INTERNATIONAL TD6 CRAWLER  
ONE MOWER  
ONE HAY RAKE  
ONE DISC  
ONE GRAIN DRILL  
ONE FERTILIZER SPREADER  
ONE PLOW  
ONE HARROW  
ONE NEW HOLLAND HAY BAILER  
ONE TANDEM 18" DISC PLOW  
ONE HAY CONVEYOR  
ONE SPRINGTOOTH  
ONE HAY SKID  
ONE 500 GALLON FUEL TANK  
ONE 300 GALLON FUEL TANK  
ALL IRRIGATION PIPE AND FITTINGS ON THE PROPERTY  
ALL POSTS AND BUILDING MATERIAL ON THE PROPERTY

780515 (3)

620 RV-2

To have and to hold the same unto the said part. Y of the second part, HIS executors, administrators and assigns forever,  
And DO hereby covenant with the said part. Y of the second part that THEY ARE the lawful owner. S of said goods and chattels; that they are free from all encumbrances

that THEY have good right to sell the same as aforesaid, and that THEY will and THEIR executors and administrators shall warrant and defend the title thereto unto the said part. Y of the second part, HIS executors, administrators and assigns against the lawful claims and demands of all persons whomsoever.

IN WITNESS WHEREOF, WE have set OUR hand. S and seal. S this 26th day of JANUARY, 1977.

Executed in the presence of:

Samuel A. Decker (SEAL)  
Betty J. Decker (SEAL)

STATE OF OREGON,

County of ss.

I, being duly sworn, depose and say that the sole owner. of the property described in the foregoing bill of sale, and that the same is free and clear of liens and encumbrances of every kind and nature,

at date of execution of said bill of sale, and the same have been paid for in full.

Subscribed and sworn to before me this day of 19

Notary Public for Oregon.  
My Commission Expires

BILL OF SALE  
(FORM No. 1)

TO

Dated 19

STATE OF OREGON, ss  
County of Wasco, ss

I, SUE A. PROFFITT, County Clerk and ex-officio Recorder of Conveyances, in and for said county, do hereby certify that the within instrument of writing was received for record -

FEB 16 4 03 PM '78

and recorded in the -

records of said County under Micro Film

NUMBER: 780515 (3)

INDEXED

Witness my hand & seal affixed at the Dunes  
SUE A. PROFFITT, County Clerk  
By Deputy  
Return to Address

STATE OF OREGON,

County of ss.

BE IT REMEMBERED, That on this day of 19 before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named

known to me to be the identical individual. described in and who executed the within instrument and acknowledged to me that. executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Notary Public for Oregon.  
My Commission expires



**Wasco County Planning Commission**

**January 23, 2018**

**Meeting begins at 3:00 p.m.**

**Columbia Gorge Discovery Center**

**5000 Discovery Dr**

**Lower Level Classroom**

**The Dalles, OR 97058**

**CALL TO ORDER**

Members Present: Lynne Erickson, Vicki Ashley, Brad DeHart, Russell Hargrave, Jeff Handley, Chris Shanno,

Absent Members: Mike Davis

Staff Present: Dawn Baird, Angie Brewer, Brenda Coleman

**Chair Russell Hargrave** called the meeting to order at 3:10 p.m.

**Mr. Hargrave** asked if there was any public comment for anything not on the agenda. There was none.

**Mr. Hargrave** then opened for deliberation, the public hearing for PLAAPL-17-10-0001 for David Wilson, of a Type I Review to deny retroactive approval of a 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building.

**Mr. Hargrave** then asked Associate Planner Dawn Baird if any new information came in. Dawn responded that new information came in during the 7 day period the commission held the record open which the Commissioners have received in the Agenda Packet. No new information since that time. Planner Baird listed the following received information:

- Information submitted by the Appellant's attorney
- Staff Memo

**Deliberation continued**

**Vice Chair DeHart** stated that he has a difficult time not viewing it as an existing building. He feels they might have fell short of finding criteria to justify the building. From the information provided, including the other examples from around the county, he feels the County has not been very consistent with how buildings are reviewed, pertaining to the size of the buildings and use.

**Commissioner Ashley** stated that she did some research on the tax lots adjacent to or surrounding the examples submitted by the applicant. Being a farmer she understands you don't put your building on your best piece of ground. Generally you put it next to a road, next

to electricity as much as possible. A lot of the big buildings are located on a small parcel. Most of them are just a storage shed, but they are big. She feels that it is too bad that the applicant received misinformation from his neighbors about not needing a permit. But she is afraid that if the County lets this slide, how many more will try it. She feels that there are more out there that we are not aware of, this will be highly publicized and she feels that we are opening a can of worms if we let it go.

**Chair Hargrave** stated as for not considering the fact that it is there, he is worried about setting a precedent. He asked if the Commission would be setting a precedent and thinks this should hold weight on the decision the Commission makes. He stated that the problem isn't that it doesn't have a permit, but would a permit be allowed in this case.

**Commissioner Schanno** stated that he does not think the size breaks the rules, therefore it would have been permitted.

**Commissioner Handley** stated that he wasn't at the first hearing so he wasn't in on everything but he doesn't like the idea of telling someone how large of a structure they can build. He believes that if we go down that road, you will be telling people how large of an ag structure, then how large of a house they can build. He doesn't feel that we should be telling someone what the proper size of a structure they need. He feels it is up to the applicant to determine what size fits their need. **Chair Hargrave** stated that he wanted clarification on outbuildings, is there potential for the applicant to build an accessory building where the size is limited to 75% of the footprint of the size of the dwelling, so the rules for an accessory structure would then be relevant to this property. **Director Brewer** stated that yes, if you for some reason found that the agricultural use was not commercial in nature, then you would be pursuing an accessory structure instead of an agricultural building. **Commissioner DeHart** stated that in that case there would be no way to approve it based upon the size of the house. You would be restricted to 75% of the size of the house. **Director Brewer** stated that she wanted to clarify that the 75% rule is a Wasco County rule on top of the existing state of Oregon land use regulations and is not required by state law.

**Commissioner DeHart** stated that the only guideline the Commission has is the statewide 20000 sqft. **Director Brewer** stated that the 20000 is a maximum, but that the Wasco County Ordinance requires the planner to evaluate the size need based on the agricultural use and size of the operation. **Commissioner Erickson** asked for clarification of the outcome of the decision if the applicant had put all his equipment and hay in the structure. **Planner Baird** stated that if all the equipment had been there, there would have still been a lot of open space.

**Commissioner Ashley** asked if the applicant walked into the office today, would he be allowed to build the structure. **Director Brewer** stated that questions would be asked today that would quantify the size of the building based on the acres of the operation.

**Commissioner Erickson** stated that she thinks if a new application were to come in today, it would be approved. **Director Brewer** stated that she did not believe we would have approved

a 7000 sqft building, she further stated that there would be some back and forth conversations and would have come up with a satisfactory solution.

**Commissioner Schanno** moved to overturn the Director's Decision and approve the request for a 7000sqft with amended findings and conditions including a requirement that the applicant obtain an agricultural exempt permit from Building Codes.

**Commissioner Erickson** seconded.

**Chair Hargrave** called for discussion. There was none.

**Chair Hargrave** called for the vote. **The motion was approved 4 to 1, with 1 abstained, and 1 absent.**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes

Vice-Chair DeHart – yes

Commissioner Handley - abstain

Commissioner Davis – absent

Commissioner Ashley – no

Commissioner Schanno – yes

Commissioner Erickson – yes

Alternate Commissioner Position #1 – vacant

Alternate Commissioner Position #2 – vacant

**Vice Chair DeHart** moved to not rely on the formula in this case and to find that the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan.

**Commissioner Ashley** seconded.

**Chair Hargrave** called for discussion. There was none.

**Chair Hargrave** called for the vote. **The motion was unanimously approved 6 to 0, with 1 absent.**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes

Vice-Chair DeHart – yes

Commissioner Handley - yes

Commissioner Davis – absent

Commissioner Ashley – no

Commissioner Schanno – yes

Commissioner Erickson – yes

Alternate Commissioner Position #1 – vacant

Alternate Commissioner Position #2 – vacant

Results: the decision is overturned and the appeal is granted.

**Director Brewer** updated the Commission on the situation regarding the Building Codes Department moving into the Wasco County Public Works Building and no longer being a part of the dissolved Mid Columbia Council of Governments. She explained that State Staff will be assisting the county by instituting the building code program.

Meeting Adjourned 4:17pm

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Russell Hargrave, Chair  
Wasco County Planning Commission

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Angie Brewer, Planning Director  
Wasco County Planning & Development

**Wasco County Planning Commission**  
**January 2, 2018**  
**Meeting begins immediately following the**  
**3:00 p.m. Planning Commission Meeting**  
**Columbia Gorge Discovery Center**  
**5000 Discovery Dr**  
**Lower Level Classroom**  
**The Dalles, OR 97058**

**CALL TO ORDER**

Members Present: Lynne Erickson, Vicki Ashley, Brad DeHart, Russell Hargrave, Mike Davis, Chris Shanno,

Absent Members: Jeff Handley

Staff Present: Dawn Baird, Angie Brewer, William Smith, Riley Marcus,

**Chair Russell Hargrave** called the meeting to order at 3:10 p.m.

Mr. Hargrave asked if there was any public comment for anything on agenda. There was none. Mr. Hargrave then opened the public hearing for PLAAPL-17-10-0001 for David Wilson, of a Type I Review to deny retroactive approval of a 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building. Mr. Hargrave then asked Associate Planner Dawn Baird to give her Presentation.

Please see **Attachment A** for Dawn Baird's presentation on PLAAPL-17-10-0001 (Wilson Appeal).

**Mr. Hargrave** asked the rest of the Planning Commission if they had any questions. Two Commissioners indicated that they would like to wait to ask their questions until after the applicant presented.

**Public Testimony:**

**Bill Summerfield**, was the first to present, representing David Wilson. Mr. Summerfield stated that they were not here to discuss prior history or to discuss any prior Code Enforcement actions on the property. Mr. Summerfield stated that they are arguing a case solely on the application for an Agriculture Exempt Building. Mr. Summerfield stated that he had Mr. Wilson pull several past permits from Wasco County Planning Department for Agriculture Exempt Buildings. One of these first retroactive applications that they had pulled was for a greenhouse. Mr. Summerfield stated that this application had not caused any heartache at that time. Mr. Summerfield stated that Mr. Wilson is cleaning up all of the messes that were left on the

Wasco County Planning Commission  
January 2, 2018 Minutes  
Page 1 of 22



property prior to him purchasing it. Mr. Summerfield stated that the Planning Commission needed to look at this application as a clean sheet of paper and stated that he thinks that the application of those laws is arbitrary for this application. Mr. Summerfield stated that he had obtained 71 applications from a Records Request. He stated that he did not submit all of these applications as evidence and instead submitted a spreadsheet that summarized the results from all 71 applications.

Mr. Summerfield stated that he did not know how the department was not aware that he was not involved within the appeal. Stated that he submitted additional materials to staff on the Friday prior to the Commission meeting and hoped that the Planning Commission had enough time to review material. He asked that if more time was needed to better evaluate submitted materials, that it should be taken. Mr. Summerfield stated that the Planning Department was “over their squeeze”. He stated that one of the permitted outright uses is an Agricultural Exempt Building and that if you tick all the boxes for items such as setbacks and other requirements, that you should be able to get an Agriculture Building. He stated that at the application stage, you are entitled to put up your building and that statute does not include any size restrictions, and that there is no reference to any yields. He stated that calling technical experts is not authorized by any statutes and is not included in the administrative rules. Mr. Summerfield stated that the LUDO does not explain why you need a Farm Management Plan and that nothing within the LUDO tells you what this requirement is. And if the county were consistently applying, that the LUDO may be deemed unconstitutional or inappropriate and stated that there was not much oversight for an Agriculture Exempt Building on resource lands.

Mr. Summerfield stated that Planning Staff does not have the expertise to tell the farmers how to go about farming or where to keep their bailers, etc. He stated that the Planning Department is only responsible for reviewing applications. Mr. Summerfield stated that it should be “If you meet setbacks, yes. If you have a farm use, yes” and that the application process should remain pretty hands off. He stated that Dawn Baird makes this point by saying that she needed to contact experts and that it should not be the business staff should be in. Mr. Summerfield stated that in the Staff Report, every calculation was based off of 6 acres. And that David Wilson has 70 acres and talks about increasing farming in future. He stated that he thought that Ms. Baird did not evaluate this. He brought up the example of a past application for an Agriculture Exempt Building for Steve Skimore, who has a lavender farm, and that he increased the space for lavender over time. Mr. Summerfield stated that if you have resource land, you are entitled to build agricultural building.

Mr. Summerfield also stated that “if you are going to get out over your squeeze, you need to do it consistently”. He stated that this was the real reason why he and Mr. Wilson dug through past applications, especially these ones that were “justifiable” on the surface. He stated that you would expect to see some oversight or some scrutiny, however it was not there. He stated that Dave Wilson is being singled out and treated specially and that it was not right and that the laws did not allow this and that Dave needs to be treated as any other person would. Stated that we need to tick the boxes that need to be ticked.

Mr. Summerfield stated that a Farm Management Plan is a template supplied by county, to show what is passing muster in the county. He stated that this is not super comprehensive. He notes that within the past applications he they gathered that one Floor Plan had been submitted that was essentially empty, and yet it had been approved. Mr. Summerfield states that the Planning Department Staff needed to consistently apply standards and laws to each application. Mr. Summerfield stated that as for the Conditions of Approval, that removal of square footage of the existing illegally placed building was ridiculous and not feasible. Mr. Summerfield stated again that he was not sure why any past history was brought up and that Mr. Wilson had continued to meet the income test each year to remain within Farm Deferral, and that he would continue to do so. He stated that income is not a factor here such as Dawn had stated and that it was not a valid argument. Mr. Summerfield stated that this existing building is not an eyesore, and that it has existed for years. Should have been approved as is, and that is what we are here for today, is to have this building approved as is and to please ask for more time if it is needed.

**Mr. Hargrave** then asked if Mr. Wilson had submitted a Farm Management Plan. Mr. Summerfield stated that Mr. Wilson had and that it was included within the submitted application materials.

**Brad DeHart** asked Mr. Summerfield if Mr. Wilson owned any more property. Mr. Wilson responded that he did, and that it was not located within Farm Deferral.

**Lynne Erickson** asked when the property was purchased and when the building was put up. Mr. Hargrave asked her to hold onto her question so that Mr. Summerfield could take his seat and have Mr. Wilson come forward.

Mr. Wilson stated that he put up the Agriculture Building 18 years ago and he hah never received a permit. He stated that a few years ago he approached the county again to build a new home, and stated that he recognized that he needed to bring the Agriculture Building back into compliance. Mr. Wilson states that he has a 1,000 horsepower grinder, and had annoyed the neighbor due to the noise. Due to this, the code compliance officer came out. He stated that they were there for one reason, but they came out for a bunch of other things. He stated that for example, there were logs sitting on my property that I was going to be using for firewood. He stated that at the time, Kate was the Code Compliance Officer and that she questioned what these logs were going to be used for. He stated that his property use to be the Wrecking Yard, which Mr. Wilson claimed he has completely cleaned up. Mr. Wilson stated that the Code Compliance Officer then went to his other property to see if it might also have violations. It was at this time that the subject parcel with the illegal building in question, was discovered. Mr. Wilson stated that at this time, it had already cost him around \$8,000 to clean up the first property. He states that a complaint on one property does not justify visiting another property owned by the same landowner. Mr. Wilson points out that it was at this time

that his property was “red flagged” and that he was now before us to try to get this “unflagging” done to get a future new dwelling.

Mr. Wilson states that at the time Dawn Baird and Joe Ramirez came to look at the illegal building that not all of his farming equipment was inside the building. He stated that when Ms. Baird visited the property, the machines and equipment were out clearing another 6-8 acres for farming purposes.

**Vicki Ashley** interrupted and addressed that the original Farm Management Plan does not say this. **Ms. Baird** stated that there were revisions on the Farm Management Plan that does include the additional acreage.

**Mr. Wilson** stated that he thought Dawn’s analysis of the number of farm animals included for the Farm Use was insulting. Mr. Wilson handed out more pictures to give to the Planning Commission. He stated that there was only one pedal toy in the garage and not multiple. And that the refrigerator in the shop was so he could have a cold drink of water and a sandwich in the middle of the summer. He stated that his freezer within the Agriculture Building is used to store frozen meat of his own cattle. Mr. Wilson then stated this his wife is sick and has not had a chance to clear out some of her past antiques and that this is what was covered by a blue tarp within the Agriculture Building.

Mr. Wilson had mentioned that he had discussed with Joseph Ramirez a second time to come out and inspect the Agriculture Building. Mr. Wilson stated that when he finally called back in for this second inspection that when he asked for the Code Compliance Officer to come back out that Joseph Ramirez was no longer the Code Compliance Officer. Wilson stated that all of a sudden the second inspection was no longer needed and instead a decision was being made. Mr. Wilson pointed out that his Agrilcutre Building is not visible, however his neighbor, who had illegal development that was visible, had not yet been penalized. Mr. Wilson stated that this is not enough room for the building, and does not include for an additional 20 acres that will be farmed in the future. Mr. Wilson stated he does not want to file complaints on his neighbors and believes that he has been selected out. Stated that he and Dawn have had arguments in the office in the past and that for Staff to decide that they feel he only needs 2,500 SF “rubs him wrong”. Wilson stated that Planning Staff should not be deciding this for him and that how Planning Staff inprets law is completely different from how a lawyer would and that Staff has no business doing this. Mr. Wilson stated that he has spoken to the Wasco County lawyer Will Carey for three hours and that he agreed with Mr. Wilson; that the county has better things to do. Mr. Wilson stated that he has a paralyzed son who uses a John Deer toy tractor and that it was insulting to him that Dawn would even take the time to write that down. Mr. Wilson returned to his seat.

**Russell Hargrave** asked if there were any other questions.

**Mike Davis** asked Mr. Wilson what other farm equipment that there was.

**Mr. Wilson** stated that the bailer was not inside, and also has a bulldozer. He stated that this because of all these items that his floor plan makes all kinds of sense.

**Vicki** asked if Building Permits or Electric Permit was ever received?

**Mr. Wilson** stated that no there were not. He stated that he had been told by multiple other farmers at the time (18 years ago) that he did not need a Permit.

**Vicki** asked if a loft would be put in.

**Mr. Wilson** stated no. He also stated that the year before last he had to wait to plow because too much moisture. Then after he plowed there was no moisture at all and therefore he had to wait before planting any more alfalfa. States that none of this matters, never was trying to create a nuisance and that the Planning Staff just did not like him.

**Mr. Hargrave** again asked if anyone had any questions. No one had any. Mr. Hargrave asked if anyone wanted to speak for the proposition for the illegal Agriculture Building.

**David Rogers** came forward to provide public testimony. He asked if any of the Planning Commissions or Planning Staff were current farmers. It was at this time that Russell Hargrave interrupted him and asked him to please not interrogate the Commission or Staff as he did not see how it was relevant to the Agriculture Building.

**Mr. Rogers** then proceeded and stated that the Planning Commission was here to keep Staff in line and that Staff should not be interpreting the law. He stated that Planning Staff was singling Mr. Wilson out.

**Mr. Hargrave** stated that this was a good point and asked if there were any other questions. Asked if anyone wants to speak in opposition. There were none. At this time several other people in the audience raised their hands and stated that they would like to speak with concerns.

**Dean McCallister** came forward and stated that he had concerns about the specificity and that everyone should be treated fairly.

**Ther Keller(?)** stated that he would rather have one oversized building over multiple smaller buildings.

**Chuck Cobert** stated that he has concerns about the regulations over a size of a building and staff telling them what kind of equipment that they can and cannot have. Used the example that how do we approve a large SF dwelling for just a husband and a wife. He stated that he questions building without a permit, however not any further regulation in terms of equipment.

**Chris Schanno** asked if the original denial was based on the size of the building.

**Ms. Baird** stated that yes, it is. And that it also meets setbacks.

**Lynne Erickson** asked that when Staff looks through Farm Management Plan, does everyone else get the same scrutiny.

**Angie Brewer, Planning Director**, asked to respond to this question. She stated that a lot of times individuals come to the counter and ask and then get told it will be denied. Or pair it down to an Agriculture use that we cannot support. We want to encourage Agriculture Use in our resource zones. Ms. Brewer stated that she encourages staff to seek out experts. She stated that it looks like there are discrepancies included with two different Farm Management Plans that were submitted, however when we reached out to the technical experts, we reached out when we need to.

**Mrs. Erickson** again asked if all other Farm Management Plans get this level of scrutiny.

**Mrs. Brewer** stated yes, that we do review the Floor Plans and the template submitted.

**Ms. Baird** stated that we also do not typically reach out to the experts because we do not typically receive retroactive requests. She stated that “No, we do not usually go to the experts, however we also do not normally receive such a large building with such a small farm use.”

**Mr. Wilson** made a statement in regards to marijuana and why for the last two years they do not receive this level of scrutiny.

**Brad DeHart** asked a question from the Staff Report, asked if the italicized portion was included within our Land Use Development Ordinance. Was wondering how much information was provided within these other applications and the level of detail included within the floor plan.

**Ms. Baird** stated that she cannot speak to all of the other Agriculture Buildings, but that she does look at the current farm use for every application.

**Mike Davis** asked Staff to help him understand that there was no formula for building sizes.

**Angie Brewer** stated that we have a Template Farm Plan that guides people, in order to make a farm and equitable decision and that there are different kinds of farms, as well as different kinds of farmers. When we do not feel comfortable, we do not go with our gut feeling, we will reach out to an expert. When we issue a decision, we assume that everything we put in writing, that could affect someone’s land, could be taken to court. There is no magical formula because there are so many complexities to the analysis.



**Mr. Hargrave** closed the hearing for deliberation (4:58pm).

**Mike Hargrave** stated that he is here to interrupt what staff brings to the commission. Mr. Hargrave stated that he is also here to represent his community and the county and that he is not here to change the LUDO, and that he is here to look at the interpretation. And without question, he states that he is torn. He states that without question, he is trying to place himself within the same situation. He states that he would be excited to have a 7,000 SF Agriculture Building. He does state that before any development occurs, that you should talk to the County. He states that it needed to happen and did not. He states that on the other hand, it is a very small piece of property in comparison of thousands of acres that we are used to. His concern is how traumatic it would be for Mr. Wilson to have to remove a large portion of his Building and states that he would need to get this to code for public safety.

**Chris Schanno** stated he is not within the business of telling someone how to run their business. And if they meet Fire Safety Standards and Setbacks, is Wasco County in the business of telling someone how big of a building they need to run their operation? He states that he made a mistake, and that it seems excessive.

**Angie Brewer** stated we are resolving a violation by addressing this. We have an ordinance that requires us to have enough information to meet state statute. The way that we do this is to ask for a Floor Plan and a Farm Management Plan.

**Vicki Ashley** stated that her issue was no permits. She also states that this is an excessive amount of building for the size of the parcel.

**Russell Hargrave** stated that he has been on this Commission for a very long time, and just because you meet setbacks does not mean you can do whatever you want. This is F-2 land. This is the reason why we require supporting documentation and because whether it is permitted or not, depends on the use. In this case it is permitted outright. And that we need to start there, take a look at the use. I think that the fact that it is there is not any reason to approve it. I am bothered by that as a mechanical engineer. It is a relatively low profile building. In my experience, a building of this size is usually much taller in size. I feel like I have a good level set of the area, and is trying to determine if this case is being treated differently. The pictures do not necessarily determine the use. I was struck that this building has been here 18 years, and had been used for Ag use for this long as I did not see the second story, the extra bathroom, etc. Said he thought it showed very little evidence of non-farm uses. Farm Deferral, being taxed on it, so not just a one year idea, seems to be a very serious farming operation. Agrees one big building is better than equipment scattered all over your yard or multiple smaller buildings. What is the outcome that we want?

**Brad DeHart** states that he agrees, and he is not comfortable with permitting "Shedville", indicating multiple sheds. Wishes we had a guide like we did for accessory structures. States he is trying to not take into account as the cost will be much higher for part of the building being

torn down. Should be either all or nothing; seems too difficult to enforce. Thinks Staff has done an outstanding job, and in going down this path, the information we have received led us to a decision that he believes that none of us wanted to see. I can say right now that I don't know if we need to continue this, but I am certainly not ready to approve staff recommendation tonight. I think that this warrants more time.

**Lynne Erickson** states that she has concerns with the somewhat ambiguous/ not clear standards that are in place to base that size of the building on. Seems to me that there is ambiguity that I am wrestling with. Inclined to agree with Brad that she would not feel comfortable with supporting the recommendation in its entirety.

**Mike Davis** stated he agrees, impossible to remove a portion of a building and instead see this turned. Under the circumstances, let's leave the building alone, and state that it will only be used for agricultural purposes. It keeps the rest of his equipment out of the neighborhood, because it is a small neighborhood. I would love to put a little Tygh Valley in this area. I would like to see a slight modification to let the building stand, however ensure that everything else is brought to code.

**Russell Hargrave** states that the building being already constructed should not play into this at all.

**Vicki Ashley** stated that this sets precedent. That a building that has existed for 18 years and never received permits getting approval will set precedent.

**Brad DeHart** stated that Staff was taking on what they were handed and trying to build a case for somehow making it possible to stay. So if we were to back up and try and take another run at this as if the building were not there, could we somehow make another case to somehow make a case for this building to stay?

**Russell Hargrave** stated that it is not about the size, but is about the use. Stated that he did not see any other non ag use related items within the pictures. This does not corrupt the building from its agricultural use. Does not see any use that would indicate that this does not have an agricultural use. What is the use? I do not see a robust farm

**Mike Davis** stated that if we are going to go down this path, then the conflicting information in regards to a Farm Management Plan, basically we are kind of erasing and restarting this as a new application?

**Russell Hargrave** stated that the facts were balanced, and he appreciates the work that the Department did and hopes others see this too. Mr. Hargrave stated that he was not factoring in the fact that building is already there, and that he understands buildings get built without permits. Not bothered by building being there, and not going for a permit for an Ag Building, because at that time was not that clear. But that I still go back to the use. Not inconsistent with

what is going on within the area. I am going to recognize that we do not have a precise formula.

**Angie Brewer** stated that we do have to be able to find that there is indeed an Agricultural Use.

**Russell Hargrave** stated that you need to show that you have an approved use. Sees Farm Deferral, taxes, Farm Management Plan that has been submitted. But that it is a Farm Use. I do not see a lot of Non farm Agricultural Use. And that is what strikes me about it.

**Mike Davis** asked if the building had everything within it, would it be an approved building?

**Angie Brewer** stated that Staff is using the most reputable information and technical expertise to make these decisions. I defer to your discretion and authority to make this decision.

**Russell Hargrave** would anyone like to make a motion?

**Brad DeHart** said he would like more time and would not be making a motion. Stated that the stakes are high for this particular information, as well as for setting precedents.

**Russell Hargrave** stated that he supported this decision. Chris Schanno and Mike Davis both agreed.

**Vicki Ashley** stated that we have to have this resolved as this happened and we let it go and I think that we need something more clear and precise.

**Brad DeHart** part of the reason I need more time is to think through what some alternatives might be. I understand electricity has been done. That Mr. Wilson may not own this property forever.

**Mike Davis** called into question the use and application of the Farm Management Plan. Would like to propose we delay this, and contact another round of experts to see what can help us, as this will set precedence.

**Vicki Ashley** talked about how different zones may be different in terms of a Farm Management Plan.

**Vicki Ashley** moved that we continue hearing to Jan 23 at 3:00pm at the Discovery Center.

**Russell Hargrave** and **Mike Davis** both seconded.

**Chair Hargrave** called for the vote.

**The motion was approved 6 to 0, 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes  
Vice Chair Ashley – yes  
Vice Chair DeHart - yes  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

**Bill Summerfield** requested that the record be held open for 7 days.

**Russell Hargrave** stated that the record would be held open for 7 days, closing at 4:00 pm, January 9, 2018.

**Russell Hargrave** moved to close the hearing (5:45pm)

**Chris Schanno** moved to keep Russell Hargrave as chair. Mike Davis seconded.

**Chair Hargrave called** for the vote.

**The motion was approved 5 to 0, 1 abstain (Commissioner Hargrave), 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – abstain  
Commissioner Ashley – yes  
Vice Chair DeHart - yes  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

**Mike Davis** nominated Brad DeHart as Vice Chair. Chris Schanno seconded.

**Chair Hargrave called** for the vote.

**The motion was approved 5 to 0, 1 abstain (Commissioner DeHart), 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes  
Commissioner Ashley – yes  
Vice Chair DeHart - abstain  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

Approving of minutes was moved to the next meeting.

Russell Hargrave adjourned at 5:50pm.

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Russell Hargrave, Chair  
Wasco County Planning Commission

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Angie Brewer, Planning Director  
Wasco County Planning & Development



**PLANNING COMMISSION PRESENTATION: December 5, 2017**

**PLAAPL-17-10-0001 (David Wilson)**

Thank you and Good Afternoon. For the record my name is Dawn Baird and I am an Associate Planner for the Wasco County Planning Department. I am going to present the background information in this case.

1. **Request:** As the Chair indicated, today we will be discussing an appeal application from David Wilson, of a Type 1 Review to deny retroactive approval of a 100'L x 70'W x 14'T, 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building.
2. **Location:** The subject property is located approximately 0.3 mile south of Sevenmile Hill Road southeast of Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described 2N 12E 22 4100, Accounts 14901, 13446, and 2N 12E 0 2800, Account 804. The subject property is 69.32 acres in size.
3. **Staff Recommendation:** The full Staff Recommendation was mailed in the Planning Commission's agenda packets. It was available for review at the counter one week prior to this hearing, and it is considered a part of the record.
4. **History of this request:**

In 2013, the Planning Commission held a public hearing to consider an application for Comprehensive Plan Amendment, Zone Change, and Exception to Statewide Planning Goal 4 – Forest Lands, for several tax lots on Sevenmile Hill Road and Dry Creek Road. This application was denied.

David Wilson decided to pursue a CPA/ZNC/Exception for 40 acres of property he owned and he submitted an application for this request on September 1, 2015. Staff processed the request, but found out prior to the hearing that Mr. Wilson's property had been improperly divided by a prior owner. In a discussion with Senior Planner, Dustin Nilsen, two weeks prior to the scheduled PC hearing for the CPA/ZNC/Exception, David Wilson stated that he was probably also going to have to get a permit for the 7,000 SF building since he had not gotten one. (Note: A former Code Compliance Officer found an illegally constructed 7,000 SF building on one of the illegal parcels. She documented it, but did not pursue enforcement action on the building.) Once David Wilson stated he had not obtained a permit for the 7,000 SF building, the Planning Department had clear evidence of 2 violations (illegal parcel, illegal building) on the property and could not pursue the CPA/ZNC/Exception until they were resolved.

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On May 16, 2017, David Wilson submitted a Type 2 application for a partition to legalize the subject properties. In addition, he submitted a Type 1 application for the 7,000 SF “agricultural exempt” building. Staff issued the Notice of Decision and Staff Report approving the partition request on June 15, 2017. The final partition plat was recorded on September 8, 2017.

Once the partition was completed, staff issued a decision on the retroactive approval of the 7,000 SF “agricultural exempt” building on October 5, 2017. The decision denied the 7,000 SF building, but approved a 2,500 SF building. This decision was appealed on October 13, 2017.

### 5. Let’s discuss why the request is before the Planning Commission...

An appeal of the Planning Director’s decision is heard by the Planning Commission. Once the appeal was submitted to the Planning Department, staff scheduled the public hearing before the Planning Commission for December 5, 2017.

**Stage in the Process:** Staff found the appeal request to be complete on October 19, 2017, and scheduled for a public hearing on today’s date. The required 20-day public notice was given on November 22, 2017 (20 days). The Staff Recommendation, with findings, conditions and conclusions, was issued on November 28, 2017, and was provided to the Planning Commission on the same day. On November 28, 2017, Mr. Wilson’s attorney, whom we did not know was involved in the process, requested postponement of the hearing, and agreed to today, January 2, 2018, to hear the matter. If the Planning Commission feels they have all the necessary information to make a **decision**, they will vote to do so today.

### 6. Criteria: The applicable standards used to evaluate each request include:

#### A. Oregon Administrative Rule (OAR) 660-006-0025, Uses Authorized in Forest Zones

#### B. Wasco County Land Use & Development Ordinance (LUDO)

##### 1. Chapter 1 – Introductory Provisions

Section 1.090, Definitions – Agricultural Structure

##### 2. Chapter 3 – Basic Provisions, Section 3.120, F-2, Forest Zone

Section 3.127, Property Development Standards

Section 3.129.D., Additional Standards – Siting Requirements

##### 3. Chapter 10 – Fire Safety Standards

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Section 10.130, Construction Standards For Dwellings And Structures – Decreasing The Ignition Risks By Planning For A More Fire-Safe Structure

### **4. Chapter 15 – Administration & Enforcement**

Section 15.030, Authority

Section 15.060, Violation of Ordinance as a Nuisance

Section 15.070, Wasco County Code Compliance and Nuisance Abatement Ordinance

### **7. Findings:**

In reviewing the request for retroactive approval of the 7,000 SF agricultural building, staff relied heavily on experts from Oregon State departments, particularly Mylen Bohle of the Oregon State Extension Office, and Robert Wood of the Water Resources Department, who provided projected yields, information about hay storage, and water rights. Staff gave the benefit of the doubt in all cases to the applicant. For instance, when OSU Extension Office staff indicated that hay is typically stored in 6' tall or 13.5' tall bales, staff calculated the space needed for 6' tall bales, which takes up more space than 13.5' tall bales.

Joseph Ramirez, former Code Compliance Officer, and I conducted a site visit to the property on May 31, 2017. We viewed the agricultural exempt structure and noted that it contained many personal items such as 4 upright freezers and 1 chest freezer, a pile of Mrs. Wilson's antiques under a tarp in the far left corner of the building, an electric wheelchair, 2 four-wheelers, a gun safe, toy pedal cars which Mr. Wilson said are used by his grandchildren for farming when they come to visit. There was a lot of vacant space in the "agricultural" building and Mr. Wilson explained that he didn't have all of his farm equipment in the building and some of the space was intended for hay storage.

In considering the expert testimony of the State of Oregon, all of the Ordinance criteria that must be met for this request, especially the definition of "Agricultural Structure", it is clear that a 7,000 SF building is not needed for the farm operation.

The County cannot consider the possibility that the applicant may expand his farm use in the future without considering the fact that he could abandon the farm use altogether. He has not harvested a crop of barley in the last 2 seasons. During the May 31st site visit dozens of items not included in the farm use on the land were being stored in the building.

**Grounds for Appeal #1:** The Planning Department erred in its interpretation of Wasco County Land Use & Development Ordinance (LUDO) 1.090, which requires that the applicant provide a Farm Management Plan to be reviewed and approved by the Planning Department.

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**STAFF RESPONSE:** As discussed on page 3 of the Staff Recommendation, the definition of “Agricultural Structure” includes a requirement that a Farm Management Plan be submitted for an Agricultural Exempt Building. The Planning Department required submittal of a Farm Management Plan consistent with Section 1.090, Definitions of the Wasco County LUDO. The definition of Agricultural Structure includes the requirement of a Farm Management Plan to ensure an agricultural building is only used for farm uses and is not so large that the owner may use it for non-farm uses instead, or in addition to the permitted farm use. Based on the LUDO adopted by the Board of Commissioners, and acknowledged by the Oregon Department of Land Conservation & Development, specifically Section 1.090, Definition of “Agricultural Structure,” the Planning Director must require a Farm Management Plan.

Staff finds that the Planning Director has the right to review and approve a Farm Management Plan for the proposed use, and Grounds for Appeal #1 is not a valid reason for overturning the Decision of the Director.

**Grounds for Appeal #2:** The Planning Department erred in finding that the applicant’s application and Farm Management Plan did not support the approval of a 7,000 SF agricultural building.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, staff contacted the Watermaster’s Office to determine if the subject parcel contained water rights for irrigation. According to Bob Wood, Watermaster, the subject parcel does not contain any registered water rights. Staff contacted the Oregon State Extension Office to find out how much area it takes to store 6 acres of hay. According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce an annual crop of approximately 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate between 3-9 tons.

Based on projected barley yields, storage of 9 tons of hay in 6’ tall stacks, would require slightly less than 400 SF. Associated equipment such as a tractor, baler, etc., would require less than 2,000 SF of space. The entire farm operation could occur in a building containing less than 2,500 SF. Many of the items the applicant states he intends to store in the agricultural building are not currently stored in the building. Based on common accepted farming practices, many hay operations do not store the rake, swather, etc., under cover because the implements are difficult to access within a building. When staff conducted a site visit to the subject parcel on May 31, 2017, the rake and swather were stored outside. The applicant’s proposed floor plan shows an excessive amount of space will be used for these farm implements

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which were not being stored inside prior to the site visit. Staff concludes that since these implements were not being stored in the building

Staff finds that retroactive approval of the owner's 7,000 SF agricultural building is not justified because the existing farm use can be accommodated in a 2,500 SF building.

**Grounds for Appeal #3:** The Planning Department erred in making unwarranted and unsupported assumptions about the applicant's farm yields and farm practices.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, and above in Grounds for Appeal #2, staff contacted the agricultural experts at Oregon State University Extension Office to request data about potential yields and space for storage for 6 acres of barley hay in northern Wasco County.

Staff contacted the Oregon State Extension Office to find out how much area it takes to store 6 acres of hay. According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce an annual crop of approximately 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate between 3-9 tons. This is not unwarranted and unsupported assumptions about farm yields and practices, but based on factual data collected by Oregon State University Extension Office for decades pertaining to soil types, climate conditions, precipitation, improvements in farm practices, etc. Grounds for Appeal #3 does not support overturning the Decision of the Planning Director because the Planning Department did not make unwarranted and unsupported assumptions about the applicant's farm yields and farm practices.

**Grounds for Appeal #4:** The Planning Department erred in making calculations about applicant's needs and projected use of the agricultural building based on its unwarranted and unsupported assumptions.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, Oregon State University Extension Office provided calculations about potential yields and storage requirements for the barley hay. Regarding the needs and projected use of the agricultural building, the building is proposed to be used for agricultural storage of farm equipment for the production of barley hay, oats, and seasonal grazing (cattle). The owner states that he needs this large building for the current farm use yet much of his farm equipment was stored outside when staff conducted a site visit to the property on May 31, 2017.

Mr. Wilson stated that he has been plowing additional land adjacent to the current 6 acres of barley/oats and plans to continue to expand the farm use and increase the number of cattle grazed on the property. He indicated he was not able to plant a



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crop in 2017 due to a lack of moisture in the soil and that he did not get “much of a crop” in 2016 which was not worth harvesting.

Staff concedes that they are not experts regarding agricultural production and sought input from experts at the State of Oregon, and Oregon State Extension Office, as well as from Bob Wood, Watermaster, Oregon Water Resources Department. Based on the information provided below,

Staff asked Oregon State Extension Office’s “Ask an Expert” website how much area it takes to store 6 acres of hay. Their response states:

*“Hay crop yields can vary between crop varieties and irrigation. With a highly productive irrigated crop you could see between 8-10 tons per acre for the entire season. Therefore about 60 tons would be about the highest production you could see for one year.*

*Assuming a harrowbed is used for stacking which stacks 9 bales high (13.5’), 1440 bales (24 bales per ton) would require about 1,050 square feet (14,140 cubic feet). If only stacked 4 bales high (about 6’ tall) it would require 2,360 square feet.”*

If cropland is irrigated it requires a Water Right from the Oregon Water Resources Department. On June 21, 2017, Robert Wood, Watermaster for Wasco County, confirmed that the existing barley field does not have a water right.

According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce approximately an annual crop of 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate 3-9 tons.

Based on projected barley yields, storage of 9 tons of hay in 6’ tall stacks, would require slightly less than 400 SF. Associated equipment such as a tractor, baler, etc., would require less than 2,000 SF of space. The entire farm operation could occur in a building containing less than 2,500 SF. Based on common accepted farming practices, many farmers do not store their rake, swather, and hay baler in an agricultural building because it is difficult to maneuver the tractor within the building to hook up these farm implements. The applicant’s proposed floor plan shows an excessive amount of space will be used for these farm implements. This finding is based on expert input from Oregon Water Resources Department and the Oregon State Extension Office and is not based on “unwarranted and unsupported assumptions about the applicant’s farm yields and farm practices as stated in Applicant’s Assignment of Error #3. Hay storage calculations are based on OSU Extension Office experts’ input, and staff’s calculations about the projected equipment storage.

## ATTACHMENT A

Grounds for Appeal #4 does not support overturning the Decision of the Planning Director because the Planning Department did not make unwarranted and unsupported assumptions about the applicant's farm yields and farm practices, but made the decision based on information from the OSU Extension Office and by the owner's storage of farm implements during their site visit to the parcel on May 31, 2017.

**Grounds for Appeal #5:** The Planning Department erred in determining that the applicant's application supports only a 2,500 SF agricultural building

**STAFF RESPONSE:** As discussed on pages 4 and 5 of the Staff Recommendation, staff provides justification for the need for approximately 400 SF of space to store hay, and less than 2,000 SF for farm equipment/machinery. Allowing 2,500 SF of building space is slightly larger than needed for the farm operation. Based on common accepted farming practices for a hay operation, staff finds that a maximum of 2,500 SF is adequate for the existing farm operation and the Planning Department did not err in their determination.

**Grounds for Appeal #6:** The Planning Department erred in conditioning the approval of the agricultural building on applicant removing 4,500 SF of the agricultural building.

**STAFF RESPONSE:** As discussed on pages 4 and 5 of the Staff Recommendation, staff provides justification for the need of approximately 400 SF of space to store hay, and less than 2,000 SF for farm equipment/machinery. Allowing 2,500 SF of building space is slightly larger than needed for the farm operation. Based on common accepted farming practices for a hay operation, staff finds that a maximum of 2,500 SF is adequate for the existing farm operation, therefore 4,500 SF of the building should be removed.

The owner has not provided any reasoning describing why this condition was an error. Staff recommends Grounds for Appeal #6 be denied.

**Grounds for Appeal #7:** The Planning Department's decision contains numerous factual errors, such as the statement that the application is for a "three-sided building" and erroneous descriptions of surrounding properties.

**STAFF RESPONSE:** The owner is correct that the building is not three-sided (see photo below showing the front of the building). The property owner did not describe the remaining "numerous factual errors" in the report. Staff has limited information about surrounding properties. It is unlikely that descriptions of surrounding properties will change the basic fact that a 7,000 SF agricultural building is not necessary for 6 acres of hay, three cows and five chickens.

Wasco County Planning Commission  
January 2, 2018 Minutes  
Page 18 of 22

## ATTACHMENT A

Staff recommends Grounds for Appeal #7 be denied. The fact that the building is not 3-sided does not change the fact that a 7,000 SF building is not needed for the existing farm operation, nor does the use of surrounding properties change anything about the farm use on the applicant's land.

Additional information was submitted by the applicant's attorney on Friday, December 29, 2017, and first seen by staff this morning. I e-mailed it to the Planning Commission by mid-morning. The following is my response to the attorney's comments.

Summerfield: The decision is arbitrary and capricious because the Department has never challenged a farm management plan or tied the requested building size to the acreage or the projected farm fields.

*Scrutiny of the proposed use: Department **always** looked at the farm management plan and scrutinized, however it was not done in writing because these are type 1 reviews and do not generally require findings.*

Summerfield: There are no denied agricultural exempt building permits.

*Property owners typically do not apply for an agricultural exempt building if they will be denied because if there is a legally placed dwelling on the property they can build one or more detached accessory buildings subject to the 75% size limit. Regarding permits cited by the applicant, nearly all of these are located on one tax lot, but the applicants often own much more farm land than the identified tax lot. For instance, the identified agricultural building constructed on a 21.61 acre property owned by Filbin is part of a 2,096 acre ranch.*

Summerfield: Farm Management Plan: 6 acres alfalfa/oats, 5 poultry, 3 cattle seasonally

*Hand out chart of cited agricultural building permits. This chart shows overall acres owned by the applicant of agricultural permits, and the existing farm use. Most of the larger buildings are related to marijuana production, a relatively new farm use in Oregon. Inside grow operations are limited to 10,000 SF of growing. Other larger buildings are in conjunction with ranches and farms that contain hundreds and thousands of acres and are justified for the existing use.*

Summerfield: Building has existed for 18 years without complaints.

*The building cannot be seen unless one drives ¼ mile south of Sevenmile Hill Road onto the property. The lack of complaints does not justify approving an illegally constructed building. If the applicant had requested approval of the*

## ATTACHMENT A

*building before it was constructed, it would have been denied. Please remember that when staff visited the building last May, there were more things in the building **not** related to farm use than were related to farm use and staff must assume that it would have continued to be improperly used.*

Summerfield: Future expansion of farm use: Farm management plan shows intention to farm more of his property than the Department acknowledged in analyzing his projected farm-related needs.

*Most people plan for the future. Plans do not always come to fruition. Staff reviews the existing farm use and generally makes their decision based on what is on the ground. Exceptions are sometimes made when the property owner can show they have invested in the future expansion. For example, if they can show receipts for new orchard trees or vineyard plants, or that they have paid for more cattle yet to be delivered, investment in irrigation system supplies, etc. Other than saying he has plans to expand his farm use when he retires sometime in the future, staff has not seen that he has invested in future expansion. (Mason Road – Jamison Farms – vineyard)*

Summerfield: Applicant makes substantial income from farm production each year the property has been in deferral.

*Would not be able to support himself on his income. He has an excavation business that staff assumes is his primary income.*

*When I first went to work in the planning field in 1979 in Hood River County, one of the first things I learned was that the Oregon Legislature created agricultural exempt permits for full-time farmers and ranchers. Like the farm deferral program, it was intended to give farmers and ranchers a financial break so that they could continue to bring food to the public. It was not for part-time farmers who had other jobs to support themselves. And please let me say that part-time farmers are very important, but this was not who the Legislature was trying to help: it was family farms and ranches where this was their full-time job. The owner constructed a building without permits. Staff is uncertain whether an electrical permit was obtained for electricity in the building. The owner has the ability to construct multiple detached accessory buildings to satisfy his needs but is unwilling to do so because he already constructed the building. Staff does not believe the existence of the building is justification to allow it to remain. It is important to consistently implement land use regulations so that all persons are treated equally. If Mr. Wilson's building is permitted to remain, he will be getting a benefit not given to any other property owner in Wasco County, which is not fair to other property owners.*

### **8. Planning Commission Decision Options:**

## ATTACHMENT A

- A. Uphold the decision of the Planning Director and deny the Appeal, with the proposed Conditions and Findings in the Staff Recommendation
- B. Uphold the decision of the Planning Director and deny the appeal, with amended Conditions and Findings.
- C. Overturn the decision of the Planning Director and approve the request for a 7,000 SF (or other size) agricultural exempt building with amended Conditions and Findings in the Staff Recommendation; or
- D. Continue the hearing to a date and time certain if additional information or review time is needed to determine whether standards and criteria are sufficiently addressed.

### 9. Proposed Conditions:

#### A. **After expiration of the 12-day appeal period the Owner shall comply with the following conditions:**

- 1. A 2,500 square foot (SF) agricultural building is approved. The owner shall remove 4,500 SF from the existing building no later than May 1, 2018.
- 2. Obtain an Approach Road Permit from the Wasco County Public Works Department within 30 days of final approval for the existing driveway approach onto Sevenmile Hill Road.
- 3. The owner shall record a restrictive covenant in the deed records of Wasco County stating that the agricultural building will only be used for agricultural uses

#### B. **Miscellaneous Conditions**

- 1. Outdoor lighting shall be sited, limited in intensity, shielded and hooded in a manner that prevents the lighting from projecting onto adjacent properties, roadways, and waterways. Shielding and hooding materials shall be composed of nonreflective, opaque materials. If the existing outdoor lighting is motion-activated, no hooding and shielding materials are required, however if the lighting is on from dusk to dawn, the lighting shall meet the outdoor lighting standard.
- 2. Failure to meet all conditions of approval will result in enforcement action by Wasco County through the Code Compliance and Nuisance Abatement Ordinance.



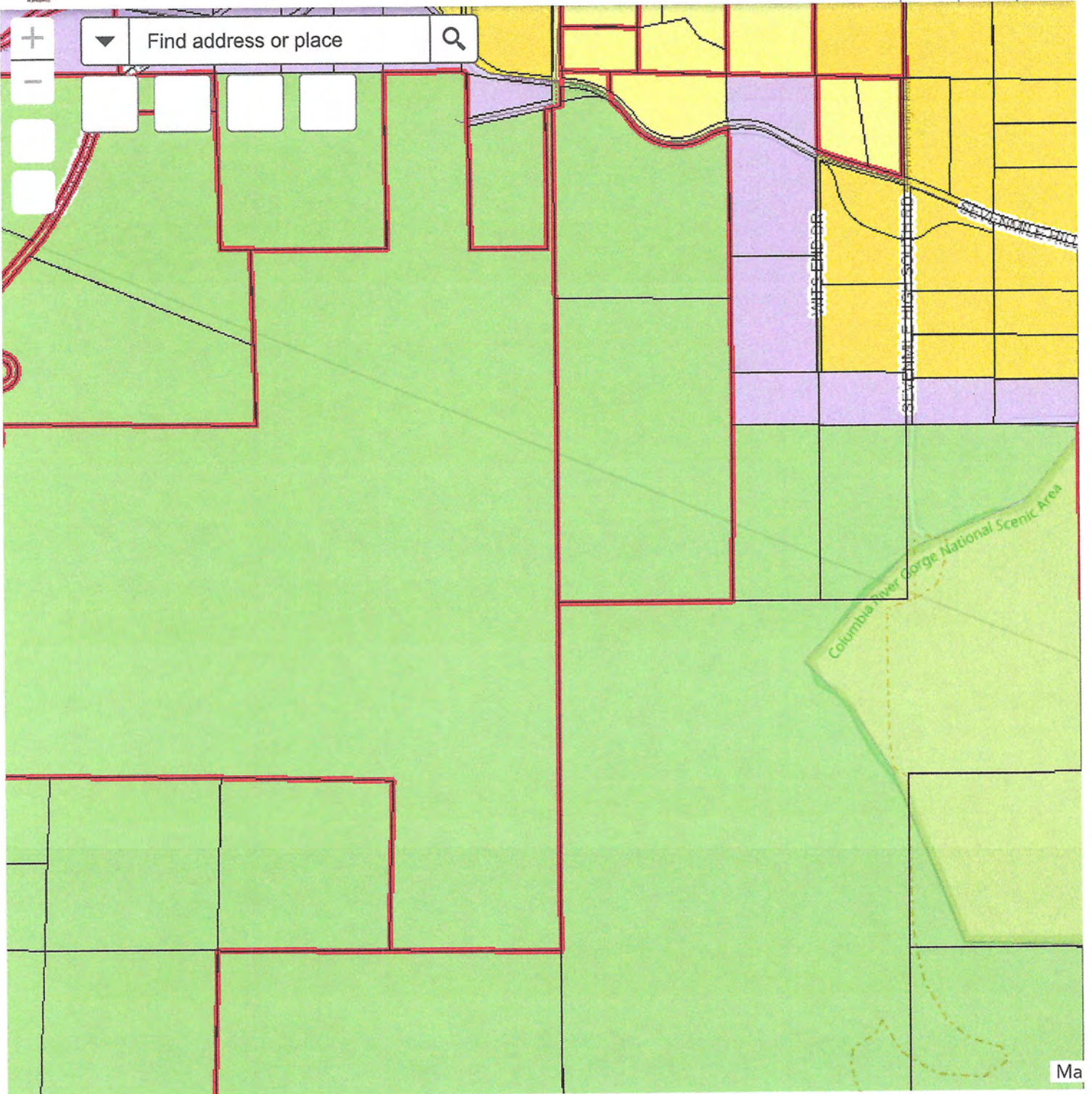
## ATTACHMENT A

**10. Staff Recommendation:** Staff recommends Option A – Uphold the Decision of the Planning Director and deny the Appeal, with the proposed Conditions and Findings in the Staff Recommendation.

Staff is not aware of any reason to continue this public hearing and believes the Planning Commission has sufficient information to make a decision on this request.

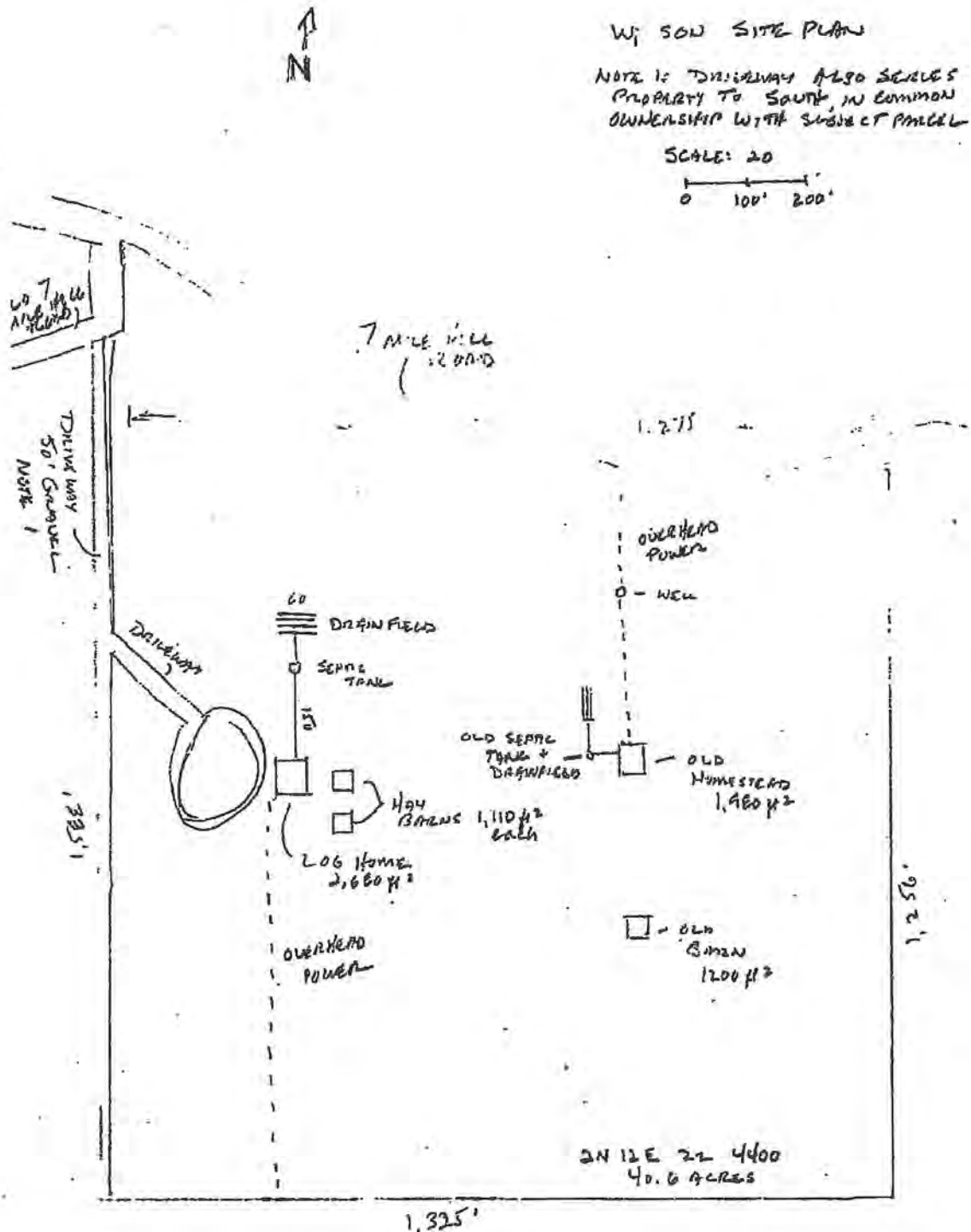
That concludes my presentation and I would be glad to answer any questions the Commission may have.

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# ATTACHMENT B - MAPS

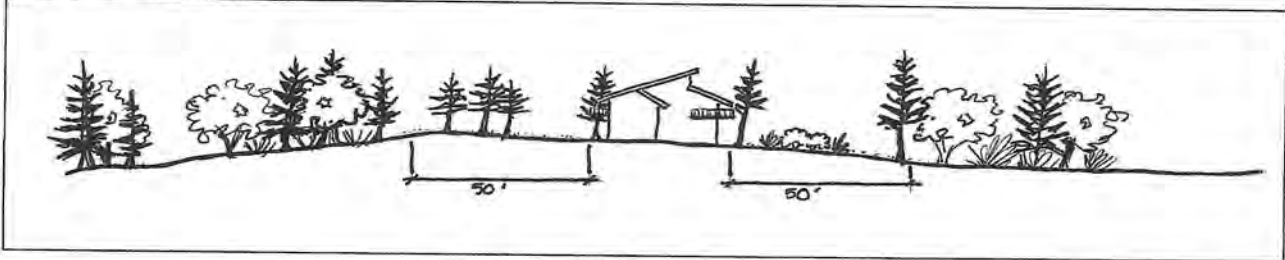
## Site Plan





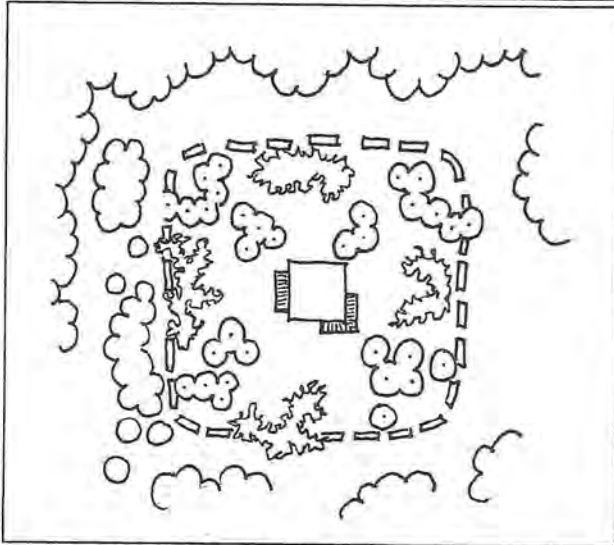
## Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break

### DEFENSIBLE SPACE

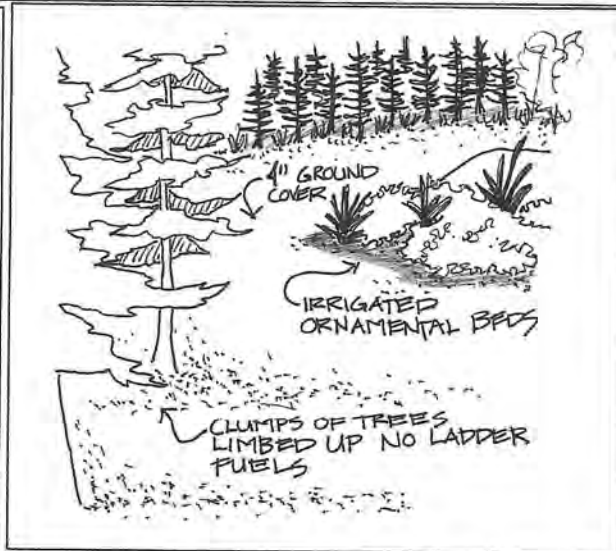


Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.

### Is your building surrounded by a 50-foot wide fire fuel break?



Fire Fuel Break Area Plan View  
Illustration



Fire Fuel Break Area Sample

### MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,
- Trees kept free from dead, dry, or flammable material;
- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;

## Re: Road buffer

From: Arthur Smith (arthurs@co.wasco.or.us)

To: sdooley3300@yahoo.com

Date: Thursday, October 28, 2021, 09:46 AM PDT

There is no defined or statutory setback for roads.

County road right-of-way is usually 60 feet in width - 30 feet either side of the centerline stripe. Our road crews like to keep a clear zone from the shoulder of the road, so they can perform maintenance work, but that can vary from road to road and area to area. In Mosier, we have trees and other vegetation within 2 feet of the road shoulder. In that area, it is natural for denser vegetation and it does not cause an unsafe situation. In Wamic, there may not be a tree or shrub for the entire 60 feet of right-of-way. There are trees, mailboxes, fences and all sorts of other objects located within the right-of-way. If you think there is an unsafe situation, I can take a look.

Arthur

On Thu, Oct 28, 2021 at 9:32 AM Sheila Dooley <sdooley3300@yahoo.com> wrote:

So what is the setback?

Sheila

On Thursday, October 28, 2021, 07:41:13 AM PDT, Arthur Smith <arthurs@co.wasco.or.us> wrote:

No, there is no requirement like that. We would be cutting down trees for 100 years to clear every county road for 50 feet.

Arthur

On Wed, Oct 27, 2021 at 4:46 PM Sheila Dooley <sdooley3300@yahoo.com> wrote:

Hi Arthur,

Is there a requirement that trees not be planted within 50 feet of county roads?

Thanks,

Sheila

Sent from Mail for Windows





**Arthur Smith | Director**  
**PUBLIC WORKS**

arthurs@co.wasco.or.us | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2645 | Fax 541-506-2641  
2705 East 2nd Street | The Dalles, OR 97058

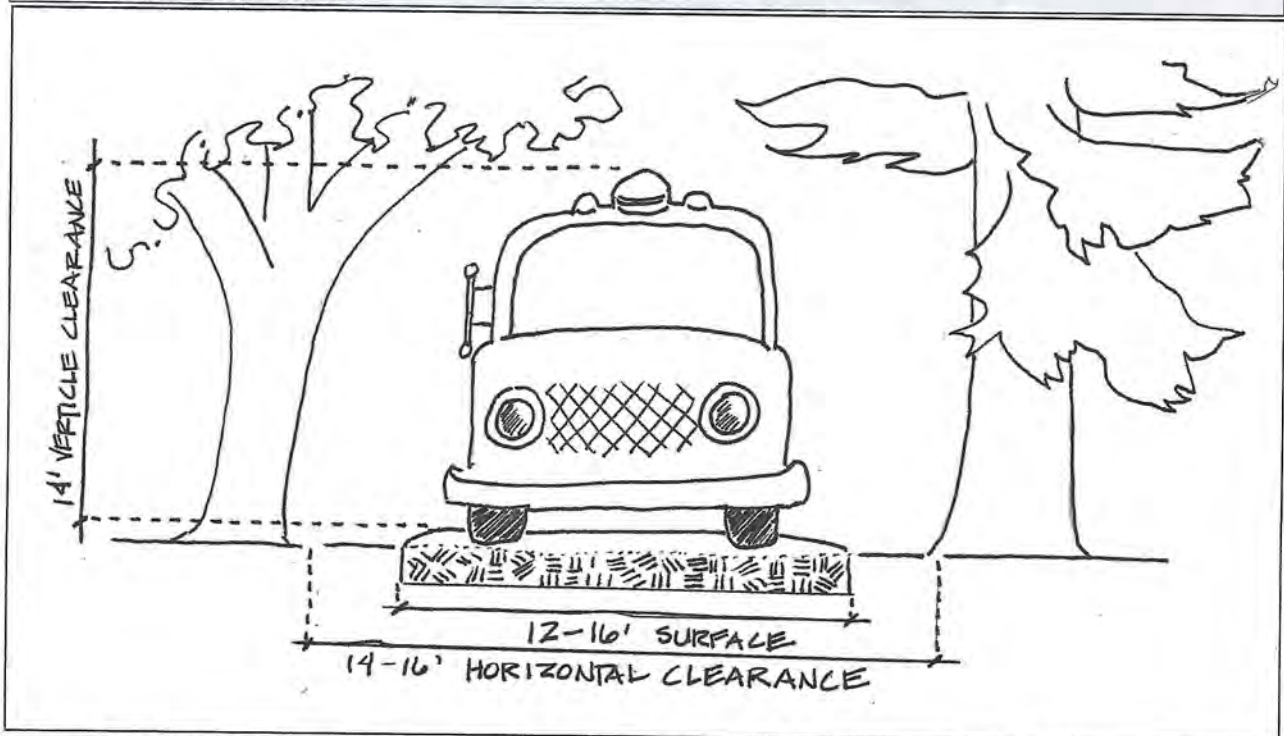


**Arthur Smith | Director**  
**PUBLIC WORKS**

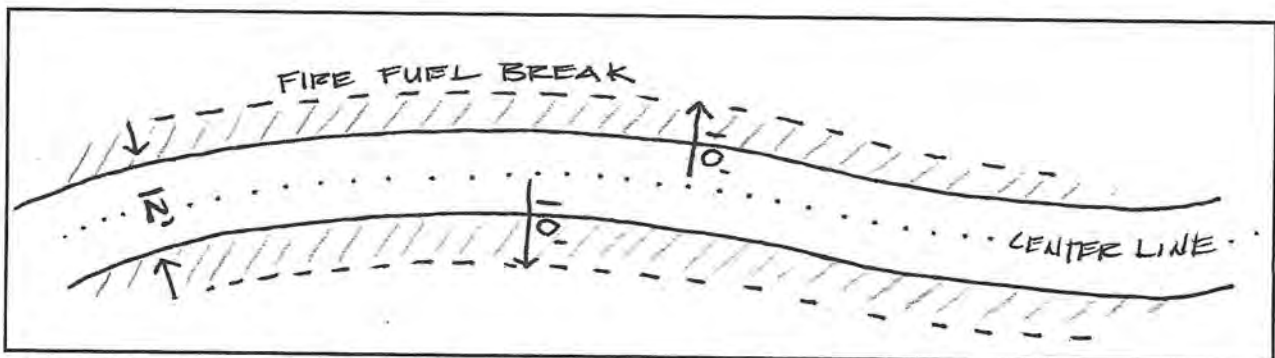
arthurs@co.wasco.or.us | [www.co.wasco.or.us](http://www.co.wasco.or.us)  
541-506-2645 | Fax 541-506-2641  
2705 East 2nd Street | The Dalles, OR 97058

B. This Standard is applicable to all residential driveways in: -All Zones	
B. If <u>Yes</u> Then	B. If <u>No</u> Then
<ul style="list-style-type: none"> <li>Emergency responders will be able to bring all vehicles onto your property and to your building site.</li> <li>You will be able to get off your property as the fire equipment accesses the site.</li> </ul>	See (A) above.

**C. Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?**



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



A fire fuel break extending 10 feet either side of the center line of the driveway is required.

December 2, 2021

Dear Wasco County Planning Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

The Table of Contents to the Supplemental Record states that beginning on page 587 “Remaining Board of County Commissioner’s June 5, 2019 Regular Session Agenda Not Related to Wilson Appeal #921-18-000085-PLNG.” This is not correct, as there is additional testimony related to the appeal beginning on page 783 from Jill Barker and Sheila Dooley as well as a letter from Department of Land Conservation and Development and Oregon Department of Forestry.

This letter relates to statements in the current staff report regarding the BPA Line right of way and other issues related to the proposed rezone.

PC 1-76 (3) “There is a history of public examination and consideration that the BPA Line right-of-way/ easement area physically separates, and therefore, mitigates the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.”

This claim was refuted by both Department of Land Conservation and Development (DLCD) and the Oregon Department of Forestry (ODF) in their letter to Wasco County dated January 22, 2014. At that time there was a previous application to rezone this property and several adjacent parcels (the majority owned by Ken Thomas and David Wilson) from F-2 (80) to F-F (10). The application was denied by Wasco County. According to DLCD and ODF, “The position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through and spot over right of way areas.”

DLCD and ODF also rejected the arguments for a rezone which are included in their attached letter. “As our comments indicate, we do not believe the subject property is either physically developed or irrevocably committed. Furthermore, we are concerned that the applicant’s contentions regarding wildfire are misplaced and could lead to a dangerous precedent. We recommend that the existing plan and zone designations be retained.”

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040



# Oregon

John A. Kitzhaber, MD, Governor

## Department of Land Conservation and Development

Bend RSC, Millpoint Building  
650 SW Columbia St, Ste 7100  
(541) 322-2032  
[www.lcd.state.or.us](http://www.lcd.state.or.us)

January 22, 2014

John Roberts, Director  
Wasco County Planning Department  
2705 E 2<sup>nd</sup> Street  
The Dalles, OR 97058

RE: Local File PLALEG-13-08-0002  
DLCD File: 001-13

Mr. Roberts:

This letter includes the joint comments of the Oregon Department of Forestry (ODF) and the Oregon Department of Land Conservation and Development (DLCD). Both departments would like to thank Wasco County for the opportunity to review and comment on the land use proposal referenced above. The subject proposal seeks to take a “physically developed” and “irrevocably committed” exception pursuant to OAR 660-004-0025 & 0028 to statewide planning goal 4 (Forest Lands). If successful, the proposal would convert about 287 acres from a Forest Plan designation and F2 (80) Zoning district to a Farm-Forest Plan designation and F-F(10) district.

It is our understanding that the subject property is composed of eight tax lots and five legal parcels. Two of the five legal parcels in common ownership are a portion of a much larger contiguous forest tract. Five homes are present. It is not clear to us whether the existing homes have been approved under state and local provisions implementing Goal 4 or whether they pre-exist modern planning and zoning programs.

Our initial observation is that the subject property appears capable to be managed as forest land and is not an obvious candidate for redesignation to provide for rural residential development. Our comments and concerns are as follows.

### ***Physically Developed Exception – OAR 660-004-0025***

A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. OAR 660-004-0025(1). Longstanding case law from the Land Use Board of Appeals (LUBA) provides additional guidance:



## Oregon Department of Forestry

Salem Headquarters  
2600 State Street  
Salem Oregon 97310  
(503) 945-7200



- “ The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded. Uses established in accordance with the goals cannot be used to justify such an exception.” *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).
- “ A local government may not assume that the entire parcel or ownership occupied by an existing dwelling or road is physically developed so that it is not available for uses allowed under the goals”. *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994).

Based on our understanding, the subject property does not qualify as being “physically developed” because only a handful of homes and some minimum road and spring improvements exist, all of which may have been approved under forestland requirements implementing Goal 4.

***Irrevocably Committed Exception – OAR 660-004-0028***

A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable. OAR 660-004-0028(1).

Our review of the materials submitted by the applicant shows that proximity to existing rural residential areas is the principle argument offered to explain why the subject property is deserving of an irrevocably committed exception. According to the Land Use Board of Appeals:

- “ OAR 660-004-0028(6)(c) prohibits impacts from rural residential uses approved pursuant to the statewide land use goals from being used to justify a committed exception for nearby property. Where a county decision relies in part on impacts from nearby residential uses to conclude that the resource lands are irrevocably committed to nonresource use, the findings must establish that those conflicts do not arise from residential areas that were approved pursuant to statewide planning goal exceptions.” *Friends of Yamhill County v. Yamhill County*, 38 Or LUBA 62 (2006)

It is our understanding that the nearby residential development relied upon by the applicant is located in approved exception areas. Therefore, this development is not available to consider and can not be used to determine the subject property is irrevocably committed to other uses.



***Wildfire***

The applicant's material includes detailed discussions on wildfire and suggests that allowing the property to convert to a rural residential scenario would help to better manage fire risks. The notion of guarding against wildfire by introducing additional development does not seem reasonable to us. As the applicant's material points out, fire often originates from residential areas and fire events that threaten homes and property routinely receive fire fighting resources that would otherwise be devoted to protecting productive forest land.

Furthermore, the position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through or spot over right-of-way areas.

Taken together, introducing additional development just pushes the urban-wildland fire interface more deeply into private forests to the detriment of commercial forest management while increasing risk and costs of fire. We strongly encourage the county to reject this argument.

***Conclusion***

As our comments indicate we do not believe the subject property is either physically developed or irrevocably committed. Furthermore, we are concerned that the applicant's contentions regarding wildfire are misplaced and could lead to a dangerous precedent. We recommend that the existing plan and zone designations be retained.

Again, thank you for this opportunity to comment. We request that this letter be entered into the record of these proceedings and that we receive a copy of the decision. If additional information is provided at the hearing, we ask that the hearing be continued, pursuant to ORS 197.763(4)(b), to allow us time to review the new information and respond if necessary.

Respectfully,



Jon Jinings  
Community Services Specialist  
Community Services Division  
Dept of Land Conservation & Development



John Tokarczyk  
Policy Analyst  
Forest Resources Planning  
Oregon Dept of Forestry

Cc: Katherine Daniels, DLCD  
Scott Edelman, DLCD



# Oregon

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January 22, 2014

John Roberts, Director  
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2705 E 2<sup>nd</sup> Street  
The Dalles, OR 97058

RE: Local File PLALEG-13-08-0002  
DLCD File: 001-13

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It is our understanding that the subject property is composed of eight tax lots and five legal parcels. Two of the five legal parcels in common ownership are a portion of a much larger contiguous forest tract. Five homes are present. It is not clear to us whether the existing homes have been approved under state and local provisions implementing Goal 4 or whether they pre-exist modern planning and zoning programs.

Our initial observation is that the subject property appears capable to be managed as forest land and is not an obvious candidate for redesignation to provide for rural residential development. Our comments and concerns are as follows.

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## Oregon Department of Forestry

Salem Headquarters

2600 State Street

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***Conclusion***

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Respectfully,



Jon Jinings  
Community Services Specialist  
Community Services Division  
Dept of Land Conservation & Development



John Tokarczyk  
Policy Analyst  
Forest Resources Planning  
Oregon Dept of Forestry

Cc: Katherine Daniels, DLCD  
Scott Edelman, DLCD

OREGON TRIAL ATTORNEY  
STATE & FEDERAL COURT

**MIKE SARGETAKIS**  
LAW OFFICE OF  
**MIKE SARGETAKIS, LLC**  
735 SW FIRST AVE, 2<sup>ND</sup> FL  
PORTLAND, OR 97204

MIKE@SARGETAKIS.COM  
(971) 808-1495

December 7, 2021

**VIA ELECTRONIC MAIL ONLY**

Wasco County Planning Commission  
Attn: Daniel Dougherty, Senior Planner  
2705 East Second Street  
The Dalles, OR 97058  
danield@co.wasco.or.us

RE: File No 921-18-000086-PLNG (Wilson Goal Exception Remand)

Dear Wasco County Planning Commission:

These comments are provided on behalf of Sheila Dooley and Jill Barker, petitioners before LUBA in this above-referenced matter. For the reasons set forth below, Wasco County cannot approve the Goal Exception/Zone Change requested by applicant David Wilson. This parcel neither qualifies for a developed exception (as recognized by Staff, and as LUBA held as a matter of law); nor does it qualify for an “irrevocable commitment” exception.

**DEVELOPED EXCEPTION**

In the interest of keeping the comments on this portion of the application brief, I will point to LUBA’s opinion on this matter (*Dooley v. Wasco County*, LUBA No. 2019-065). LUBA was unequivocal when it held that this property does not qualify for a “developed” exception. Nothing has changed since that time, other than the applicant’s attempt to manipulate the numbers. The law is clear: structures allowed by Goal 4 cannot be counted toward a physically developed exception. *See* OAR 660-004-0025(2). The roads, the dwelling, and the barns are allowed under Goal 4 as incidental to farm uses. Staff correctly noted these problems with the application, and its draft findings correctly lead to the conclusion that a Developed exception is inappropriate.

**IRREVOCABLY COMMITTED EXCEPTION**

Again here, LUBA’s opinion in *Dooley v. Wasco County* is instructive. The “focal criteria” when analyzing an irrevocably committed exception is the relationship between the subject property and adjacent uses. OAR 660-004-0028(2); *see also*, *DLCD v. Curry County (Pigeon Point)*, 151 Or App 7, 11, 947 P2d 1123 (1997) (holding that the “fundamental test” for irrevocably committed exception is the relationship between the subject property and the surrounding area); *Converse*, 39 Or LUBA at 441.



The County must demonstrate *how* existing uses on adjacent lands render resource use on the subject property impracticable. *DLCD v. Wallowa County*, 37 Or LUBA 105, 111 (1999). Stated another way, a committed exception “must be based on facts illustrating how past development has cast a mold for future uses.” *1000 Friends of Oregon v. LCDC (Curry County)*, 301 Or 447, 501, 724 P2d 268 (1986). The mere presence of adjoining residential uses is not a sufficient basis for concluding that resource lands are irreversibly committed to non-resource uses. *Gordon v. Polk County*, 54 Or LUBA 351 (2007); *Waymire*, 39 Or LUBA at 452-53. Nor is the “occasional inconvenience” that a rural resident must be willing to accept sufficient to approve a Committed exception. *Friends of Linn County v. Linn County (Schwindt)*, 42 Or LUBA 235, 246 (2002).

While, as with the prior hearing on this matter, staff has once again chosen to rely on a dictionary definition for “impracticable,” there is no shortage of case law which the County should rely on instead for its determination. The standard for impracticability “is a demanding one.” *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508, 519 (1994). The test is not one of commercial viability. The question is whether the subject property is capable of generating a gross income. *See, 1000 Friends of Oregon v. Benton County*, 32 Or App 413, 426 (1978).

Reliance upon longstanding adjacent rural uses is insufficient to demonstrate that resource use of the proposed exception area has become impracticable in the absence of recent or imminent changes affecting the subject property. *Wodarczak v. Yamhill County*, 34 Or LUBA 453, 460-461 (1998) (*citing Jackson County Citizens League*, 38 Or LUBA at 365-366).

Staff notes that “a majority of the north, northwest, and east adjacent parcels contain active registered addresses, and are generally smaller in size than those located to the south, southwest, and west.” Staff report at p. 72. And further notes that “the size of the subject parcel, and its historical and current use is more in line with those neighboring north, northwest, and east parcels.” *Id.* However, this isn’t quite true, if one looks at the map immediately preceding this finding. This subject parcel is 40 acres, while the neighboring parcels used to justify this finding are all less than 15 acres. While the applicant seeks to rezone this parcel so that it may in the future be subdivided to smaller parcels more like this, the subject parcel is actually more like the larger parcels to its south and west, which are, as staff describes “in active forestry use” Staff Report at 67.

Staff’s next finding here is confusing- it simultaneously describes the different (and if accurate, seemingly anomalous) soil types on this property that make it unsuitable for growing the very trees which satellite views show it growing, while recognizing the surrounding properties on three sides as “actively in forest use” but saying nothing of the satellite views showing ponderosa pine trees growing across all properties in the area.

The question, pursuant to OAR 660-004-0028(3) is whether:

- 1) farm use as defined in ORS 215.203;
- 2) propagation or harvesting of a forest product as specified in OAR 660-033-0120; and,
- 3) forest operations or forest practices specified in OAR 660-006-0025(2)(a) are  
*impracticable* [as defined above].

The historic, and current existence of ponderosa pine throughout this tract seem to foreclose the idea that propagation or harvesting of a forest product is impracticable here. One look at the “soil suitability map” provided by the applicant, and presented in the staff report at p. 83 shows that the areas designated “generally unsuitable” are overlayed over large swaths of mature ponderosa pine trees. Not only that, but the soils dubbed “suitable” are largely in mowed areas, or areas where there are sparse trees, as opposed to staff’s assertion that those areas are dominated by development. This is flatly not borne out by the very image submitted by the applicant and placed before this body.

As LUBA discussed in its opinion remanding this application, “the county’s finding that conflicts with residential uses resulting from spraying are not a basis to find that resource use of the subject property is impracticable.” LUBA No. 2019-065 at 14 (internal citation omitted).

On Page 82 of the Staff Report, staff concludes that “resource use on the subject property has **become** impracticable.” (emphasis added). Notably absent is any analysis or even description of the recent changes responsible for this metamorphosis. To the contrary, staff points to the applicant’s continued use for livestock grazing on the property for the last three years. Staff relies on a dictionary definition for guidance on deciding resource uses are impracticable, ignoring the dearth of case law from LUBA already in the Record describing what this standard actually means. This is the same tack taken by the County before, which LUBA found to be insufficient to support an irrevocable commitment exception.

## CONCLUSION

For each of the reasons set forth in this comment, as well as all of the comments provided by my clients directly, and the facts in the whole Record, the applicant has failed to meet the requirements for either a developed, or a committed exception, and the draft findings as presented are insufficient to support a Decision granting this application. This application must be denied.

  
\_\_\_\_\_  
Mike Sargetakis

*Attorney for Sheila Dooley and Jill Barker*

November 26, 2021

Dear Wasco County Planning Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I have the following additional comments regarding the new evidence submitted by the applicant.

According to the Wasco County Soil and Water Conservation District, Ponderosa Pine and Oregon White Oak can't grow on the 10E Bodell soil type. As most of the 6.06 acres labeled as 10E Bodell on the applicant's soil survey contain these trees, it appears that these areas are not correctly identified.

Please see the attached information. It shows the native vegetation that occurs naturally and should be present if the land has been undisturbed by development including farming as well as trees that are commonly planted.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040

## Ecological Site/Plant Association and Vegetation (OR)

### Wasco County, Oregon, Northern Part

[Composition of forest understory vegetation is based on canopy cover. Composition of rangeland vegetation is based on dry weight]

Map symbol and soil name	Ecological site or plant association	Common trees	Forest understory or rangeland characteristic vegetation	Composition	
				Forest	Range
				Pct	
10E:					
Bodell	SOUTH SLOPES 20-40 PZ (R006XA204OR)	—	Idaho fescue bluebunch wheatgrass Sandberg bluegrass	— — —	55 15 10
49C:					
Wamic, north	LOAMY 14-20 PZ (R006XA300OR)	Oregon white oak ponderosa pine	Idaho fescue bluebunch wheatgrass antelope bitterbrush Oregon white oak ponderosa pine prairie Junegrass Sandberg bluegrass	45 10 8 8 8 5 5	45 10 8 8 8 5 5
50D:					
Wamic	LOAMY 14-20 PZ (R006XA300OR)	Oregon white oak ponderosa pine	Idaho fescue bluebunch wheatgrass antelope bitterbrush Oregon white oak ponderosa pine prairie Junegrass Sandberg bluegrass	45 10 8 8 8 5 5	45 10 8 8 8 5 5
51D:					
Wamic	SOUTH SLOPES 14-20 PZ (R006XA200OR)	Oregon white oak ponderosa pine	bluebunch wheatgrass Oregon white oak Sandberg bluegrass antelope bitterbrush ponderosa pine	— — — — —	70 10 10 5 5

December 7, 2021

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon

The USDA soil survey found the soils to be more productive than average and suited to growing Ponderosa Pine and Oregon white oak. These trees as well as fir trees are growing on the areas not mowed and are visible in the aerial photographs.

The stated goal of the applicant's soil survey was to show a preponderance of unsuited soils. The applicant can't say with any certainty that this is the case. Out of 40.13 acres, 20.79 were claimed to be unsuitable, a difference of only 1.45 acres.

The soil survey included areas incorrectly labeled as infrastructure such as vacant land, treed areas, and illegal and unusable buildings. Removing these results in a preponderance of suitable soils.

There is a margin of error involved in using 23 test sites and then extrapolating the results to apply to areas around them.

A review of the applicant's Soil Survey found the following discrepancies:

1. The soil survey includes a soil type not found in Northern Wasco County: 51C. It shows up nowhere else but on the applicant's property. Soils types listed on PC 1-425
2. The soil type 10E Bodell was identified in areas containing Ponderosa Pine and Oregon White Oak, trees that should not be growing on this soil type according to the Soil and Water Conservation District.

This calls in question the validity and accuracy of the soil survey.

The staff analysis also contains discrepancies such as:

1st. The claim that the subject parcel's use is more in line with properties with residential zoning.  
Response: This property is part of a 109-acre tract, historically used for farming alfalfa hay and grazing, and containing some merchantable timber. The other 69 acres are in farm deferral.

2nd. The claim that the property is surrounded on three sides by existing residential development and there would be potential conflicts with forestry use.

Response: There is no house on the west side and the applicant's house is on the south side. Both properties are zoned F2. To the north across the road is a tree farm. The house to the east is on the other side of the property. The description of potential conflicts with forestry use is unfounded.



3rd. The claim that the property can't be used to make a profit and has been removed from farm/forest tax deferral.

Response: This was most likely done by the applicant to support his claim that the property should be rezoned. Yet he is planning to clear and farm an additional 20 acres on his adjoining property (which is in farm deferral and makes a substantial income according to his attorney) rather than utilize this property. Choosing to not actively farm this parcel, plant trees or let them come back naturally, or apply for a tax deferral was done to support the claim that the property should be rezoned.

The request for a rezone should be denied.



Daniel Dougherty &lt;danield@co.wasco.or.us&gt;

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**Wilson Remand Application - 2021**

1 message

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**Jillian Barker** <bjillian187@gmail.com>  
To: danield@co.wasco.or.us

Sun, Nov 28, 2021 at 11:06 AM

November 26, 2021

Dear Wasco County Planning Commissioners,

I have the following concerns regarding the Wilson Remand (File # 921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-965):

I find it obviously refutable to claim that soils on the applicant's property that are presently voluntarily growing many trees, are nevertheless categorized in the applicant's soil study as incapable of growing trees due to unsuitable soil classifications. This appears to be an error or misinterpretation of the conclusions of the soil study.

Some years ago in the process of doing fire fuel reduction on the property, the mechanical grub-hoeing of the understory has removed many young seedling and sapling conifer and oak trees in those areas. In spite of this there are still numerous oak and conifer trees in the alleged "unsuitable soil" areas in the east and south parts of the property which are not mowed, as evidenced in the current aerial photos.

The areas that have been mowed are very suitable for trees and in the past produced three crops of alfalfa each year. In 1977 I assisted in the purchase of alfalfa hay from that same field. The fact that the applicant is not using most of his property for forest purposes and has not replanted the open field with trees (or let them grow back naturally) does not make it any less valuable as forest land.

I fully concur with Sheila Dooley in her analysis of the Remand application issues, regarding the physically developed or irrevocably committed exception requirements. I am surprised that the new site plan map submitted with the Remand application does not match the site plan map that was originally submitted to Wasco County and LUBA in 2019. There are many new non-existing plans and infrastructure drawn on this new site plan map that were not included in the original map. This has totally changed the application and these proposed changes are not relevant to the Remand application.

Additionally, the "literal moonscape nature of the adjoining properties south of the subject property" are merely natural dry grasslands and wheat/hay/grazing fields in summertime (on overexposed film) and are irrelevant to the Remand application.

Thank you for your attention.

Sincerely,

Jill Barker

P.O. Box 572

Mosier, Oregon 97040



Daniel Dougherty &lt;danield@co.wasco.or.us&gt;

## Wilson Remand Hearing testimony

1 message

**Jillian Barker** <bjillian187@gmail.com>  
To: danield@co.wasco.or.us

Tue, Dec 7, 2021 at 2:59 PM

December 7, 2021

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

Jill Barker

P.O. Box 572

Mosier, Oregon

Regarding Wilson's remand application, the statement that there is a "literal moonscape nature of the adjoining properties south of the subject property" can not be substantiated. That same land to the south and east has been Grant Robbins' productive hay and grazing fields since the 1970s. To the northeast of the property is Ortley, a productive ranch owned and operated by Kortge Wheat and Cattle for over 50 years. These are hardly moonscapes.

The new site plan map submitted in the Remand application has changed considerably from the original site plan submitted in the original 2019 LUBA record. There is much new infrastructure shown that does not yet exist, such as 3 proposed trailer sites as well as additional driveways, powerlines and septic drain fields.

It appears that this nonexistent infrastructure has been included to add to buffer zones in an attempt to preclude forestry use. Future plans must not be included to create new buffer zones.

The applicant appears to be adding this proposed physical development to make a "physically developed" case after the fact. LUBA ruled that the property was not physically developed based on the evidence. Is the applicant trying to show that it is more developed than it actually is, suggesting that that it is "irrevocably committed" to non-resource use?

It is completely irresponsible to allow more residential development in a high fire risk, high wind area in an unprecedented drought condition with declining aquifers and wells.

The areas that have been mowed are very suitable for growing trees and in the past produced 3 crops of alfalfa each year. In 1977 I assisted in the purchase of alfalfa hay from that same field. The fact that the applicant is not using most of his property for forest purposes and has not replanted the open field with trees or let them grow back naturally does not make it any less valuable as forest land.

I find it obviously refutable to claim that soils on the applicant's property that are presently growing many trees are supposedly nevertheless incapable of growing trees due to unsuitable soil classifications. Some years ago in the process of doing fire fuel reduction on the property, the mechanical grub hoeing of the understory removed many young seedling and sapling trees in those areas. In spite of this, there are still numerous trees in the alleged "unsuitable" soil areas as shown in aerial photographs.

December 7, 2021

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

Phil Swaim  
3300 Vensel Rd.  
Mosier, Oregon

In 2014 there was a previous application to rezone this and several adjacent parcels from F280 to FF10. This was denied by Wasco County after the county received a letter from DLCD and ODF in strong opposition. They disagreed with the claim that the BPA Powerline would serve as a firebreak in the event of a fire. The Mosier Creek Fire of 2020 proved this to be correct as the fire raced across the Powerline easement and onto adjoining forestland.

Additional development would push the wildland-urban interface more deeply into forestland to the detriment of forest management and increase fire cost and risk.

They did not believe the subject property was either Physically Developed or Irrevocably Committed and recommended that the existing zone and plan designations be retained.

The applicant has put forth a new site plan that is drastically different from the site plan in the LUBA Record. There are imaginary buffer requirements included in the Remand Request letter. These include a 50 foot road setback along Seven Mile Hill Rd. when none is required. On the applicant's property, this supposed 50 foot buffer zone contains 60 plus pines of 2 to 40 feet in height.

The electric coop maintains a 30-foot easement on a primary service line but not on a line that just serves one or two customers.

On the new site plan, the 2660 square foot house has tripled to 8000 square feet. The power line that runs the length of the property for about 1320 feet has increased to 10,0024 feet., running every which way to 3 proposed trailer sites with septic and drain fields. It seems that the new site plan is what Mr. Wilson wishes he had, not what actually exists. So what are we responding to?

Mr. Wilson claims that the soil is no good for either ag use or growing trees. However 2/3 of the 40 acre parcel is tree covered, 90% of the alleged bad soils on the south and east are tree covered. There are over 500 pine trees growing on 28 acres, many that are merchantable. The balance of the acreage, the mowed hay field, is of prime soil type that could grow about anything. Trees would naturally reseed if it was left unmowed, even with Douglas fir, as evidenced by a water course down the center of the property as shown by a willow tree growing there.

According to OSU Extension, "If the native vegetation on the site includes healthy Ponderosa Pine, that's a good indication that species will respond favorably if planted."

Please reject the proposed zone change.





# **WASCO COUNTY PLANNING** **COMMISSION AGENDA PACKET**

**FOR**

**Hearing Date:** December 7, 2021

**Hearing Time:** 3:00 pm

**Hearing Location:** Electronically via Zoom  
**Meeting ID: 812 3953 0808**

**HEARING DETAILS:** File # 921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065) hearing for a Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson. The 40-acre subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as Township 2 North, Range 12 East W.M., Section 22, Tax Lot 4400; Account 884.





MEMORANDUM TABLE OF CONTENTS

**Date:** November 30, 2021  
**To:** Wasco County Planning Commission  
**From:** Wasco County Planning Office  
**Subject:** Submittal for Hearing Dated December 7, 2021  
**Re:** Land Use Board of Appeals Remand of #921-18-000086-PLNG

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Melanie Brown – Wasco County Chief Appraiser	
Hilary Foote, Oregon Land Conservation & Development Farm Forest Specialist	
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Gary Kitzrow, Principal Soil Taxonomist	
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Wilson Order 1 Soil Survey	
Attachment D – Exhibit (15)	PC 1 - 513
Copy of Applicant Site Map, Aerial Photo & All Maps created for Staff Report	
Attachment D – Exhibit (18)	PC 1 - 568
Comments – Sheila Dooley, Jillian Barker & Attorney Mike Sargetakis	





## PLANNING DEPARTMENT

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561  
• [www.co.wasco.or.us](http://www.co.wasco.or.us)

*Pioneering pathways to prosperity.*

### SUMMARY OF INFORMATION Prepared for Planning Commission Hearing

**FILE #:** 921-18-000086-PLNG

**HEARING DATE:** December 7, 2021

**NEWSPAPER PUBLISH DATE:** November 10, 2021

**REQUEST:** Approval for:

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forestry" to "Forest Farm";
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

**STAFF RECOMMENDATION:** Pertaining to OAR 660-004-0025, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Planning Commission deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, staff concludes that resource use on the subject parcel has become impracticable according to its commonly understood definition, and recommends that the Planning Commission approve the request based on the "exception area" being irrevocably committed to other uses.

**APPLICANT/OWNER:** David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**LOCATION:** The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:** Forest (F-2) Zone / EPD-8, Sensitive Wildlife Habitat Overlay Zone

**Attachments:**

**Staff Reviewer:** Daniel Dougherty, Senior Planner

- A. Remand Hearing Scope Memorandum
- B. Staff Recommendation and Planning Commission Options
- C. Staff Report
- D. Exhibits





## ATTACHMENT A

### REMAND HEARING SCOPE MEMORANDUM

#### MEMORANDUM

**SUBJECT: REMAND HEARING SCOPE**

**TO: PLANNING COMMISSION**

**FROM: DANIEL DOUGHERTY, SENIOR PLANNER**

**DATE: 11/24/2021**

#### **Background**

The Wasco County Planning Department processed David Wilson's Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson's Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (See *Dooley et al v. Wasco County*, LUBA No. 2019-065) on January 14, 2020.

LUBA addressed four "Assignments of Error" brought by the appellants who challenged Wasco County's record evidence, findings, and conclusions that approved Mr. Wilson's goal exception request under "OAR 660-004-0025 Lands Physically Developed to Other Uses" exception and "660-004-0028 Land Irrevocably Committed" exception. Three "Assignments of Error" found that the County's findings did not support the conclusion to grant an exception under "660-004-0028 irrevocably committed" exception. The "Fourth Assignment of Error" found an overall lack of record evidence to support the County's findings and conclusions. LUBA ordered the County's decision remanded.

#### **Remand Scope**

Staff findings and recommendations for this remand hearing are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028.

#### **Supporting Case Law**

*Von Lubken v. Hood River County*, 19 Or LUBA 404 (1990). On remand from LUBA, a local government is entitled to limit its consideration of a request for land use approval to the issues that were the basis for remand.

*Strawn v. City of Albany*, 21 Or LUBA 172 (1991). City councilors who participated in a decision remanded by LUBA are not bound on remand to vote as they did previously.

## ATTACHMENT B

### STAFF RECCOMENDATION AND PLANNING COMMISSION OPTIONS

All associated maps are enclosed as **Attachment D Exhibit 15**. The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the December 7, 2021, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **SCOPE OF HEARING**

The scope of this Remand Hearing is discussed in Attachment A. Findings and conclusions made with regards to other required local and state law pertaining to the original decision will remain in effect.

#### **STAFF RECOMMENDATION**

Pertaining to OAR 660-004-0025, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Planning Commission deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, staff concludes that resource use on the subject parcel has become impracticable according to its commonly understood definition, and recommends that the Planning Commission approve the request based on the "exception area" being irrevocably committed to other uses.

Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible. Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.

#### **FORMAT**

Proposed findings of fact, conclusions of law and staff recommendations are provided throughout the Staff Report. **It only takes one Criterion not being met to recommend denial of the request.**

#### **PLANNING COMMISSION OPTIONS**

- A. **Continuation:** Based on testimony and evidence presented at the hearing, continue the hearing for more time to deliberate and/or consider the information provided. Additional testimony may provide specific reasons to support a recommendation of approval or denial.
- B. **Continuation:** Based on testimony and evidence presented at the hearing, request additional information of staff or the applicant, and keep the record open for additional information to be provided until the next hearing at a date and time certain.
- C. **Recommend Approval:** Based upon all of the findings of fact and conclusions of law set forth within the Staff Report, the Planning Commission can recommend approval of the exception and zone change under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*, and recommend that the proposed exception area be rezoned to Forest-Farm (F-F 10) Zone (Non-Resource) and that the corresponding plan, map and ordinance changes be made.

## ATTACHMENT B

### STAFF RECOMMENDATION AND PLANNING COMMISSION OPTIONS

Recommend Approval: Based upon all of the findings of fact and conclusions of law set forth within the Staff Report, the Planning Commission can recommend approval of the exception and zone change under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*, and recommend that the proposed exception area be rezoned to Forest-Farm (F-F 10) Zone (Non-Resource) and that the corresponding plan, map and ordinance changes be made.

- D. Recommend Approval With Modification(s): Approve the request with amended findings of fact and/or new conclusions of law.
- E. Close the Public Hearing, and Continue Deliberation to Work Session: Acknowledge that all required evidence has been presented and heard. Continue deliberations with a scheduled work session to review and edit individual findings before making a final decision.
- F. Recommend Denial: Based upon all of the findings of fact and conclusions of law set forth within the Staff Report, the Planning Commission can recommend denial of the exception and zone change under *OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses*, and recommend that the Commission deny the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

Recommend Denial: Based upon all of the findings of fact and conclusions of law set forth within the Staff Report, the Planning Commission can recommend denial of the exception and zone change under *OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses*, and recommend that the Commission deny the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

- G. Recommend Denial With Modification(s): Deny the request with amended findings of fact and/or new conclusions of law.

## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forestry” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

**Applicant/Owner:** David Wilson

**Prepared By:** Daniel Dougherty, Senior Planner

**Prepared For:** Wasco County Planning Commission

**Procedure Type:** Quasi-Judicial Hearing

### **LUBA Remand**

**Background:** The Wasco County Planning Department processed David Wilson’s Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson’s Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded (See LUBA No. 2019-065) on January 14, 2020.

LUBA addressed four “Assignments of Error” brought by the appellants who challenged Wasco County’s record evidence, findings, and conclusions that approved Mr. Wilson’s goal exception request under “OAR 660-004-0025 Lands Physically Developed to Other Uses” exception and “OAR 660-004-0028 Land Irrevocably Committed” exception. Three “Assignments of Error” found that the County’s findings did not support the conclusion to grant an exception under “OAR 660-004-0028 irrevocably committed” exception. The “Fourth Assignment of Error” found an overall lack of record evidence to support the County’s findings and conclusions. LUBA ordered the County’s decision remanded.

### **Remand Hearing**

**Scope:** Staff findings and recommendations for this remand hearing are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028.

## ATTACHMENT C – STAFF REPORT

### Staff

#### Recommendation:

Pertaining to OAR 660-004-0025, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Planning Commission deny the request based on the physically developed exception.

Pertaining to OAR 660-004-0028, staff concludes that resource use on the subject parcel has become impracticable according to its commonly understood definition, and recommends that the Planning Commission approve the request based on the “exception area” being irrevocably committed to other uses.

### Planning Commission

#### Hearing Date:

December 7, 2021

#### Location:

The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

#### Zoning:

Forest (F-2) Zone

### Comprehensive Plan

#### Designation:

Forestry

#### Past Actions:

PLALEG-13-08-0002 (Rezone)  
PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)  
CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)  
PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)  
PLAPAR-17-05-0002 (Partition and Agricultural Structure)  
PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

#### Submitted Comments:

Submitted comments related to this Remand hearing are addressed in this Staff Report where appropriate. Provided below is list of public comments submitted.

#### Agency Commentary / Attachment D (Exhibit 5)

Arthur Smith, Wasco County Public Works Director

Melanie Brown, Wasco County Chief Appraiser

Hilary Foote, Oregon Land Conservation and Development (DLCD) Farm Forest Specialist



## ATTACHMENT C – STAFF REPORT

### Public Commentary / Attachment D (Exhibit 18)

Sheila Dooley submitted comments, but requested they not be addressed in Staff Report.

Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker (Requested opportunity to testify at hearing)

### Specialist Commentary / Attachment D (Exhibit 10)

Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist.

### **Maps:**

Full copies of all maps are located in Exhibit 15.

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## I. APPLICABLE STANDARDS

### A. State Law

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

#### **Oregon Administrative Rules (OAR)**

OAR 660-015-0000(2) - Goal 2 Land Use Planning” Statewide Planning Goals and Guidelines

OAR 660-015-0000(4) - Goal 4 Forest Lands

OAR 660-004-00025 - Exception Requirements for Land Physically Developed to Other Uses

OAR 660-004-00028 - Exception Requirements for Land Irrevocably Committed to Other Uses

## II. BACKGROUND INFORMATION

**A. Remand History and Issues addressed in this Staff Report:** The Wasco County Planning Department processed David Wilson’s Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson’s Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (LUBA No. 2019-065) on January 14, 2020. A hearing before the Planning Commission to consider the Remand request was scheduled for December 7, 2021.

**B. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### C. Public Facilities and Services

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately 0.5 miles east of the intersection of Sevenmile Hill/State/Dry Creek Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See 1997 TLSA full report). A 1998 TLSA memo contained the following statistics (1998 TLSA memo, Page 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

Copies of the “1997 TLSA full report” and “1998 TLSA memo” are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 1.

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwelling units to the area’s traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, the Wasco County 2009 Transportation System Plan utilized the Oregon Highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwelling units will not cause the V/C ratio to rise above 0.70. The TSP predicted that the V/C ratio would reach 0.03 by 2030 at 600 ADT, thus, even with the addition of three new dwelling units, the ADT for State Road/Sevenmile Hill Road in 2030 will only equal 629 ADT, which does not approach the 0.70 V/C ratio, nor the 1,500/day capacity of State Road/Sevenmile Hill Road. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on Wasco County’s transportation facilities.

A copy of the “2009 Wasco County Transportation System Plan” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG.

2. Water and Sewer: Because of the rural nature of the area, there is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50’ and the depth to base of aquifer was found to be between 100’ and 199.’ (“TLSA Study Area Ground Water Evaluation – Wasco County, Oregon”, Jervey Geological Consulting (“Groundwater Study”), Pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, and are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the

aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwelling units will be required to handle its own sewage as required by law. At the development stage, each residential development will have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

A copy of the "TLSA Study Area Ground Water Evaluation – Wasco County, Oregon" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 1.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the existing subject property and each of the three potential properties that may be created. Wasco Electric Co-op currently serves the residence located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

#### **D. Land Use History:**

##### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. These concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated "L/H," meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how land within the Forest (F-2) Zone should be addressed. After the TLSA study, eight parcels of Forest-Farm (F-F 10) Zone (Non-Resource) land in the Sevenmile Hill area north of the subject property were converted to Rural Residential (R-R (10)) Zone, removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

#### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

#### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences),



and committed (through existing plan and zone designations and development approvals) to low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource).

To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south. (Settlement Agreement, Page 1).

A copy of the “Settlement Agreement” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 2.

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply the Forest-Farm (F-F 10) Zone (Non-Resource) to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) within the Forest (F-2) Zone. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new Forest-Farm (F-F 10) Zone (Non-Resource) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the

application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### 1. State Laws – Oregon Revised Statutes, Planning Goals & Oregon Administrative Rules

##### 1. Introduction

The applicant seeks the following:

- (1) Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
- (2) Exception to Statewide Planning Goal 4 – Forest Lands; and
- (3) Zone Change: Change a legal parcel zoned Forest (F-2) Zone, Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections).

In order to alter the subject property’s land use designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Statewide Planning Goal 4 – Forest Lands, and amend the Wasco County Comprehensive Plan.

An exception to Statewide Planning Goal 4 – Forest Lands is allowed under statutory and administrative laws. Those Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR) that provide for a Statewide Planning Goal exception are provided below:

##### **ORS 197.732**

(1) *As used in this section:*

- (a) *“Compatible” is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.*
- (b) *“Exception” means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (A) *Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*
  - (B) *Does not comply with some or all goal requirements applicable to the subject properties or situations; and*
  - (C) *Complies with standards under subsection (2) of this section.*

(2) *A local government may adopt an exception to a goal if:*

*(\*\*\*)*

- (b) *The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the*

*applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*(\*\*\*)*

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*(\*\*\*)*

**Planning Goal 2, PART II EXCEPTIONS, (OAR 660-015-0000(2))**

*A local government may adopt an exception to a goal when:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*
- (b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

*Exception means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that;*

- (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*
- (b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*
- (c) Complies with standards for an exception.*

**Chapter 660, Division 4 INTERPRETATION OF GOAL 2 EXCEPTION PROCESS (OAR-660-004)**

*OAR-660-004-0005*

*Definitions*

*For the purpose of this division, the definitions in ORS 197.015 and the Statewide Planning Goals shall apply. In addition, the following definitions shall apply:*

- (1) An "Exception" is a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

- (b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and
  - (c) Complies with ORS 197.732(2), the provisions of this division and, if applicable, the provisions of OAR 660-011-0060, 660-012-0070, 660-014-0030 or 660-014-0040.
- (2) "Resource Land" is land subject to one or more of the statewide goals listed in OAR 660-004-0010(1)(a) through (g) except subsections (c) and (d).
- (3) "Nonresource Land" is land not subject to any of the statewide goals listed in OAR 660-004-0010(1)(a) through (g) except subsections (c) and (d). Nothing in these definitions is meant to imply that other goals, particularly Goal 5, do not apply to nonresource land.

**OAR-660-004-0010**

**Application of the Goal 2 Exception Process to Certain Goals**

- (1) The exceptions process is not applicable to Statewide Goal 1 "Citizen Involvement" and Goal 2 "Land Use Planning." The exceptions process is generally applicable to all or part of those statewide goals that prescribe or restrict certain uses of resource land, restrict urban uses on rural land, or limit the provision of certain public facilities and services. These statewide goals include but are not limited to:

(\*\*\*)

- (b) Goal 4 "Forest Lands"; however, an exception to Goal 4 "Forest Lands" is not required for any of the forest or nonforest uses allowed in a forest or mixed farm/forest zone under OAR chapter 660, division 6, "Forest Lands";

**Planning Goal 4, FOREST LANDS, (OAR 660-015-0000(4))**

*To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.*

*Forest lands are those lands acknowledged as forest lands as of the date of adoption of this goal amendment. Where a plan is not acknowledged or a plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.*

**FINDING:** As provided above, both Goal 2: OAR 660-015-0000(2) and OAR 660-004-0005(1), adopt the legislative (ORS 197.732) definition of "exception" with minor variation. Furthermore, Goal 2: OAR 660-015-0000(2), provides that "[a] local government may adopt an exception to a goal" as long as the underlying request "[c]omplies with standards for an exception." OAR 660-004-0010(1)(b), explicitly provides for a "Goal 2 Exception Process" which "is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land," to include "Goal 4 'Forest Lands.'"

In order to effectuate the applicant's request to change the subject property's land use designation from "forestry" to "forest-farm", state law requires that Wasco County adopt an exception to Statewide Planning Goal 4 – Forest Lands, and amend the Wasco County Comprehensive Plan. In order for Wasco County to adopt an exception to Statewide Planning Goal 4, the applicant must demonstrate through clear and objective evidence compliance with applicable standards provided in either "OAR 660-004-0025 Exception Requirements for Land Physically Developed to Other Uses" or "OAR 660-004-0028 Exception Requirements for Land Irrevocably Committed to Other Uses".

As provided above in Section II.A of this report, the Wasco County Planning Department processed David Wilson's Land Use Board of Appeals (LUBA) Remand and Review request on July 13, 2021. The request letter included new evidence for staff consideration of Mr. Wilson's Comprehensive Plan Map Amendment, Goal Exception, and Zone Change request that was approved by Wasco County, appealed, and remanded by LUBA (LUBA No. 2019-065) on January 14, 2020.

The LUBA opinion (See LUBA No. 2019-065) addressed four "Assignments of Error" brought by the appellants who challenged Wasco County's record evidence, findings, and conclusions that approved Mr. Wilson's goal exception request under "OAR 660-004-0025 Lands Physically Developed to Other Uses" exception and "660-004-0028 Land Irrevocably Committed" exception. Three "Assignments of Error" specifically found that the County's findings did not support the conclusion to grant an exception under "660-004-0028 irrevocably committed" exception. The "Fourth Assignment of Error" found an overall lack of record evidence to support the County's findings and conclusions. LUBA ordered the County's decision remanded.

Mr. Wilson has provided new evidence and requests a remand hearing to consider his request. Below, staff has re-evaluated evidence provided in support of the original request as well as the new evidence submitted. Staff has only provided findings and recommendations for those four issues (Assignments of Error) contested in the appeal to LUBA (See LUBA No. 2019-065). Staff findings and recommendations for this remand hearing are strictly limited to those criteria contested within OAR 660-004-0025 and OAR 660-004-0028.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

*OAR 660-004-0025 contains standards for adoption of a "physically developed" exception.*

### **OAR 660-004-0025:**

*Exception Requirements for Land Physically Developed to Other Uses*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.*



**FINDING:** Information concerning the “physically developed area” of the subject parcel is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021.

Analysis includes the following: (1) Physical Development & Fire Buffer & Maintenance Area Estimates; (2) STAFF ANALYSIS (Physical Development & Fire Buffer & Maintenance Area Estimates); and (3) STAFF CONCLUSIONS & RECOMMENDATIONS.

**(1) Physical Development & Fire Buffer & Maintenance Area Estimates.** Original application materials provide the following description of the existing physical development of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>. (Original Application, Page 27).

A copy of the “Original Application” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Information submitted on remand provides the following estimates regarding the quantification of existing structures and fire buffers:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

Applicant has again discussed the power line buffer with the power company (15' from centerline), and has applied those in the attached calculations, in addition to a 50' buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50' buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

A copy of the “Remand Letter” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

Power Lines

15' either side from center line

10,024 linear feet x 30' = 300,730 ft<sup>2</sup>

Structures

50' each side from dimensions below

Log Home 80 x 100 = 36,000 ft<sup>2</sup>  
Barn #1 24 x 35 = 16,740 ft<sup>2</sup>  
Barn #2 30 x 30 = 16,900 ft<sup>2</sup>  
Lean To 16 x 30 = 15,627 ft<sup>2</sup>  
Old Homestead Home 55 x 55 = 24,025 ft<sup>2</sup>  
Old Homestead Barn 25 x 55 = 16,875 ft<sup>2</sup>

Total square footage developed area 426,887 ft<sup>2</sup>

40 acres = 1, 742,700 ft<sup>2</sup>  
 $426,887 / 1,740,700 = .2452$  (24.52% of total area)

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>  
50' buffer along driveway easement = 79,300 ft<sup>2</sup>

$571,187 / 1,740,700 = .3281$  (32.81% of total area)

(Remand Letter, Pp. 3-4).

A copy of the "Remand Letter" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

The applicant also submitted a sitemap illustrating approximate locations of existing physical development, infrastructure, and natural features. (See Below "Applicant Site Map").



**Applicant Site Map**

A copy of the "Applicant Site Map", "Aerial Photo" and all maps included in this Staff Report are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 15.

The applicant's site map was not to scale, did not illustrate the estimated distances of utility lines, or provide illustrations of fire fuel break or maintenance buffer zones. Additionally, specific land use criteria that the applicant used in support of the 50' buffer zone requirements that were calculated for the "driveway easements" or "7 Mile Hill Road" was not provided.

**(2) STAFF ANALYSIS (Physical Development & Fire Buffer & Maintenance Area Estimates).** The original staff reviewer conducted a site visit on June 21, 2018, and confirmed the applicant's description of existing physical development on the subject parcel. A driveway runs along the western property line and provides access to the single family dwelling and accessory structure situated on the west portion of the parcel. This driveway also provides physical access to the single family dwelling located on the neighboring south adjacent parcel, that is owned by the applicant (David Wilson).

A decommissioned farm house is situated at the center of the subject parcel and is served by an additional driveway that bisects the property. This area also contains two additional accessory structures (A pump house and a barn). The property is served by two wells. As provided in submitted well reports, the two wells are capable of serving four dwelling units as each well is permitted to serve two dwellings each. (See below "Physical Development Map").



# Physical Development Map

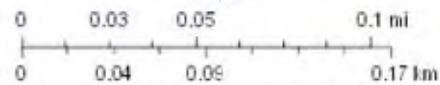


**Subject Parcel**



**Developed Areas**

1:4,514



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Wasco County Planning



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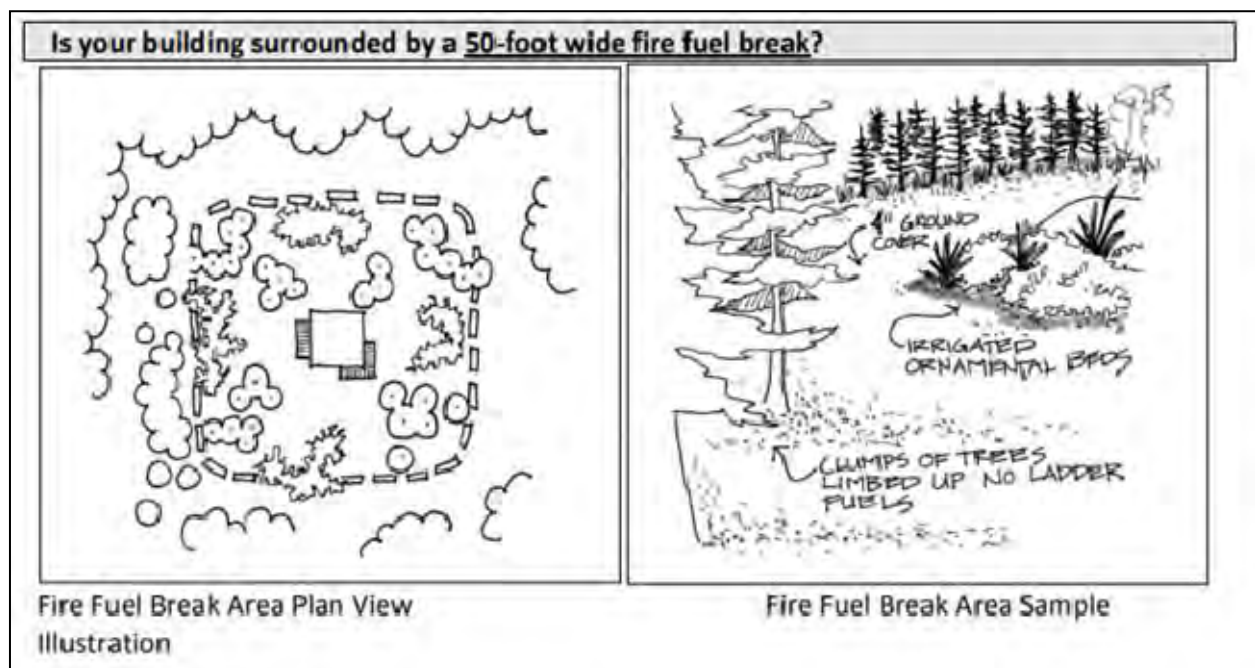
The original staff report provided that approximately 12.5% of the subject parcel was physically developed. It is unclear whether the findings quantified required fire fuel break and maintenance buffer zone areas into the overall percentage of land that is considered “physically developed”. The applicant submitted fire fuel break buffer zone area estimates; however, the methodology used for those calculations is unclear. Staff has provided required fire safety criteria and buffer zone area calculation methodology below for confirmed fire fuel break land use criteria and maintenance areas. Staff analysis did not address the unconfirmed 50’ fire and maintenance buffer areas that the applicant calculated for the “driveway easements” or “7 Mile Hill Road”.

Regarding fire fuel break buffer zones for existing structures, the Wasco County Land Use and Development Ordinance Chapter 10 Section 10.020 - Applicability of Fire Safety Standards applies to the “all rural zones (all zones outside an Urban Growth Boundary).” (Chapter 10, Page 1). All rural zones, including the Forest (F-2) Zone, are subject to fire standards; however, the applicability of the specific standards varies by zone and by use type.

Criteria outlining the creation, design, and maintenance of fuel break buffer zones is provided in Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break. Section 10.120 provides the following:

**Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break**

*Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.*



**MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:**

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,

- Trees kept free from dead, dry, or flammable material;
- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;
- Keep shrubs and ornamental beds 15 feet away from edge of buildings and drip line of tree canopy; and
- Use well irrigated or flame resistant vegetation (See OSU Extension Service publication called "Fire Resistant Plants for Oregon Home Landscapes")

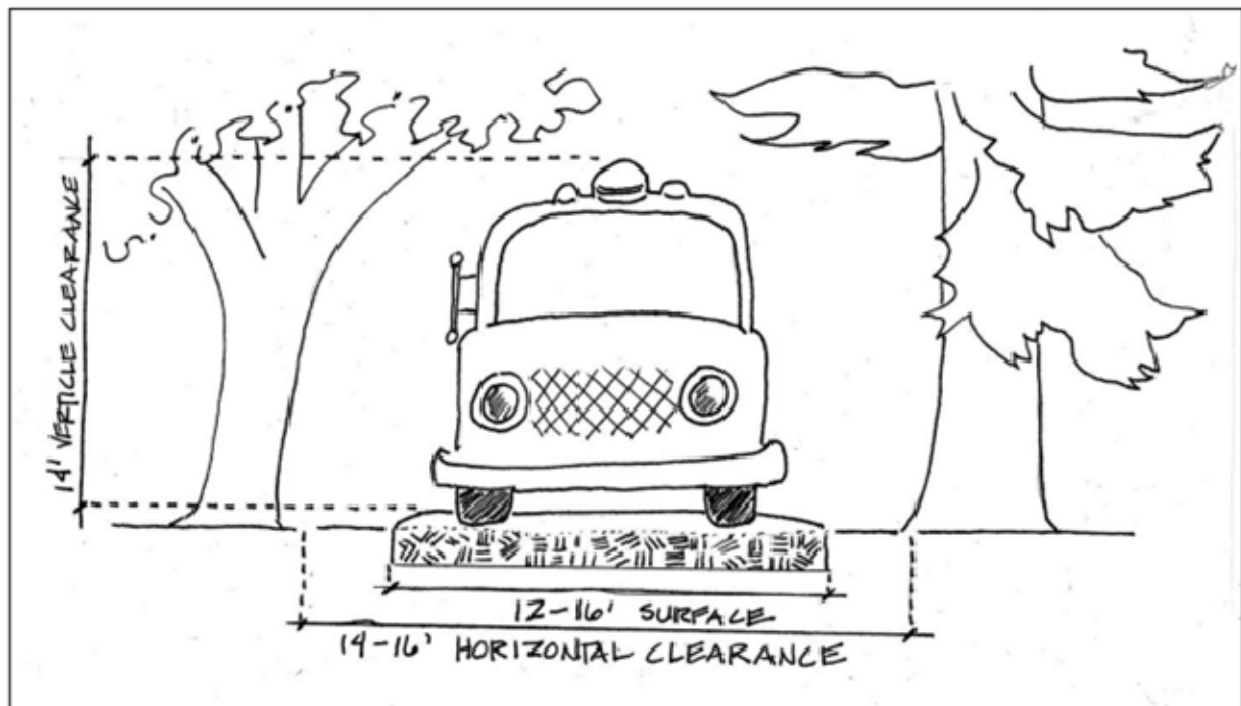
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(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 9-10).

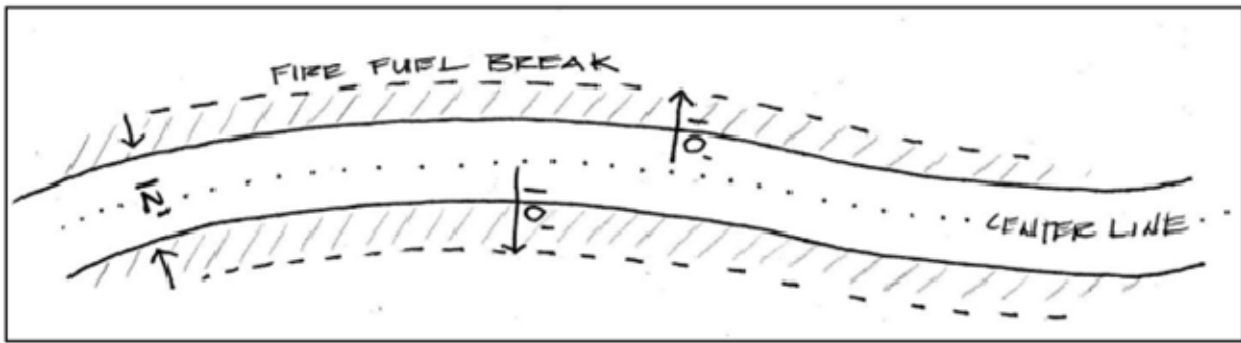
Regarding required fire fuel break buffer zone areas along "residential" private access driveways, the Wasco County Land Use and Development Ordinance (WC-LUDO) Chapter 10 Section 10.140 - Access Standards - Providing safe access to and escape from your home, subsections B & C, requires the following:

**Section 10.140 - Access Standards - Providing safe access to and escape from your home**

**C.** Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



*A fire fuel break extending 10 feet either side of the center line of the driveway is required.*

*C. This Standard is applicable to all residential driveways in: -All Zones*

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 18-19).

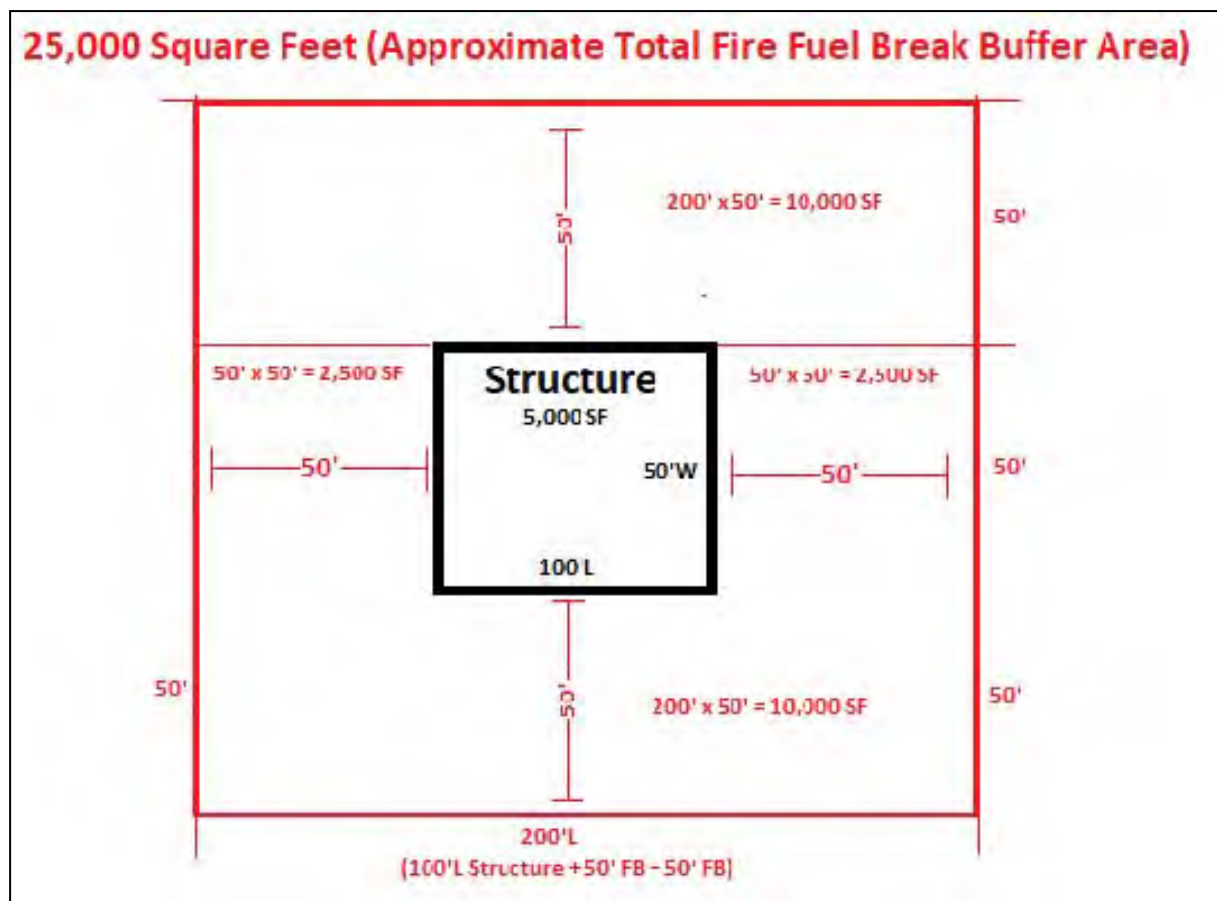
A copy of the WC-LUDO Chapter 10 Fire Safety Standards is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG.

One of the primary purposes for fire fuel break buffer zone areas is to “reduce threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” (WC-LUDO Chapter 10 Fire Safety Standards Section 10.010, Page 1). In Wasco County, fire fuel break buffer zone area requirements are explicitly linked to existing and proposed physical development that includes dwellings, accessory structures, agricultural structures, and private access driveways. Fire fuel break buffer zone areas are specifically designed to be kept free from dead, dry, or flammable material and must be rigorously maintained to ensure fuel sources are removed. Although the buffer zone criteria do not mandate the area be completely free of tree and other shrub like vegetation, demonstrating outright compliance or achieving compliance through a Fire Safety Mitigation Plan is required under the WC-LUDO Chapter 10 Fire Safety Standards. Thus, fire fuel break buffer zone areas required under Chapter 10 are considered an integral part of the unit of land’s developed area, and shall be included in the calculated percentage of physically developed areas on the subject parcel for this analysis.

Additionally, private maintenance areas for overhead utility lines and public road rights of way are calculated in this analysis due to their nexus to Chapter 10 Fire Safety Standard’s purpose of “[reducing] threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” *Id.*

*Physical Development & Development Fire Buffers.* Staff analysis utilized information from the Wasco County Assessor’s Office, the application’s site map, and the Wasco County Geographical Information System Measurement Tool to approximate the parcel’s physical development and fire fuel break buffer zone areas. In determining the subject parcel’s physical developed areas, staff took into account that the square feet of private access driveway space cannot be calculated and used as part of the parcel’s physically developed area (See *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, Page 19), “Finally, we agree with petitioners that the county’s findings are inadequate where they fail to explain why the two driveways on the property should be considered as physically developed, when roads are uses allowed by Goal 4.”)

Fire fuel break buffer zone areas for physical development such as dwelling units, accessory structures, and agricultural structures were calculated (approximated) using the below method:



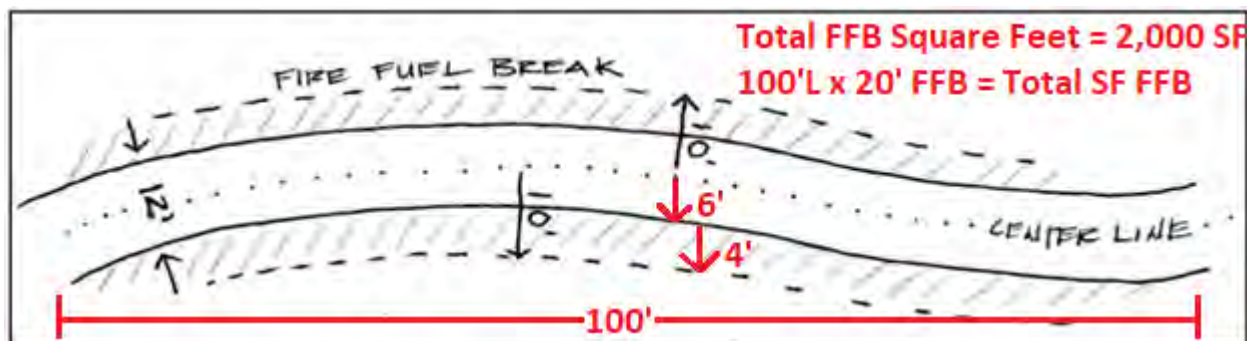
A copy of the “Diagram: Fire Fuel Break Calculation Method” and all created diagrams are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 16.

1. Dwelling unit and developed curtilage (80' x 100' = 8,000 SF) // Fire Break = 28,000 SF
2. Accessory/Agricultural Structure #1 (24' x 35' = 840 SF) // Fire Break = 15,900 SF
3. Accessory/Agricultural Structure #2 (30' x 30' = 900 SF) // Fire Break = 16,000 SF
4. Accessory/Agricultural Structure #3 (16' x 30' = 480 SF) // Fire Break = 14,600 SF
5. Dwelling unit (Old Homestead) (55'L x 55'W = 3,025 SF) // Fire Break = 21,000 SF
6. Agricultural Structure (Old Homestead Barn) (25' x 55' = 1,375 SF) // Fuel Break = 18,000 SF

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Measurement Tool. Although the square footage of existing driveways cannot be considered physical development in this analysis, the required fire fuel break buffer zone areas are considered.

Fire fuel break buffer zone areas for private access drives were calculated (approximated) using the below method:



**Diagram: Access Drive Fire Fuel Break Calculation Method**

Driveway #1: Approx. 20'W x 480'L moving southward from Sevenmile Hill Rd. to driveway split.  
Driveway #2: Approx. 20'W x 681'L moving southeast from driveway split to dwelling unit.  
Driveway #3: Approx. 20'W x 946'L moving southward from driveway split to south adjacent parcel.  
Driveway #4: Approx. 20'W x 1,280' moving southward from Sevenmile Hill Rd. to south parcel.

The following fire fuel break buffer zone areas were calculated for the existing access drives on the subject parcel:

Driveway #1 Fire Fuel Break Buffer Zone Area: 9,600 SF = 480'L x 20'  
Driveway #2 Fire Fuel Break Buffer Zone Area: 13,620 SF = 681'L x 20'  
Driveway #3 Fire Fuel Break Buffer Zone Area: 18,920 SF = 946'L x 20'  
Driveway #4 Fire Fuel Break Buffer Zone Area: 25,600 SF = 1,280'L x 20'

*Utility Line Maintenance Area.* Staff confirmed by phone with Wasco Electric Cooperative on November 15, 2021, that a 15 foot from center line maintenance easement is provided on each side of overhead power lines, and that the goal of the maintenance easement is to keep areas around power lines free from debris that might obstruct safe transmission of electric power. Staff utilized applicant's submitted sitemap and Wasco County GIS Measurement Tool to approximate and confirm applicant's estimated power line distances and maintenance zones. (See below "Power Line Distance Estimate" Map).





Power Line #1 Maintenance Area Estimate: 19,050 SF = 635'L x 30' (15' from center line)  
Power Line #2 Maintenance Area Estimate: 15,900 SF = 530'L x 30'  
Power Line #3 Maintenance Area Estimate: 5,550 SF = 185'L x 30'  
Power Line #4 Maintenance Area Estimate: 10,050 SF = 335'L x 30'  
Power Line #5 Maintenance Area Estimate: 16,800 SF = 560'L x 30'  
Power Line #6 Maintenance Area Estimate: 25,200 SF = 840'L x 30'  
Power Line #7 Maintenance Area Estimate: 7,050 SF = 235'L x 30'  
Power Line #8 Maintenance Area Estimate: 13,200 SF = 440' x 30'

*Public Roadway Maintenance Area.* Additional information regarding fire fuel break and maintenance areas that are dedicated for publicly maintained roads was requested from the Wasco County Public Works Department. The Wasco County Public Works Director Arthur Smith provided commentary on November 15, 2021:

WC-Public Works Department Director Arthur Smith Commentary (November 15, 2021):

We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection - people can't block a road, it must remain open for travel. However, the county is not obligated to care for or maintain public or private roads, just county roads.

Most county roads are only 22-24 feet in width, but have a 50-60 foot dedicated right-of-way which we manage. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard.

A copy of the Director Smith's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

The applicant provided the following calculation regarding Sevenmile Hill Road maintenance: "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>".

The Wasco County GIS Roads layer provides that Sevenmile Hill Road is a publicly maintained road. Staff utilized Partition Plat 2017-003560 and Wasco County GIS Measurement Tool to approximate the length and width of Sevenmile Hill Road along the subject parcel's north boundary line. The estimated distance is 1,115 feet.

Partition Plat 2017-003560, page 2, provides that Sevenmile Hill Road is at least 60' wide. Considering Director Smith's comments concerning the 50-60' dedicated right-of-way, and the 4-6 foot maintenance area on each side of county roads, staff estimates the dedicated maintenance area for Sevenmile Hill Road that directly applies to the subject parcel is approximately 6,690 SF = (6' x 1,115').

A copy of "Partition Plat 2017-003560" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 6.

Total estimated actual physical development square footage = 14,620 SF  
Total estimated fire fuel break buffer zone area development square footage = 113,500 SF  
Total estimated fire fuel break buffer zone area for access drives = 67,740 SF  
Total estimated maintenance easement area for overhead power lines = 112,800 SF  
Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF

The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

**STAFF CONCLUSIONS & RECOMMENDATIONS.** In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner’s “Fourth Assignment of Error”, which argued that staff’s findings were not supported by substantial evidence in the record, where the county found that approximately 87 percent of the subject parcel was not physically developed, but still approved a physically developed exception. As noted above, staff conducted thorough analysis of the subject parcel’s physical development, and concluded that approximately 18% of the subject parcel is physically developed.

As provided in *Sandgren v. Clackamas County*, and explicitly referred to by LUBA in *Dooley et al.*, in order to “approve a physically developed exception, the county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded” (*Sandgren v. Clackamas County*, 29 Or LUBA 454, 457 (1995)). The overall demonstration of clear and objective evidence is more straightforward under OAR 660-004-0025 compared to OAR 660-004-0028; however, the standard is demanding, and requires the applicant demonstrate forestry uses are no longer an option. (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18). Additionally, as provided by LUBA in *Dooley et al.*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.

In the present case, even if the County accepts the applicant’s estimation that 32.81% of the total area of the subject parcel is physically developed, in order to approve the request, the County is “required to determine that the property is “physically developed to the extent that it is no longer available” for forestry uses.” (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18), ORS 197.732(2)(a).

Based on the above facts, analysis, and findings, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Planning Commission deny the request based on the physically developed exception.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**OAR 660-004-0028:**

*Exception Requirements for Land Irrevocably Committed to Other Uses*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

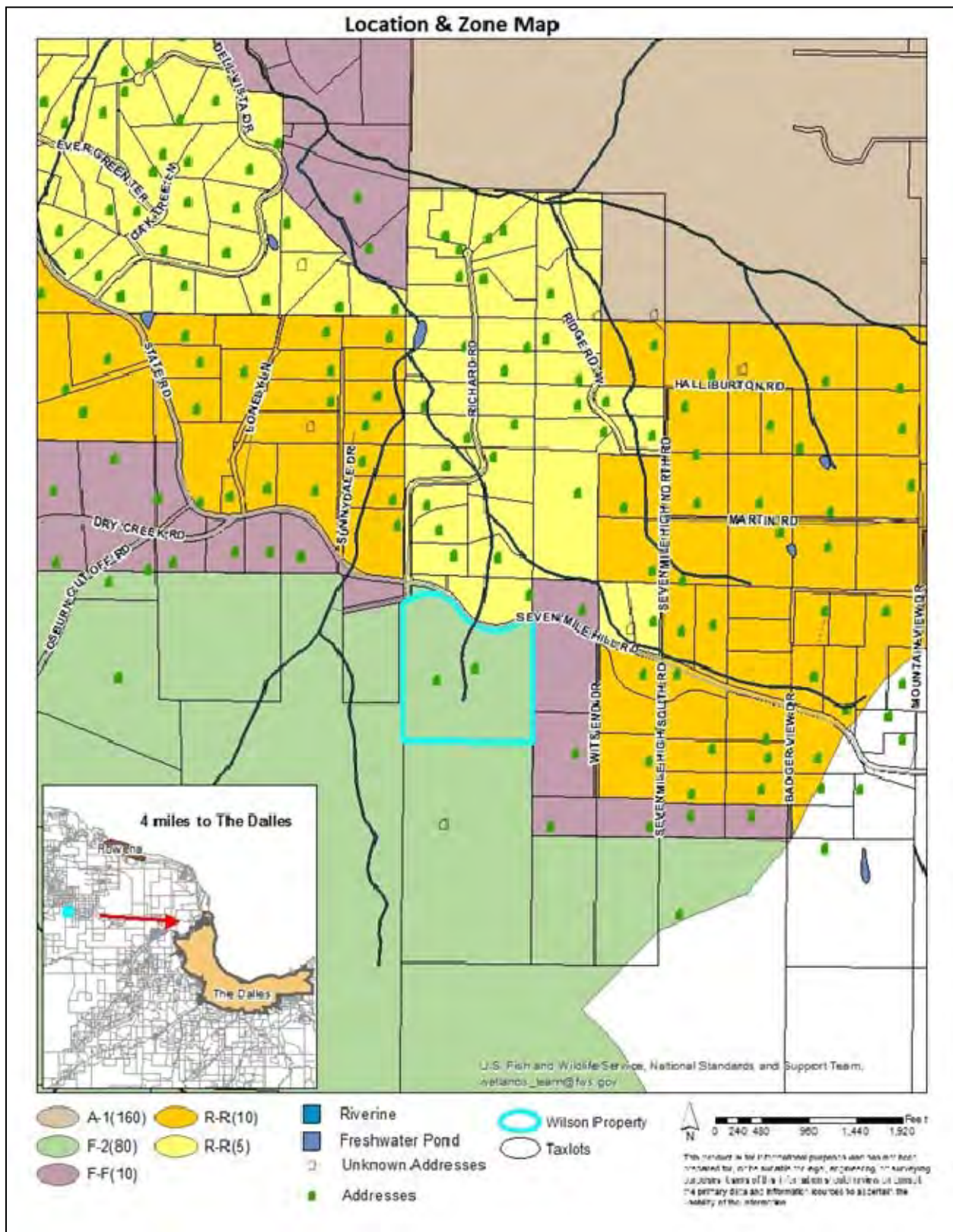
*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** Additional evidence was submitted by Mr. David Wilson on July 13, 2021. Mr. Wilson seeks a remand hearing for the purposes of obtaining a ‘committed exception’ for the subject 40.6-acre property located at 2 North 12 East Section 22 Tax Lot 4400 (Account # 884). For the purposes of this rule, the subject 40.6-acre parcel is the designated ‘exception area’. The subject parcel falls within the Wasco County Forest (F-2) Zone, and the applicable Statewide Planning goal that applies to the property is Goal 4: Forest Lands. (See below “Location & Zone Map”)





ORAR 660-004-0028(1), does not require the evidence demonstrate that “existing adjacent uses and other relevant factors” make resource uses allowed within the designated exception area “impossible,” but only that the evidence demonstrate that the “existing adjacent uses and other relevant factors” make resource uses allowed within the designated exception area “impracticable.”



Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “1a: not practicable: incapable of being performed or accomplished by the means employed or at command: infeasible \* \* \* c: IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Application materials submitted in the original request signed May 4, 2018 (received by the Wasco County Planning Office on May 23, 2018), provide the following response to subsections OAR 660-004-0028(1)(a)-(c).

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses. (Original Application, Page 29).

A copy of the “Original Application” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 3.

Staff has provided renewed analysis throughout this report of the original record evidence as well as the additional evidence submitted for this remand hearing.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

(a) *The characteristics of the exception area;*

**FINDING:** Information concerning the “characteristics of the exception area” is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021.

Characteristics and analysis of the subject parcel “exception area”, include the following: (1) Physical Development & Fire Buffer & Maintenance Area Estimates; (1a) STAFF ANALYSIS (Physical Development & Fire Buffer & Maintenance Area Estimates); (2) Undeveloped Areas & Soils; (2a) STAFF ANALYSIS (Undeveloped Areas & Soils); and (3) STAFF CONCLUSIONS & RECOMMENDATIONS (Physically Developed & Undeveloped Areas).

**Characteristics of the Exception Area**

**(1) Physical Development & Fire Buffer & Maintenance Area Estimates.** Original application materials provide the following description of the existing physical development of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>. (Original Application, Page 27).

Information submitted on remand provides the following estimates regarding the quantification of existing structures and fire buffers:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

Applicant has again discussed the power line buffer with the power company (15' from centerline), and has applied those in the attached calculations, in addition to a 50' buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50' buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Power Lines

15' either side from center line

10,024 linear feet x 30' = 300,730 ft<sup>2</sup>

Structures

50' each side from dimensions below

Log Home 80 x 100 = 36,000 ft<sup>2</sup>

Barn #1 24 x 35 = 16,740 ft<sup>2</sup>

Barn #2 30 x 30 = 16,900 ft<sup>2</sup>

Lean To 16 x 30 = 15,627 ft<sup>2</sup>

Old Homestead Home 55 x 55 = 24,025 ft<sup>2</sup>

Old Homestead Barn 25 x 55 = 16,875 ft<sup>2</sup>

Total square footage developed area 426,887 ft<sup>2</sup>

40 acres = 1, 742,700 ft<sup>2</sup>

426,887/1,740,700 = .2452 (24.52% of total area)

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>

50' buffer along driveway easement = 79,300 ft<sup>2</sup>

$571,187/1,740,700 = .3281$  (32.81% of total area)

(Remand Letter, Pp. 3-4).

A copy of the "Remand Letter" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 4.

The applicant also submitted a sitemap illustrating approximate locations of existing physical development, infrastructure, and natural features. (See Below "Applicant Site Map").



**Applicant Site Map**

The applicant's site map was not to scale, did not illustrate the estimated distances of utility lines, or provide illustrations of fire fuel break or maintenance buffer zones. Additionally, specific land use criteria that the applicant used in support of the 50' buffer zone requirements that were calculated for the "driveway easements" or "7 Mile Hill Road" was not provided.

**(1a) STAFF ANALYSIS (Physical Development & Fire Buffer & Maintenance Area Estimates).** The original staff reviewer conducted a site visit on June 21, 2018, and confirmed the applicant's description of existing physical development on the subject parcel. A driveway runs along the western property line and provides access to the single family dwelling and accessory structure situated on the west portion of the parcel. This driveway also provides physical access to the single family dwelling located on the neighboring south adjacent parcel, that is owned by the applicant (David Wilson).

A decommissioned farm house is situated at the center of the subject parcel and is served by an additional driveway that bisects the property. This area also contains two additional accessory structures (A pump house and a barn). The property is served by two wells. As provided in submitted well reports, the two wells are capable of serving four dwelling units as each well is permitted to serve two dwellings each. (See below "Physical Development Map").



## Physical Development Map

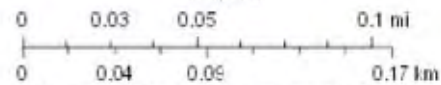


**Subject Parcel**



**Developed Areas**

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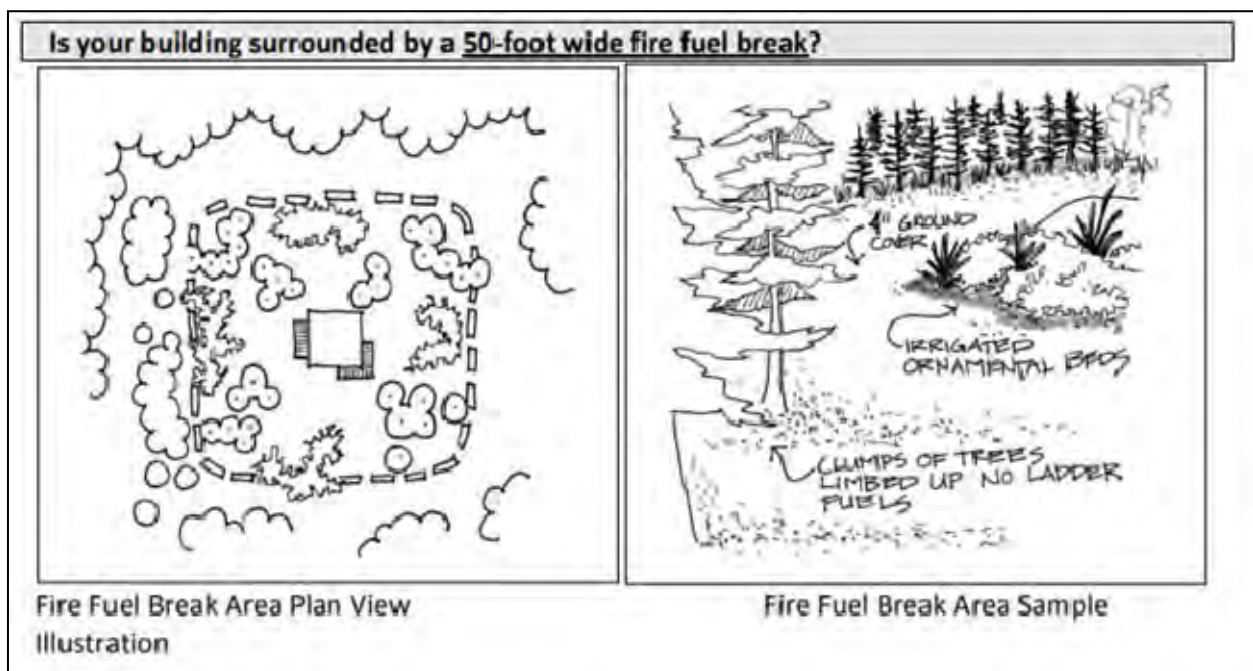
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Regarding fire fuel break buffer zones for existing structures, the Wasco County Land Use and Development Ordinance Chapter 10 Section 10.020 - Applicability of Fire Safety Standards applies to the “all rural zones (all zones outside an Urban Growth Boundary).” (Chapter 10, Page 1). All rural zones, including the Forest (F-2) Zone, are subject to fire standards; however, the applicability of the specific standards varies by zone and by use type.

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**Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break**

*Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.*



**MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:**

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,

- Trees kept free from dead, dry, or flammable material;
- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;
- Keep shrubs and ornamental beds 15 feet away from edge of buildings and drip line of tree canopy; and
- Use well irrigated or flame resistant vegetation (See OSU Extension Service publication called "Fire Resistant Plants for Oregon Home Landscapes")

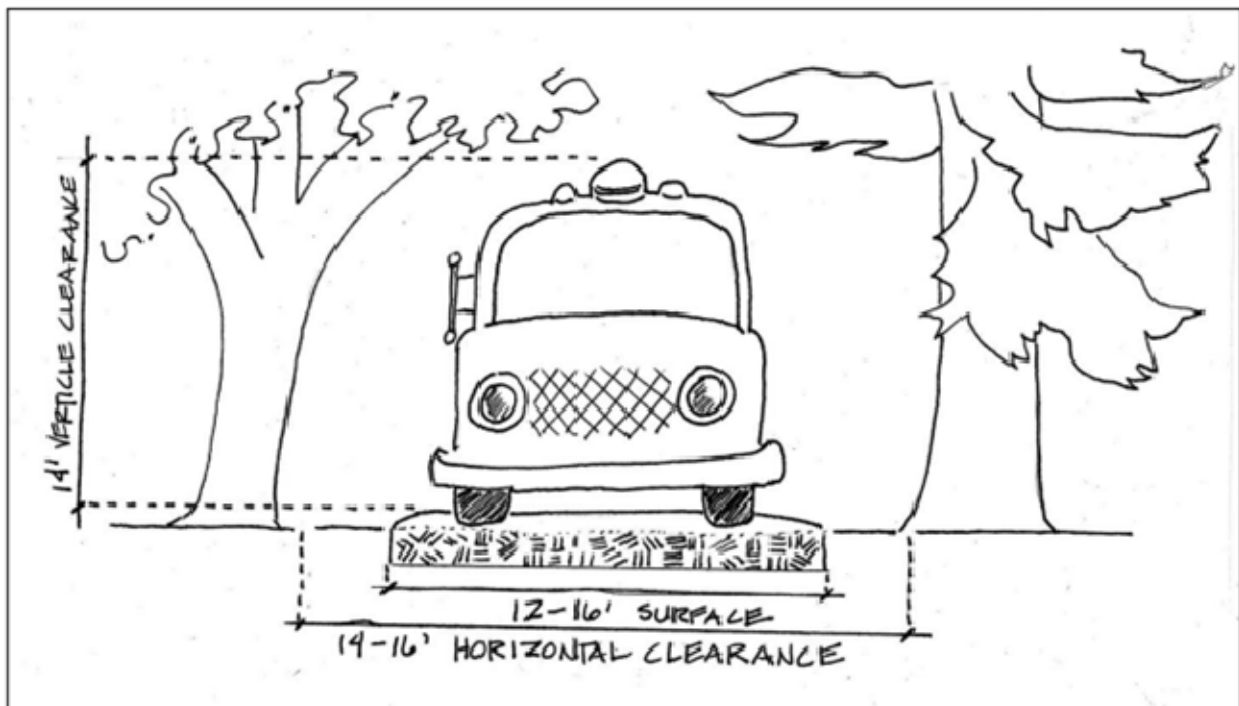
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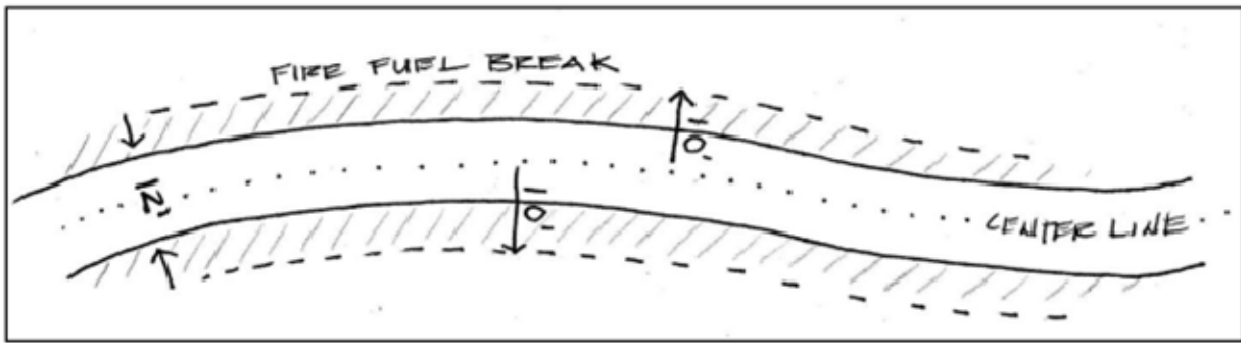
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**Section 10.140 - Access Standards - Providing safe access to and escape from your home**

**C.** Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



*A fire fuel break extending 10 feet either side of the center line of the driveway is required.*

**C.** *This Standard is applicable to all residential driveways in: -All Zones*

(WC-LUDO Chapter 10 Fire Safety Standards, Pp. 18-19).

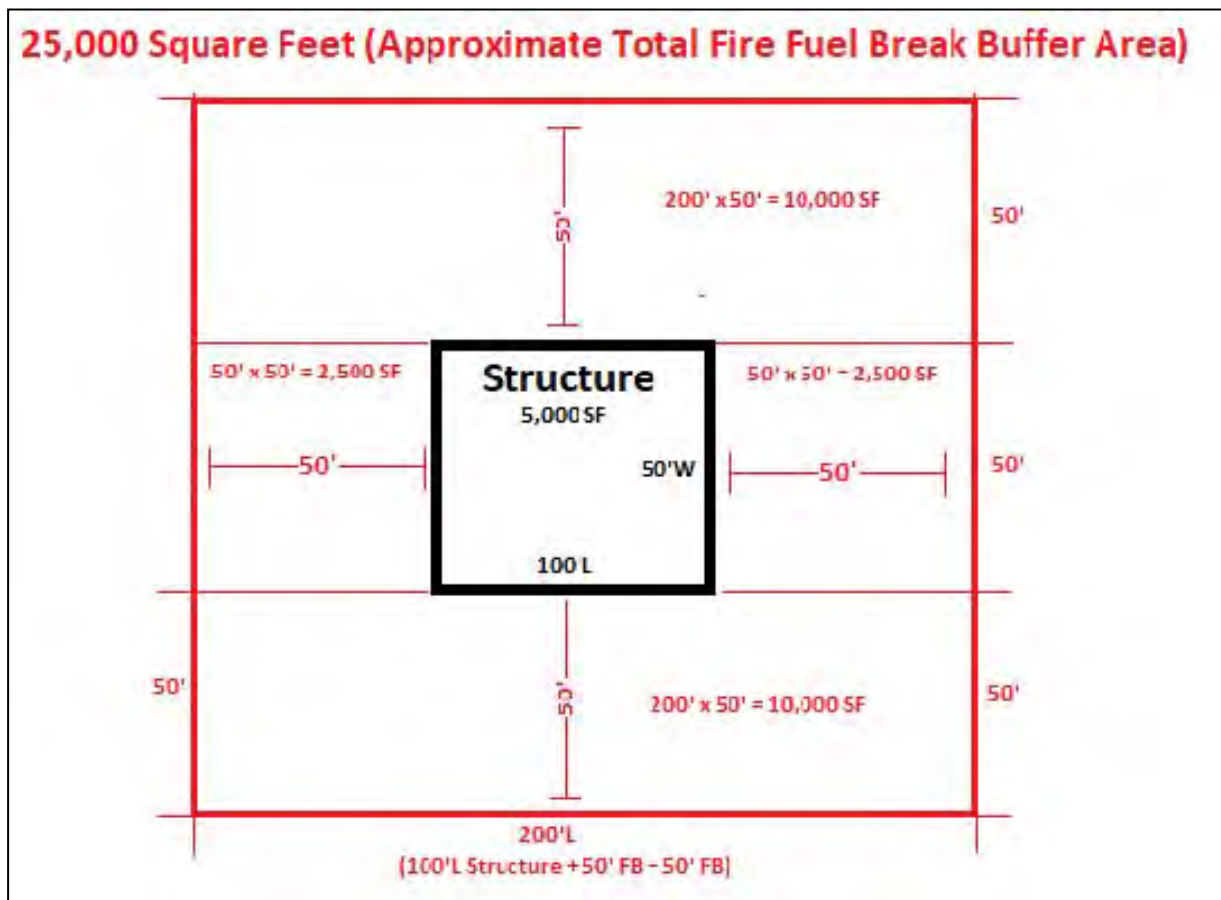
One of the primary purposes for fire fuel break buffer zone areas is to “reduce threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” (WC-LUDO Chapter 10 Fire Safety Standards Section 10.010, Page 1). In Wasco County, fire fuel break buffer zone area requirements are explicitly linked to existing and proposed physical development that includes dwellings, accessory structures, agricultural structures, and private access driveways. Fire fuel break buffer zone areas are specifically designed to be kept free from dead, dry, or flammable material and must be rigorously maintained to ensure fuel sources are removed. Although the buffer zone criteria do not mandate the area be completely free of tree and other shrub like vegetation, demonstrating outright compliance or achieving compliance through a Fire Safety Mitigation Plan is required under the WC-LUDO Chapter 10 Fire Safety Standards. Thus, fire fuel break buffer zone areas required under Chapter 10 are considered an integral part of the unit of land’s developed area, and shall be included in the calculated percentage of physically developed areas on the subject parcel for this analysis.

Additionally, private maintenance areas for overhead utility lines and public road rights of way are calculated in this analysis due to their nexus to Chapter 10 Fire Safety Standard’s purpose of “[reducing] threats to life, safety, property, and resources by improving access to and defensibility of development in rural areas.” *Id.*

*Physical Development & Development Fire Buffers.* Staff analysis utilized information from the Wasco County Assessor’s Office, the application’s site map, and the Wasco County Geographical Information System Measurement Tool to approximate the parcel’s physical development and fire fuel break buffer zone areas. In determining the subject parcel’s physical developed areas, staff took into account that the square feet of private access driveway space cannot be calculated and used as part of the parcel’s physically developed area (See *Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065, Page 19), “Finally, we agree with petitioners that the county’s findings are inadequate where they fail to explain why the two driveways on the property should be considered as physically developed, when roads are uses allowed by Goal 4.”)

Fire fuel break buffer zone areas for physical development such as dwelling units, accessory structures, and agricultural structures were calculated (approximated) using the below method:





**Diagram: Fire Fuel Break Calculation Method**

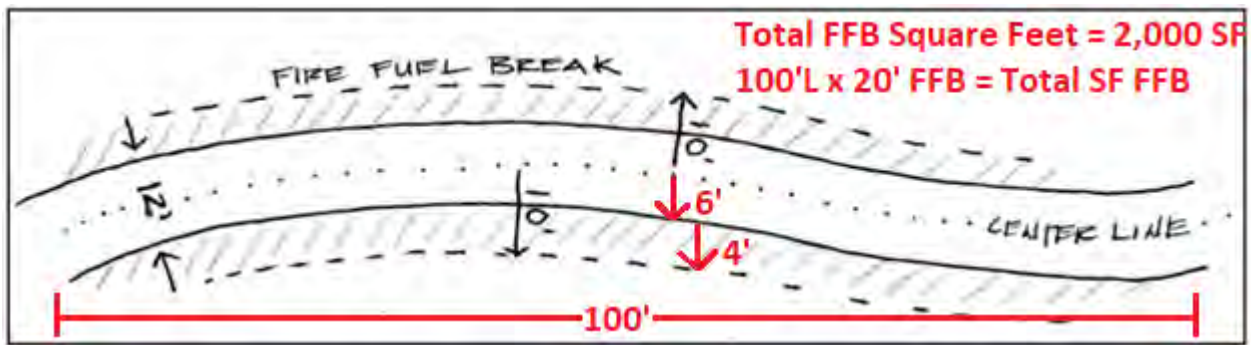
Physical development areas and fire fuel break buffer zone areas for dwelling units, accessory structures, and agricultural structures are provided below:

1. Dwelling unit and developed curtilage (80' x 100' = 8,000 SF) // Fire Break = 28,000 SF
2. Accessory/Agricultural Structure #1 (24' x 35' = 840 SF) // Fire Break = 15,900 SF
3. Accessory/Agricultural Structure #2 (30' x 30' = 900 SF) // Fire Break = 16,000 SF
4. Accessory/Agricultural Structure #3 (16' x 30' = 480 SF) // Fire Break = 14,600 SF
5. Dwelling unit (Old Homestead) (55'L x 55'W = 3,025 SF) // Fire Break = 21,000 SF
6. Agricultural Structure (Old Homestead Barn) (25' x 55' = 1,375 SF) // Fuel Break = 18,000 SF

*Access Drive Fire Buffers.* The following driveway lengths and widths are estimated from the original application materials, site map, Remand Letter, and Wasco County Geographical Information System Measurement Tool. Although the square footage of existing driveways cannot be considered physical development in this analysis, the required fire fuel break buffer zone areas are considered.

Fire fuel break buffer zone areas for private access drives were calculated (approximated) using the below method:





**Diagram: Access Drive Fire Fuel Break Calculation Method**

Driveway #1: Approx. 20'W x 480'L moving southward from Sevenmile Hill Rd. to driveway split.  
 Driveway #2: Approx. 20'W x 681'L moving southeast from driveway split to dwelling unit.  
 Driveway #3: Approx. 20'W x 946'L moving southward from driveway split to south adjacent parcel.  
 Driveway #4: Approx. 20'W x 1,280' moving southward from Sevenmile Hill Rd. to south parcel.

The following fire fuel break buffer zone areas were calculated for the existing access drives on the subject parcel:

Driveway #1 Fire Fuel Break Buffer Zone Area: 9,600 SF = 480'L x 20'  
 Driveway #2 Fire Fuel Break Buffer Zone Area: 13,620 SF = 681'L x 20'  
 Driveway #3 Fire Fuel Break Buffer Zone Area: 18,920 SF = 946'L x 20'  
 Driveway #4 Fire Fuel Break Buffer Zone Area: 25,600 SF = 1,280'L x 20'

*Utility Line Maintenance Area.* Staff confirmed by phone with Wasco Electric Cooperative on November 15, 2021, that a 15 foot from center line maintenance easement is provided on each side of overhead power lines, and that the goal of the maintenance easement is to keep areas around power lines free from debris that might obstruct safe transmission of electric power. Staff utilized applicant's submitted sitemap and Wasco County GIS Measurement Tool to approximate and confirm applicant's estimated power line distances and maintenance zones. (See below "Power Line Distance Estimate" Map).



Power Line #1 Maintenance Area Estimate: 19,050 SF = 635'L x 30' (15' from center line)  
Power Line #2 Maintenance Area Estimate: 15,900 SF = 530'L x 30'  
Power Line #3 Maintenance Area Estimate: 5,550 SF = 185'L x 30'  
Power Line #4 Maintenance Area Estimate: 10,050 SF = 335'L x 30'  
Power Line #5 Maintenance Area Estimate: 16,800 SF = 560'L x 30'  
Power Line #6 Maintenance Area Estimate: 25,200 SF = 840'L x 30'  
Power Line #7 Maintenance Area Estimate: 7,050 SF = 235'L x 30'  
Power Line #8 Maintenance Area Estimate: 13,200 SF = 440' x 30'

*Public Roadway Maintenance Area.* Additional information regarding fire fuel break and maintenance areas that are dedicated for publicly maintained roads was requested from the Wasco County Public Works Department. The Wasco County Public Works Director Arthur Smith provided commentary on November 15, 2021:

WC-Public Works Department Director Arthur Smith Commentary (November 15, 2021):

We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection - people can't block a road, it must remain open for travel. However, the county is not obligated to care for or maintain public or private roads, just county roads.

Most county roads are only 22-24 feet in width, but have a 50-60 foot dedicated right-of-way which we manage. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard.

A copy of the Director Smith's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

The applicant provided the following calculation regarding Sevenmile Hill Road maintenance: "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>".

The Wasco County GIS Roads layer provides that Sevenmile Hill Road is a publicly maintained road. Staff utilized Partition Plat 2017-003560 and Wasco County GIS Measurement Tool to approximate the length and width of Sevenmile Hill Road along the subject parcel's north boundary line. The estimated distance is 1,115 feet.

Partition Plat 2017-003560, page 2, provides that Sevenmile Hill Road is at least 60' wide. Considering Director Smith's comments concerning the 50-60' dedicated right-of-way, and the 4-6 foot maintenance area on each side of county roads, staff estimates the dedicated maintenance area for Sevenmile Hill Road that directly applies to the subject parcel is approximately 6,690 SF = (6' x 1,115').

A copy of Partition Plat 2017-003560 is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 6.

Total estimated actual physical development square footage = 14,620 SF  
Total estimated fire fuel break buffer zone area development square footage = 113,500 SF  
Total estimated fire fuel break buffer zone area for access drives = 67,740 SF  
Total estimated maintenance easement area for overhead power lines = 112,800 SF  
Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF

The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

**(2) Undeveloped Areas & Soils.** Original application materials provide the following description of undeveloped areas of the designated exception area (subject parcel):

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. (Original Application, Page 28).

Soil Survey. The submitted Remand Letter provides the following information regarding a soil assessment that was conducted on the subject parcel:

Applicant/Owner: David Wilson Remand Letter (Signed July 9, 2021)

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. \*Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error. (Remand Letter, Page 1).



Submitted soils data (Scanned Pdf file titled: "Remand Request Soil Data"), includes the following: (1) "Soil Assessment Submittal Form" and "Soil Assessment Release Form"; (2) "Soil Assessment Completeness Review"; and (3) "Wilson – Order 1 Soil Survey".

The "Soil Assessment Submittal Form" was signed by both the property owner, David Wilson (Signed January 15, 2021) and soil scientist, Gary Kitzrow (Signed January 10, 2021). The "Soil Assessment Submittal Form" provides the Department of Land Conservation and Development the authority to review the soil survey, and provides the following:

"Soil Assessment Submittal Form" (Submitted to DLCD January 23, 2021):

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews of field checks will accompany the soils assessments. (Soil Assessment Submittal Form, Page 1).

The "Soil Assessment Release Form" was signed by the property owner, David Wilson (Signed January 15, 2021), and submitted with the "Soil Assessment Submittal Form".

Copies of the "Soil Assessment Submittal Form" and "Soil Assessment Release Form" are available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 8.

The "Soil Assessment Completeness Review" was issued and approved on March 29, 2021, by Hilary Foote Department of the Oregon Land Conservation and Development (DLCD) Farm Forest Specialist.

Soil Assessment Completeness Review (March 29, 2021):

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030. (Soil Assessment Completeness Form, Page 1).

A copy of the "Soil Assessment Completeness Review" is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 9.

Staff contacted Hilary Foote requesting additional clarification concerning the purpose of the "Soil Assessment Completeness Review". Ms. Foote confirmed that DLCD's Soil Assessment's review is only to ensure the applicant's submitted Soil Survey is complete and consistent, and that the local jurisdiction gets to make its own determination as to the survey's accuracy and acceptability. Additionally, Ms. Foote noted that the report indicates the property is zoned "EFU, not Forest"; however, this discrepancy appears to be a scrivener's error.



A copy of the referenced communication with Hilary Foote is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

Staff has reviewed the submitted soil report titled: “Wilson – Order 1 Soil Survey”, that was conducted by Soils Scientist Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist. The survey was submitted to DLCD on January 23, 2021. There is no indication that the information provided within the soil report is incomplete or inaccurate. Additionally, the credentials of Mr. Kitzrow meet the minimum standards required per OAR 660-033-0045(1). Staff deems the facts, findings, and conclusions within the “Wilson – Order 1 Soil Survey”, to be complete, consistent, and accurate.

The “Wilson – Order 1 Soil Survey” provides that a backhoe was used to excavate and test 23 specific areas on the subject parcel. (See below “Site Condition Map”). (See also Page 10 of “Wilson – Order 1 Soil Survey”).

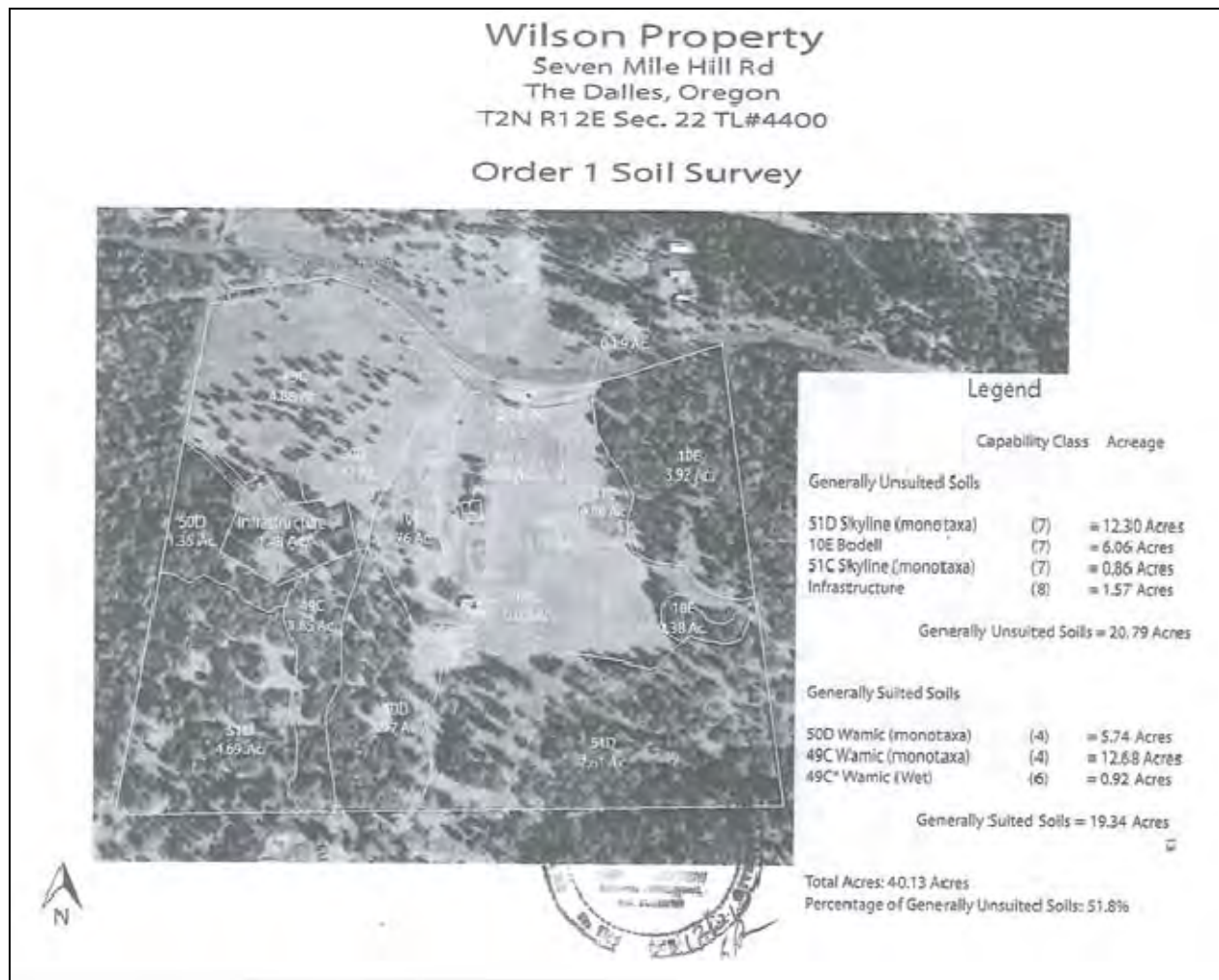
A copy of “Wilson – Order 1 Soil Survey” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 11.

Wilson  
T2N R12E Sec. 23C TL# 4400

Site Containing Water



The “Wilson – Order 1 Soil Survey” also provides a map illustrating the results of the soil survey. (See below “Order 1 Soil Survey” Map). (See also Page 13 of “Wilson – Order 1 Soil Survey”).



See also the “Enlarged Soil Capability Class Legend” Diagram below.

Legend		
	Capability Class	Acreage
Generally Unsited Soils		
51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres
Generally Unsited Soils = 20.79 Acres		
Generally Suited Soils		
50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres
Generally Suited Soils = 19.34 Acres		
Total Acres: 40.13 Acres		
Percentage of Generally Unsited Soils: 51.8%		

**Diagram: Expanded Soil Capability Class Legend Diagram**

Identified soil types include the following: 51D Skyline (monotaxa); 10E Bodell; 51C Skyline (monotaxa); 50D Wamic (monotaxa); 49C Wamic (monotaxa); and 49C (Wet).

The “Wilson – Order 1 Soil Survey” subsection (2)(e), provides additional descriptions and correlations between the existing soils and vegetation growth on the subject parcel.

“Wilson – Order 1 Soil Survey” Subsection (2)(e) (submitted January 23, 2021):

There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related. Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present. (Wilson – Order 1 Soil Survey, Page 2).



Additionally, the “Wilson – Order 1 Soil Survey” subsection (2)(f), provides notes concerning the underrepresentation of the existing USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the subject parcel.

“Wilson – Order 1 Soil Survey” Subsection (2)(f) (submitted January 23, 2021):

No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed. (Wilson – Order 1 Soil Survey, Page 2).

The survey’s summary and conclusion are provided in subsection (5).

“Wilson – Order 1 Soil Survey” Subsection (5) (submitted January 23, 2021):

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% (20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

(Wilson – Order 1 Soil Survey, Page 3).

A copy of the “Wilson – Order 1 Soil Survey” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 11.

**(2a) STAFF ANALYSIS (Undeveloped Areas & Soils).** *Vegetation Analysis.* A previous site visit and Wasco County GIS data (2018 Aerial OSIP Imagery), indicate and confirms that grass hay is grown on the parcel. The pasture area is located on the northwest, central, and east portion of the parcel.

The vegetation of the subject parcel is split between open grassland in the north, center, and east portions. Oregon White Oak trees are interspersed with Ponderosa Pine trees. There are very few Douglas Fir trees around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

*Slope Analysis.* The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the dwelling unit at



about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or for forestry uses.

*Wetland Analysis.* Staff utilized information from the Wasco County GIS (National Wetlands Inventory, National Hydrography Dataset, and Statewide Wetlands Inventory) to identify one seasonal "Riverine" wetland (stream) that runs in a north-south direction through the center of the subject parcel. Additionally, a pond "Waterbody - Large Scale" and the north-south stream "Flowline - Large Scale" is identified at the center of the subject parcel (approximately 41' +/- from the Agricultural Structure (Old Homestead Barn)). The approximate length of the identified waterbody is estimated to be 1,259 feet long. (See below "Wetland Map").



Staff has provided the applicable WC-LUDO Forest (F-2) Zone criterion below for wetland buffer areas:

**Section 3.127 - Property Development Standards**

**3. Waterways**

- a. *Resource Buffers: All bottoms of foundations of permanent structures, or similar permanent fixtures shall be setback from the high water line or mark, along all streams, lakes, rivers, or wetlands. (Added 4/12)*

- (2) *A minimum distance of fifty (50) feet when measured horizontally at a right angle for all water bodies designated as non-fish bearing by any federal, state or local inventory.*

(\*\*\*)

- (5) *The following uses are not required to meet the waterway setbacks; however, they must be sited, designed and constructed to minimize intrusion into the riparian area to the greatest extent possible:*

- (a) Fences;*
- (b) Streets, roads, and paths;*
- (c) Drainage facilities, utilities, and irrigation pumps;*
- (d) Water-related and water-dependent uses such as docks and bridges;*
- (e) Forest practices regulated by the Oregon Forest Practices Act;*
- (f) Agricultural activities and farming practices, not including the construction of buildings, structures or impervious surfaces; and*
- (g) Replacement of existing structures with structures in the same location that do not disturb additional riparian surface area.*

Based on the identified wetland type (non-fish bearing stream), a wetland development buffer of 50 feet on either side of the waterbody is required; however, forest practices regulated by the Oregon Forest Practices Act are exempted to the buffer standards to the degree that they “minimize intrusion into the riparian area to the greatest extent possible.” (WC-LUDO Chapter 3 Basic Provisions Section 3.127, Pp. 10-11).

*Soils Analysis.* The United States Department of Agriculture (USDA), Soil Conservation Service (STS), in cooperation with the Oregon Agricultural Experiment Station, published the “Soil Survey of Wasco County, Oregon, Northern Part”, in 1982. The survey’s soil map data has been digitized, and was used in determining and analyzing the subject parcel’s soil classifications in the original Staff Report. The USDA “Soil Survey of Wasco County, Oregon, Northern Part” is classified as an Order 3 survey.

A copy of the “Soil Survey of Wasco County, Oregon, Northern Part” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 12.

The “Wilson – Order 1 Soil Survey” submitted for this remand hearing is an Order 1 survey.

The Natural Resources Conservation Service Soils webpage provides a description of soil survey orders.

The Natural Resources Conservation Service Soils webpage: Orders of Soil Surveys:

The orders are intended to convey the level of detail used in making a survey, the scale used to delineate map units, and how general the map units are. They also indicate the general levels of quality control that are applied during surveys. These levels affect the kind and precision of subsequent interpretations and predictions.

Order 1 (or first order) surveys are made if [sic] very detailed information about soils, generally in small areas, is needed for very intensive land uses. These land uses commonly require reviews and permits from regulatory agencies, engineers, and other professionals. Order 1 surveys are also conducted for specialized information, such as for critical habitat or cultural resources.

Order 3 (or third order) surveys are made where land uses do not require precise knowledge of small areas or detailed soil information. The survey areas are commonly dominated by a single land use and have few subordinate uses. The soil information can be used in planning for range, forest, and recreational areas and in community planning.

(See [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2\\_054254#orders](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054254#orders))

The “Soil Assessment Completeness Review”, issued and approved on March 29, 2021, by Hilary Foote Department of Land Conservation and Development (DLCD) Farm Forest Specialist provides the following regarding survey order:

Soil Assessment Completeness Review (March 29, 2021):

The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted.

(Soil Assessment Completeness Form, Page 2).

As noted earlier, the “Wilson – Order 1 Soil Survey” provides the following analysis regarding the 1982 USDA Order 3 survey:

“Wilson – Order 1 Soil Survey” Subsection (2)(f) (submitted January 23, 2021):

No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. (Wilson – Order 1 Soil Survey, Page 2).

Staff notes that the submitted “Wilson – Order 1 Soil Survey”, was a parcel specific survey. The “Wilson – Order 1 Soil Survey” contains detailed soil testing analysis, and used a backhoe to excavate 23 study areas to conduct: “Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing detailed map with precision of subsequent interpretations and predictions.” (“Wilson – Order 1 Soil Survey”, Page 1).

The “Wilson – Order 1 Soil Survey”, provides that Skyline, Wamic, Bodell, and Infrastructure are the soil series confirmed on the subject parcel. Specifically identified soil mapping units are provided in the diagram below:

Legend		
	Capability Class	Acreage
Generally Unsited Soils		
51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres
Generally Unsited Soils = 20.79 Acres		
Generally Sited Soils		
50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres
Generally Sited Soils = 19.34 Acres		
Total Acres: 40.13 Acres		
Percentage of Generally Unsited Soils: 51.8%		

**Diagram: Expanded Soil Capability Class Legend Diagram**

(See “Wilson – Order 1 Soil Survey”, Page 13)

In order to provide detailed analysis of the soil mapping units identified on the subject parcel, staff utilized the “Soil Survey Single Phase Interpretation Sheets in Oregon” for the 1982 “Soil Survey of Wasco County, Oregon, Northern Part”, published by the United States Department of Agriculture (USDA), Soil Conservation Service (STS). The “Soil Survey Single Phase Interpretation Sheets in Oregon” or “Green Sheets” provides detailed data concerning field crops, woodland suitability, windbreaks, wildlife habitat suitability, and potential native plant communities that are supported by the soil mapping unit. The categories and the ratings for the classified soil mapping units are relevant to how well the subject parcel may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

The subject parcel’s predicted crops and pasture yield capability was examined by staff in order to determine the soil quality for field crops. Four “Soil Capability Classes” were identified in the “Wilson –



Order 1 Soil Survey". The "Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon" published by the Soil Conservation Service (Natural Resources Conservation Service), June 1982, provides the following description of "Capability and Predicted Yields - Crops and Pasture Soil Capability Classes":

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter-e, w, s, or c--to the class numeral, for example, lie. The letter e shows- that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief-limitation is climate that is too hot, too cold, or too dry for production of many crops.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

(Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 16-17).

A copy of the “Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon” is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 13.

Staff notes that the “Wilson – Order 1 Soil Survey” discovered that 20.79 acres of the subject parcel’s soils fall within the Class 7 and 8 (Class VII & VIII) soil Capability Classes. 19.34 acres of the subject parcel’s soils fall within Class 4 and Class 6 (Class IV & VI) soil Capability Classes. Given the percentage of Class 7 and 8 soils, the “Wilson – Order 1 Soil Survey” found that a slight majority of the subject parcel’s soils (51.8%) have severe limitations that make them generally unsuitable for cultivation, and limit their use for pasture, woodland, and wildlife. However, while the Soil Capability Classification can be used to broadly understand the behavior of the soils when used for other purposes, “this classification is not a substitute for interpretations designed to show *suitability and limitations of groups of soil for range, for forest trees*, [emphasis added] or for engineering.” (Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 16).

To understand the specific resource suitability of the subject parcel’s soil, staff examined the “Green Sheets”, which provide the following interpretation guidance for the soil mapping unit’s “Woodland Suitability”:

This section deals with the potential productivity and management problems in the use of the soils for woodland production. The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

The mean site index is given for the listed species. It is based on field sampling. The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed. Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre.

The second element is a letter expressing selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities

are in the order listed above. In the columns below management problems, the ratings used are slight, moderate, and severe.

(Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon, Pp. 18-19).

The previous Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" only identified Wamic and Wamic-Skyline Complex as the dominant soils on the subject parcel. Specifically identified were, 49C Wamic Loam (29.8 acres); 50D Wamic Loam (10.5 acres) (total = 40.3 acres). 51D Wamic-Skyline Complex (0.5 Acres) was also identified. (Wilson – Order 1 Soil Survey, Page 3).

The "Wilson – Order 1 Soil Survey" provides that the subject parcel contains 19.34 acres of the Wamic series soil type. Specifically, the 50D Wamic Loam (5.74 acres) mapping unit, and 49C Wamic Loam (13.6 acres = 12.68 49C Wamic (monotaxa) + 49C Wamic (wet)) mapping unit are identified.

Specific details regarding the Wamic soil mapping units identified in the "Soil Survey Single Phase Interpretation Sheets in Oregon" (Commonly referred to as the "Green Sheets") are provided below:

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both" Subclass e indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types, four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section provides a soil's potential for producing various kinds of wildlife habitat. Under "Potential for Habitat Elements":
    - "Grain Seed" is rated "Fair"; and "Grass & Legume" and "Wild Herb" subgroups are rated a "Good".
    - "Hardwood Trees", "Conifer Plants", and "Shrubs" subgroups are rated as "Fair".
    - "Wetland Plants" and "Shallow Water" subgroups are rated as "Poor"; "Open Land Wildlife" and "Woodland Wildlife" subgroups are rated as "Fair"; "Wetland Wildlife" is rated "Poor", and "Rangeland Wildlife" contains no classification.
- Potential Native Plant Community (Rangeland or Forest Understory Vegetation)
  - Ponderosa Pine and Oregon White Oak tree species are listed.

- Non-tree species: Idaho Fescue; Bluebunch Wheatgrass; Sandberg Bluegrass; Arrowleaf/Balsamroot; and Antelope Bitterbrush.

The “Wilson – Order 1 Soil Survey” provides that the subject parcel also contains approximately 20.79 acres of the Skyline, Bodell, and Infrastructure series soil type. Specifically, the 10E Bodell (5.74 acres) mapping unit, and 49C Wamic Loam (13.6 acres = 12.68 49C Wamic (monotaxa) + 49C Wamic (wet)), and Infrastructure (0.92 acres) mapping unit are identified.

Specific details regarding the 10E Bodell Cobbly Loam soil mapping unit is identified in the “Green Sheets”:

- Capability and yields per acre of crops and pasture (high level management)
  - This Bodell soil mapping unit is listed as 7e (Class 7 which has “very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.” Subclass e indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). This soil type contains no recommended field crop/pasture.
- Woodland Suitability
  - This Bodell soil mapping unit contains no woodland suitability soil classification and has no common trees listed (Specifically listed as “None”).
- Windbreaks
  - This Bodell soil mapping unit has no species listed for windbreaks (Specifically listed as “None”).
- Wildlife Habitat Suitability
  - This section provides a soil’s potential for producing various kinds of wildlife habitat. Under “Potential for Habitat Elements”:
    - “Grain Seed”, “Grass & Legume” and “Wild Herb” the class is rated a “Poor” for all three subgroups.
    - “Hardwood Trees”, “Conifer Plants”, and “Shrubs” contain no classification or species provided for all three subgroups.
    - “Wetland Plants”, “Shallow Water”, “Open Land Wildlife”, “Woodland Wildlife”, “Wetland Wildlife”, and “Rangeland Wildlife” the class is rated a “Poor” for all six subgroups.
- Potential Native Plant Community (Rangeland or Forest Understory Vegetation)
  - No trees are listed.
  - Non-tree species: Idaho Fescue; Bluebunch Wheatgrass; Letterman Needlegrass; Sandberg Bluegrass; Oregon Bluegrass; Arrowleaf/Balsamroot; Buckwheat; and Bighead Clover.

A copy of the pertinent sheets used in the “Soil Survey Single Phase Interpretation Sheets in Oregon” for the 1982 “Soil Survey of Wasco County, Oregon, Northern Part”, published by the United States Department of Agriculture (USDA), Soil Conservation Service (STS), is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 14.

No specific details are provided in the “Green Sheets” for soil mapping units 51D or 51C Skyline. Due to the lack of pertinent information in the “Gree Sheets” pertaining to the Skyline mapping units, staff requested additional information from Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist. Mr. Kitzrow provided commentary on November 26, 2021:

Gary Kitzrow, Soil Scientist (November 26, 2021):

Skyline units on my report are MONOTAXA units meaning one soil per delineation. Wamic soils are NOT found within those mapping units except as an inclusion. Order I Soil Surveys (such as the current one) separates out soil "Complexes" into their component parts. Order I Soil Surveys are Site Specific Soil Surveys with a high degree of confidence in the final delineations correlated. I have mapped over 1 million acres of soils in the USA and in 2 foreign countries. I use the same USDA-protocols in all jurisdictions I have published Soil Survey Reports in (8) states. The goal of Order I Soil Surveys is to make every soil mapping unit a monotaxa element.

The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a Non-Commercial Forest Soil. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

A copy of the Mr. Kitzrow's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 10.

#### **STAFF CONCLUSIONS & RECCOMENDATIONS (Physically Developed & Undeveloped Areas).**

*Physically Developed.* The standard of proof for evidence submitted in support of this Remand request is "Clear and Objective". The burden of proof falls on the applicant to submit clear and objective evidence that demonstrates the proposal can meet the requirements under the law. In this instance, the submitted Remand materials failed to produce a site map to scale; failed to provide illustrated measurements of infrastructure and existing development; failed to provide fire fuel break buffer zone calculation methodology; and failed to provide source material for the proposed 50' fire fuel break buffer zone areas used in the applicant's estimated "50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>" and "50' buffer along driveway easement= 79,300 ft<sup>2</sup>" calculations.

Staff conducted research and analysis of the existing physical development, and was able to provide the following approximations regarding the subject parcel's physically developed areas:

Total estimated actual physical development square footage = 14,620 SF

Total estimated fire fuel break buffer zone area development square footage = 113,500 SF

Total estimated fire fuel break buffer zone area for access drives = 67,740 SF

Total estimated maintenance easement area for overhead power lines = 112,800 SF

Total estimated applicable area dedicated for maintenance of Sevenmile Hill Road = 6,690 SF

The estimated physically developed areas, fuel break buffer zone areas, private utility line maintenance areas, and public road maintenance areas on the subject parcel equal 315,350 SF.

The subject is parcel is 40.13 acres in size.

(1 Acre = 43,560 SF) (40.13 acres x 43,560 = 1,748,062 acres)

315,350 SF / 1,748,062 SF = 0.1803 or 18% of the subject parcel is physically developed.



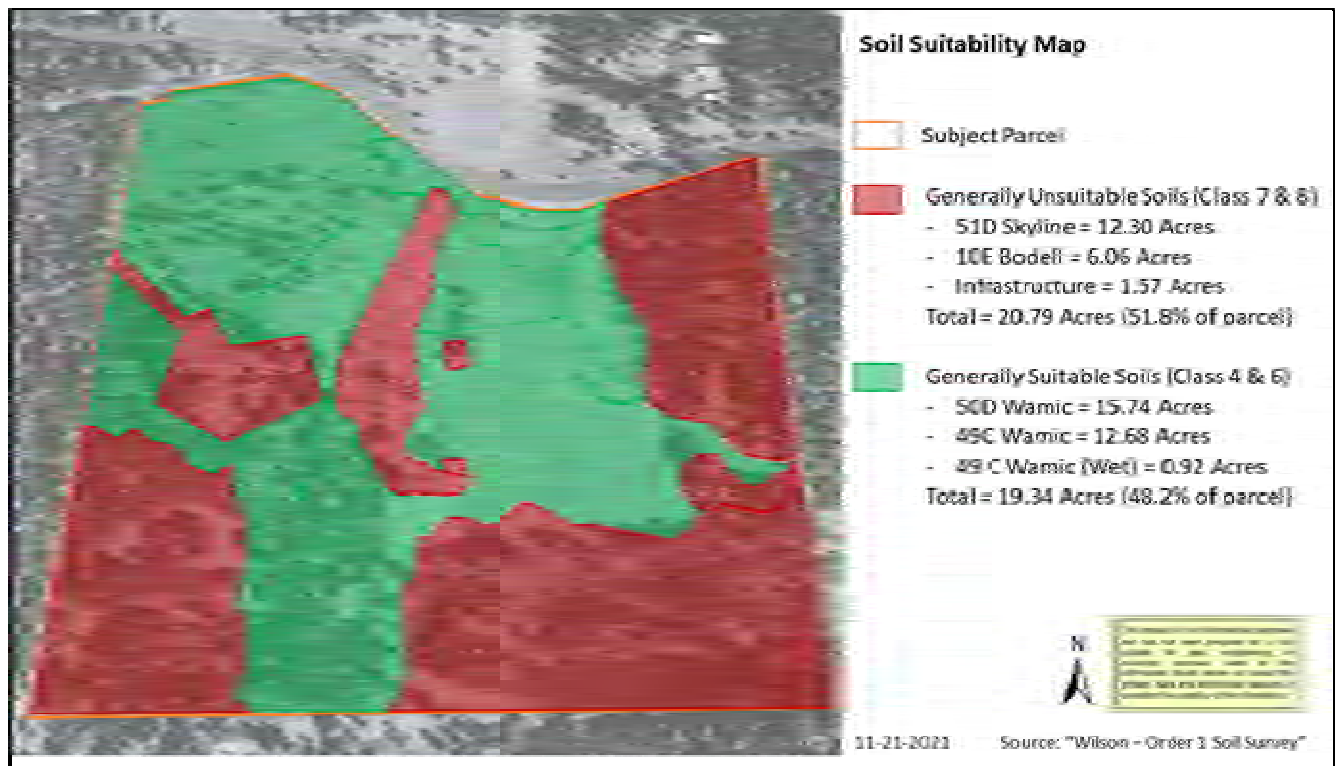
Staff's approximations do not necessarily reflect absolute accuracy, and should not be considered to unconditionally negate the applicant's submitted calculations for physical development. However, unlike the applicant, staff provided source material for applicable fire fuel break buffer zone criteria and applicable utility line and road maintenance easements. Furthermore, staff provided the sources and GIS tools that were used to approximate private access drive and utility line distances. Finally, staff provided calculation methodology for estimated fire fuel break buffer zone areas. Considering these facts, staff recommends the Planning Commission consider staff's approximated percentage of the subject parcel's physically developed area in making its decision regarding this request.

Staff estimates that 18% of the subject parcel is physically developed.

*Undeveloped Areas.* Neither the subject parcel's slopes or existing wetland buffers significantly hinder or preclude forestry uses. The primary point of analysis for the undeveloped area of the subject parcel is centered around the property' soil quality and its suitability for forestry uses.

The applicant submitted the "Wilson – Order 1 Soil Survey", which provides that 20.79 acres of the subject parcel contains "Generally Unsuitable Soils". Using the soil survey and the "Green Sheets", staff conducted in depth analysis of the soil mapping units identified within the "Wilson – Order 1 Soil Survey". The soil mapping units 50D Wamic, 49C Wamic, and 10E Bodell were explicitly found within the "Soil Survey Single Phase Interpretation Sheets in Oregon" ("Green Sheets"), and analysis was provided. The soil mapping units 51D Skyline and 51C Skyline were not explicitly found within the "Green Sheets"; however, staff did provide analysis of the 51D Wamic-Skyline Complex for reference. The Infrastructure soil mapping unit is also not within the "Green Sheets".

The "Wilson – Order 1 Soil Survey's" "Findings and Conclusions" and remarks made within the 23 individual "Soil Profile Documentation Sheets", provide clear and objective evidence that the areas of the subject parcel containing "Generally Unsuitable Soils" are not favorable for field crops and pasture, large or small scale commercial woodlands, or wildlife habitat. (See below "Soil Suitability Map" for reference).



Soil data evidence was a key issue of contention within the Land Use Board of Appeals opinion in *Dooley et al v. Wasco County* (LUBA Opinion No. 2019-065). Using the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part", the appellants provided in their "Second Assignment of Error", that the county had failed to support its findings to allow the exception to Goal 4: Forest Lands "where the undisputed evidence [had shown that] the subject property contains merchantable tree species in its southern portion and contains soil types that are capable of supporting Ponderosa Pines (20-49 cubic feet per year)." (LUBA Opinion No. 2019-065, Page 14). The appellants successfully argued that the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part", demonstrated that the soil types on the property support Ponderosa Pines, and that the county's findings were "inadequate to explain why the remaining open portion of the subject property could not be planted and [used] for forestry purposes." (LUBA Opinion No. 2019-065, Page 14).

The "Wilson – Order 1 Soil Survey" demonstrates that a majority of the property contains "Generally Unsuitable Soils", and that those soils are primarily located in the south and east portions of the subject parcel where the majority of scattered tree growth exists. Considering these facts, staff recommends the Planning Commission consider the findings and conclusions within the submitted "Wilson – Order 1 Soil Survey" as well as staff's analysis of that survey in making its decision regarding this request.

**OAR 660-004-0028:**

**Exception Requirements for Land Irrevocably Committed to Other Uses**

(2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

(b) *The characteristics of the adjacent lands;*

**FINDING:** Information concerning the “characteristics of the adjacent lands” is provided by the original record, Wasco County GIS data (2018 Aerial OSIP Imagery), and the additional evidence (Remand Request Letter & Remand Request Soil Data) submitted by Mr. David Wilson on July 13, 2021. Additional references are provided throughout this subsection.

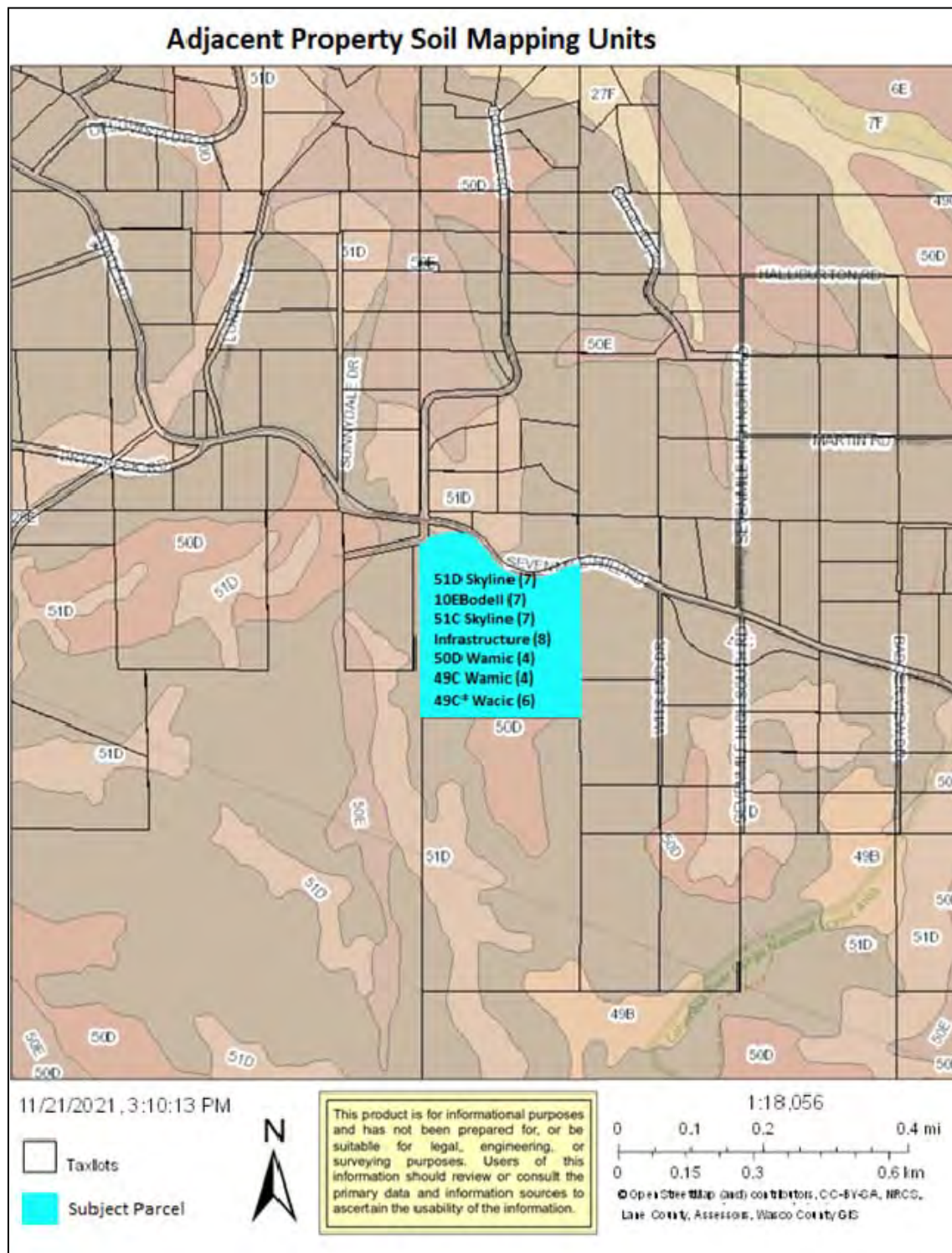
Characteristics and analysis of the adjacent lands includes the following: (1) Soil Analysis; (2) General Land Use History, Zoning, and Use; and (3) STAFF CONCLUSIONS & RECOMMENDATIONS.

**(1) Soils Analysis.** Original application materials provide the following regarding soils analysis on adjacent lands:

Applicant/Owner: David Wilson Application Form (Signed May 4, 2018)

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially. (Original Application, Page 19).

The soil mapping units for adjacent and neighboring parcels are provided by the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”. This Order 3 survey was used to obtain the subject parcel’s soil data in the original application request. (See below “Adjacent Property Soil Mapping Units” map).



Regarding the subject parcel, the USDA Order 3 survey's soil data is refuted by the "Wilson – Order 1 Soil Survey's" findings and conclusions. Although the scope of the "Wilson – Order 1 Soil Survey" was limited to the subject parcel, the survey's author Mr. Gary Kitzrow, provided comment regarding the under-representation of the number and diversity of Soil Mapping Units on the Wasco county USDA Soil Legend. Specifically, Mr. Kitzrow provided the following:

“Wilson – Order 1 Soil Survey” Subsection (2)(f) (submitted January 23, 2021):

By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. (Wilson – Order 1 Soil Survey, Page 2).

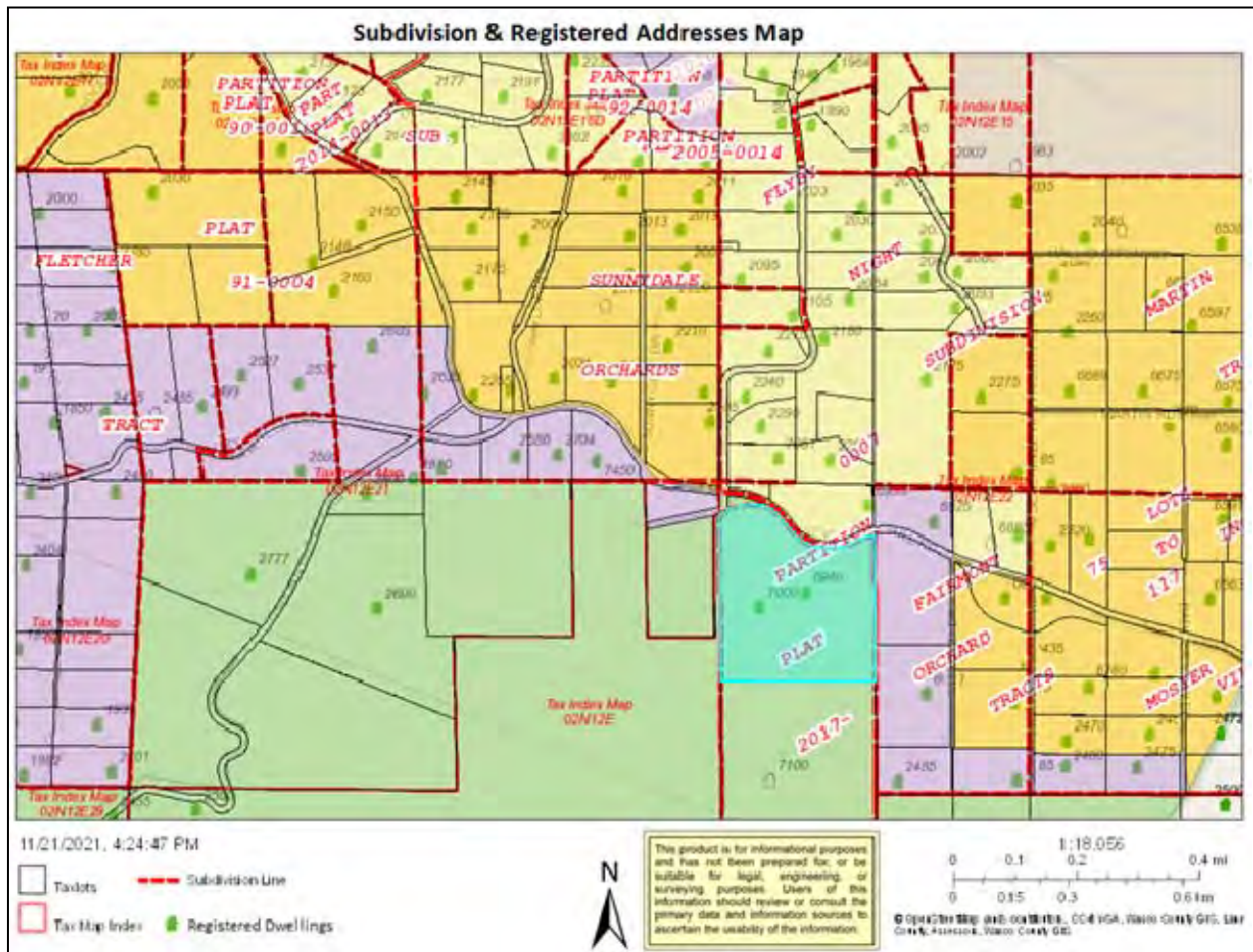
It is clear from Mr. Kitzrow’s commentary that similar to the subject parcel, it is likely that neighboring and adjacent lands contain a wider array of Soil Mapping Units than is provided within the USDA Order 3 survey. Although Mr. Kitzrow’s commentary cannot override the Order 3 USDA’s survey of mapped soil units on surrounding parcels, his comments do provide additional information concerning the possible increased diversity of soil characteristics of adjacent lands.

**(2) General Land Use History, Zoning, and Use.** Information concerning the surrounding area’s land use history, zoning, and current use is provided by the land use file records, the Wasco County Assessor’s Office, and Wasco County GIS data (2018 Aerial OSIP Imagery, Zoning Layer, Subdivision Layer).

The lands to the north, east, and west of the proposed exception area have been primarily divided into smaller units of land relative to rural development (10 acres or less). A large majority of these parcels were created long before the area was subject to statewide or county-wide zoning regulations. Of the four subdivisions in the area, three were platted in the early part of the twentieth century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). Three of these subdivisions primarily contain lots that are approximately 5 acres in size. The county has recognized the area’s existing parcel sizes by zoning the area for rural residential development (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zones), and for small-scale agriculture or forestry uses in conjunction with a rural residence (Forest-Farm (F-F 10) Zone (Non-Resource)). Lands to the south, southwest, and west were historically created by deed or land sales contract prior to state or county-wide zoning laws, and many were divided into smaller units of land in the 1980s by partition. Additional details are provided below.

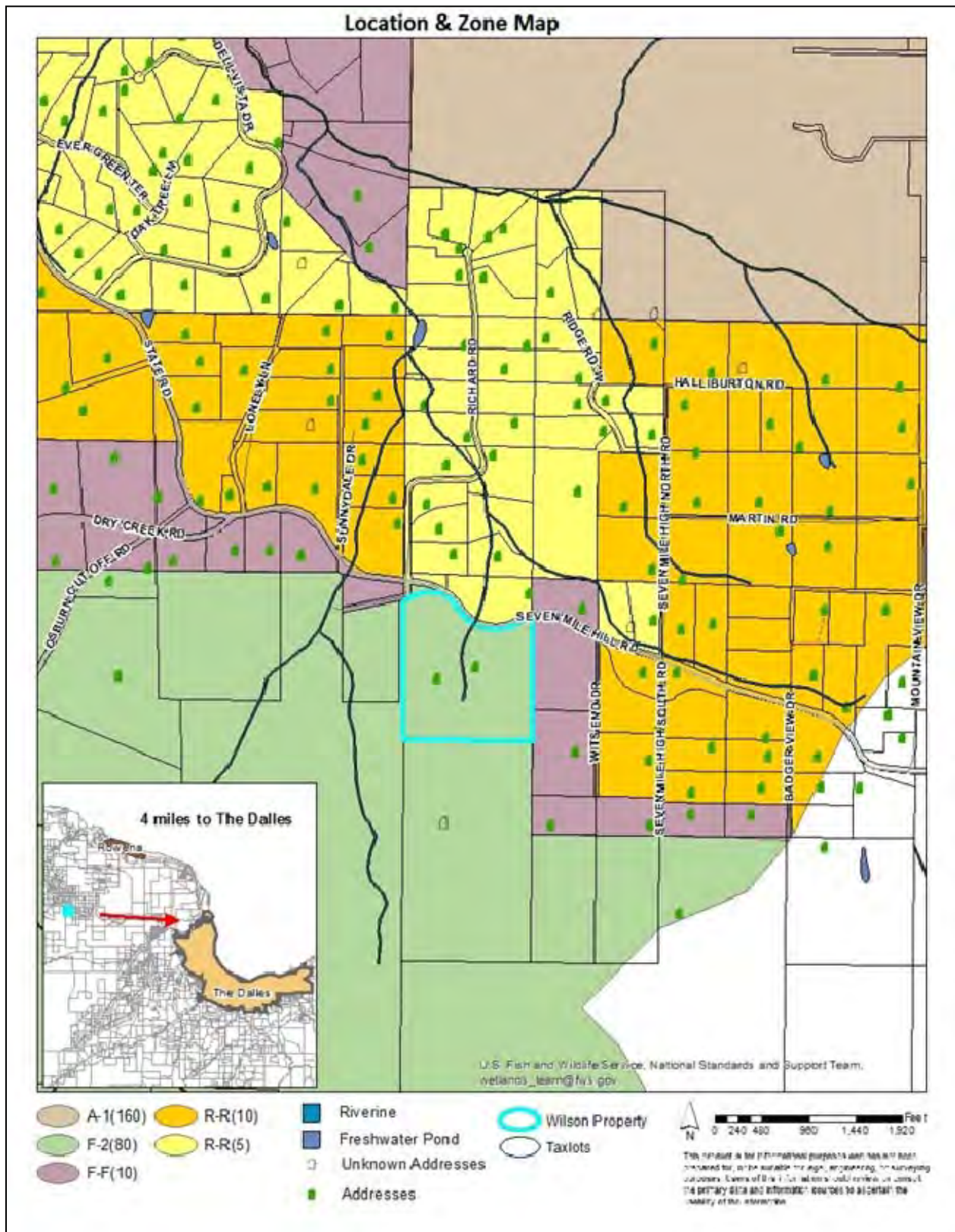
As a result of the parcel creation history, parcel size, and parcel use, and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas within the Forest-Farm (F-F 10) Zone (Non-Resource). (See below “Subdivision & Registered Addresses Map”).





Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development under the three non-resource rural residential zoning designations, R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands further south, and immediately west of the subject parcel “exception area” are generally used for commercial forestry. (See below “Location & Zone Map”).



The land on the immediate north and south side of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Sevenmile Hill Road are within the R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource), with 5 or 10 acre minimum parcel sizes.

*Lands East of the Subject Parcel.* Directly to the east, north east, and south east of the proposed "exception area" are three parcels within the Forest-Farm (F-F 10) Zone (Non-Resource) (T2N R12E, Section 22, Lots 4700, 4300, and 4200). Two of these tax lots abut the eastern boundary of the subject parcel, and the third (tax lot 4700) is located on the immediate north side of Sevenmile Hill Road. Tax lots 4700 and 4200 contain dwelling units and are used for residential purposes. Tax lot 4300 was recently approved for a dwelling unit on October 12, 2021 (See File No. 921-21-000131-PLNG).

The three abutting rural residential lots further to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the southwest quarter of Section 22, Township 2 North, Range 12 East. The subdivision was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, R-R (5) Rural Residential, Rural Residential (R-R (10)) Zone, and Forest-Farm (F-F 10) Zone (Non-Resource). The National Scenic Area (NSA) Boundary is located approximately 0.6 miles east of the subject parcel's east property line. Zoning designations within this area of the NSA are predominantly "A-1" Large Scale Agriculture Zone (GMA & SMA). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from Forest-Farm (F-F 10) Zone (Non-Resource) to Rural Residential (R-R (10)) Zone (County Ordinance 99-111, amending Ordinance 97-102). Further, according to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. The appeal was stayed for mediation pursuant to the parties' stipulation, and the matter was later dismissed from LUBA. (*Thomas v. Wasco County* (unpublished), LUBA appeal No. 99-178)

*Lands North of the Subject Parcel.* Immediately north and northeast of the subject parcel, but still on the south side of Sevenmile Hill Road, is a vacant 0.7 acre parcel, that is zoned Forest (F-2) Zone. The small parcel is owned by Wasco County and is located between the old Sevenmile Hill Road and the current Sevenmile Hill Road. Immediately north of the vacant parcel, on the north side of Sevenmile Hill Road are two lots that are within the R-R (5) Rural Residential zone, and were also part of the Fairmont Orchard Tracts Subdivision discussed above. One of these lots is 0.7 acres, is vacant, and owned by Wasco County. The other lot is 7.9 acres and contains a single family dwelling with associated accessory structures.

The Fly-By Night Subdivision lies north of the Fairmont Orchard Tracts Subdivision on the north side of Sevenmile Hill Road. Three parcels were reconfigured through a partition in 2017. All of the lots north of Sevenmile Hill Road for approximately 0.8 miles are within the R-R (5) Rural Residential zone. North of



the Fly-By Night Subdivision, lands are within the Exclusive Farm Use (A-1) Zone or within the National Scenic Area.

Lands lying to the northwest of the subject parcel are within the Sunnydale Orchards Subdivision. All of the lots within the subdivision that are located north of Sevenmile Hill Road are within the Rural Residential (R-R (10) zone, and all of the lots located on the south side of the road are within Forest-Farm (F-F 10) Zone (Non-Resource). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with lots within the Forest-Farm (F-F 10) Zone (Non-Resource) and R-R (5) Rural Residential zone.

All of the area north of the proposed “exception area” is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards Subdivision and Flyby Night Subdivision.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest lot being 11.4 acres. Lots within the subdivision are mostly less than ten acres. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area located on the north side of Sevenmile Hill Road is the most heavily developed area surrounding the subject parcel. As can be seen in the maps above (See “Location & Zone Map” and “Subdivision & Registered Dwellings Map”), virtually all units of land located north of Sevenmile Hill Road have been improved with a dwelling unit.

*Lands West of the Subject Parcel.* There are two properties immediately adjacent to the proposed exception area to the west. The northwest parcel is 16.3 acres, with the north 1/3 within the Forest-Farm (F-F 10) Zone (Non-Resource) and the southern 2/3 within the Forest (F-2) Zone. This property is not developed. The adjacent property to the southwest is within the Forest (F-2) Zone, is 439 acres, is in commercial forestry, and is owned by Kenneth Thomas. Lands west of the subject parcel are larger in size and within the Forest (F-2) Zone. These lands stretch almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before they reach the Fletcher Tract Subdivision where properties fall within the Forest-Farm (F-F 10) Zone (Non-Resource) and are much smaller in size (5-15 acres). The majority of lands within the Forest (F-2) Zone is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

The Fletcher Tract Subdivision was recorded on June 6, 1908 and contains a total of 32 lots, almost all five acres each. All of the lots within the Fletcher Tract are within the Forest-Farm (F-F 10) Zone (Non-Resource). The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. According to 2018 Aerial OSIP Imagery, this south portion of the platted road south of Dry Creek Road has never been developed, although there are some private access roads leading to the developed parcels. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but some have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract. Beyond the subdivision to the west and south are large parcels within the Forest (F-2) Zone. According to Planning Department records, the Fletcher Tract has been zoned for non-resource use since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates statewide or countywide zoning in the area, each 5-acre parcel could be developed with residential use.

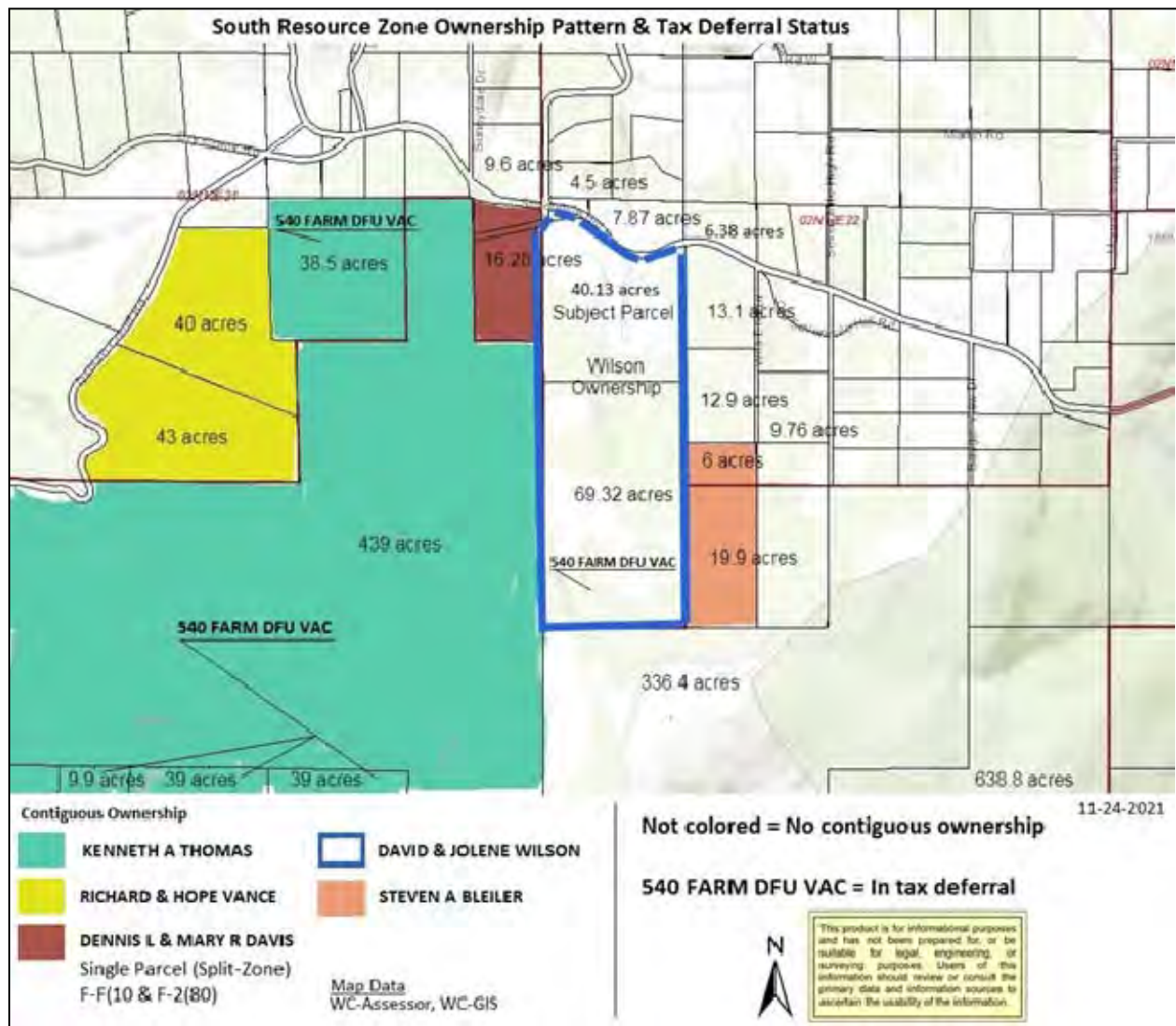
*Lands South of the Subject Parcel.* The south adjacent 69 acre parcel is within the Forest (F-2) Zone, and is also owned by the applicant David Wilson. The parcel is used for farm and residential purposes, and no forestry uses occur there. A record Quick Claim deed (recorded 1948-65409), describes the south adjacent parcel, the subject parcel, three separate parcels (now within the Forest (F-2) Zone) and four lots of the Fairmont Orchard Tracts (now within the Forest-Farm (F-F 10) Zone (Non-Resource) and Rural Residential (R-R (10) zone). Land use history provides that the 1948 tract was separated through conveyances throughout the twentieth century to form the existing nine separate units of land situated to the south, southeast, and east of the subject parcel (currently zoned for forest and residential use).

The lands to the south and southwest (all within the Forest (F-2) Zone) were created by deed prior to state and county-wide land use laws. However, it appears that the current 439 acre adjacent southwest parcel (2N 12E 0 2900) owned by Kenneth Thomas and the 40.35 acre parcel (2N 12E 21 2700) and 43.01 acre parcel (2N 12E 21 2800) owned by Richard & Hope Vance were all three reduced in size through a series of two partitions occurring in 1984 and 1985 (MIP-84-118 & MIP-85-103). Further west, the 30.45 acre (2N 12E 21 2900) and the 34.31 acre (2N 12E 21 3000) acre parcels were also reduced in size through a partition (MIP-86-103). The north-south dividing line between the four smaller parcels appears to have been the BPA Line.

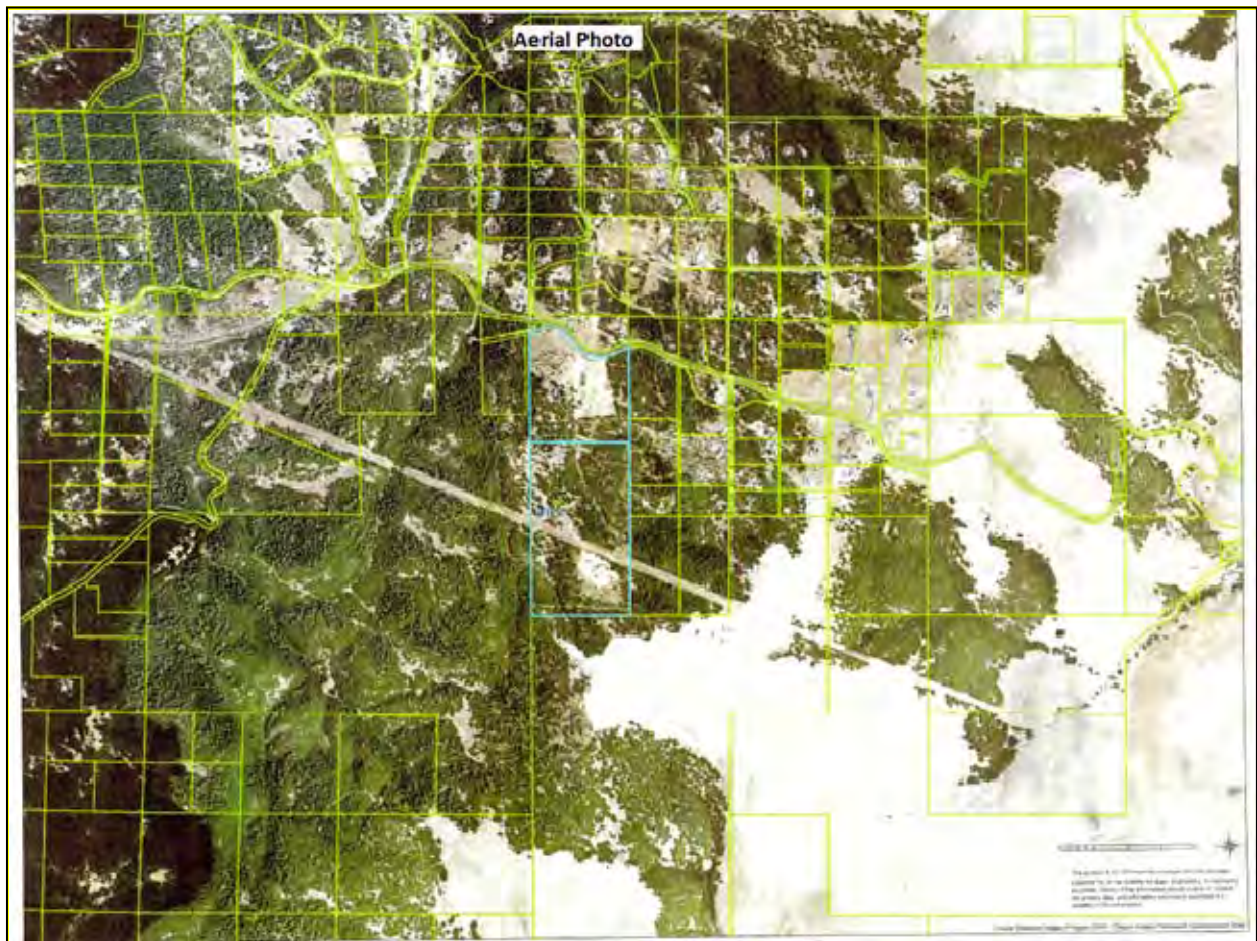
A copy of the pertinent deeds and minor partitions, is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 17.

The south adjacent parcel, the southwest adjacent parcel, and a parcel located further west (all in Forest (F-2) Zone) are in tax deferral status. There are three tracts of land wholly in resource use, and one split zoned (Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone) (See "South Resource Zone Ownership Pattern and Tax Deferral Status" map).



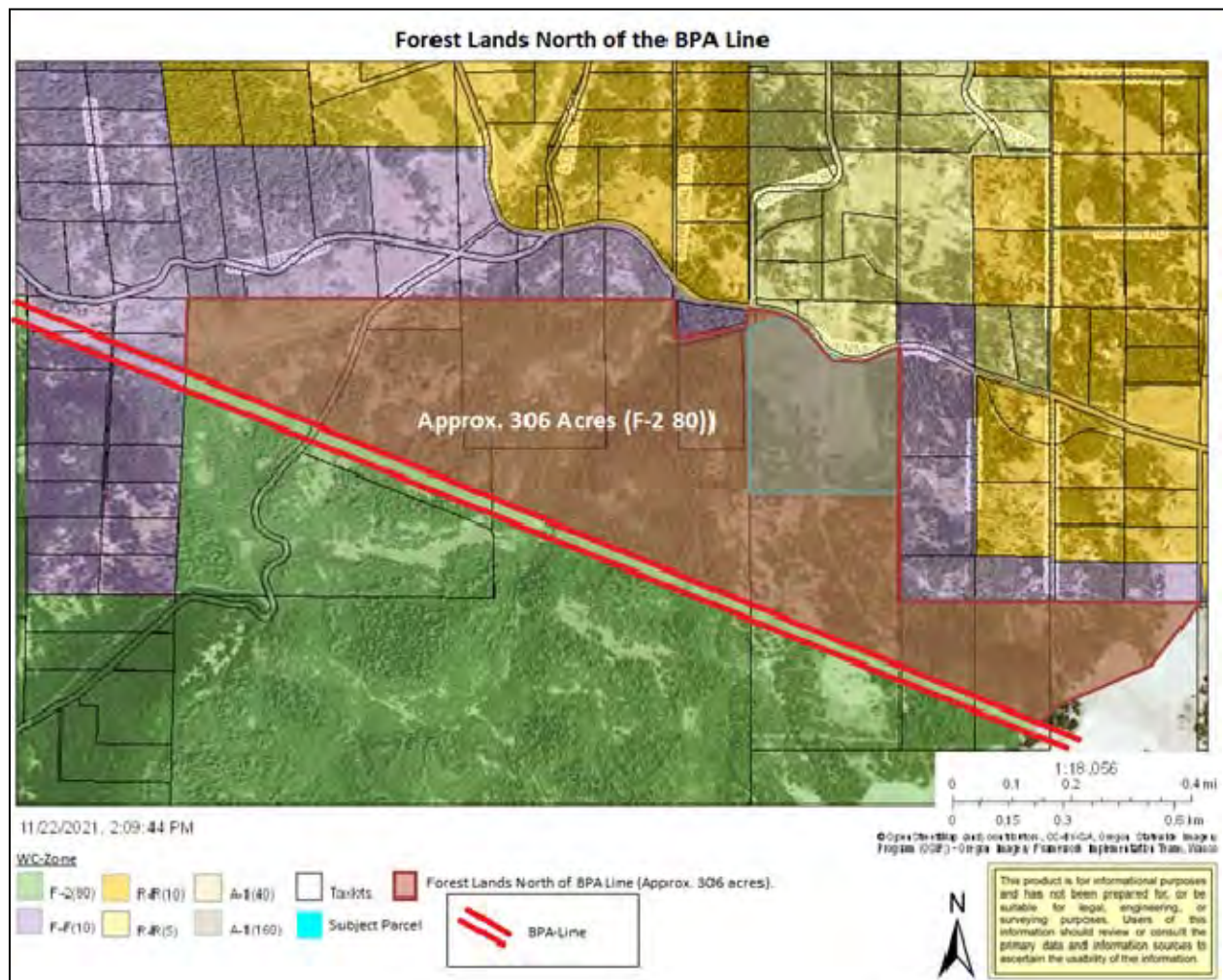


The south adjacent property along with all other properties to the west are bisected by a Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line”. The BPA line runs in a southeast to northwest direction. The transmission line’s maintenance easement is approximately 150’ +/- wide, and is clearly demarcated on the below map that was submitted with the applicant’s Remand materials. (See below “Aerial Photo” map).



Additionally, staff analysis provides that an area of approximately 306 acres of Forest (F-2) Zoned land is situated north of the BPA line (including the subject parcel). (See below “Forest Lands North of the BPA Line” map).



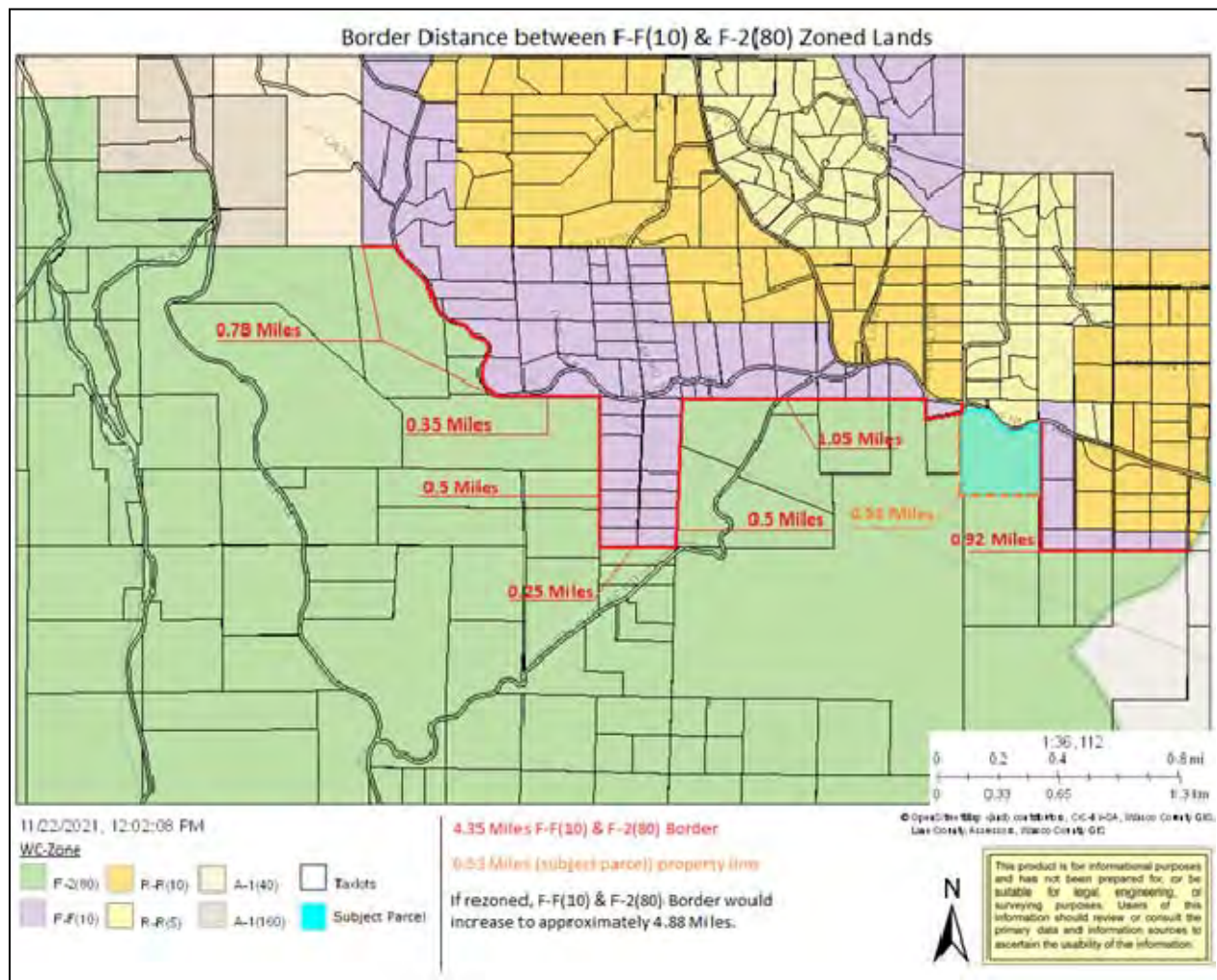


Continuing further south and southwest, lands are squarely within the Forest (F-2) Zone for approximately five miles (crossing Chenoweth Creek Road). This region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses. Deed research indicates these parcels were created prior to modern state and county land use law.

To the far southeast, near areas surrounding Wells Road, approximately 1.5 - 4.5 miles southwest of The Dalles, lands fall within the Forest-Farm (F-F 10) Zone (Non-Resource) and residential zones ((R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). This area's zoning patterns mimic the zoning pattern of the subject area of analysis with Forest-Farm (F-F 10) Zoned lands situated between resource and residential zoned lands.

Public access to the south and southwest parcels that are within the Forest (F-2) Zone, is provided by Sevenmile Hill Road (provides access to the 439 acre parcel owned by Kenneth Thomas), Osburn Cut-off Road, and Dry Creek Road.

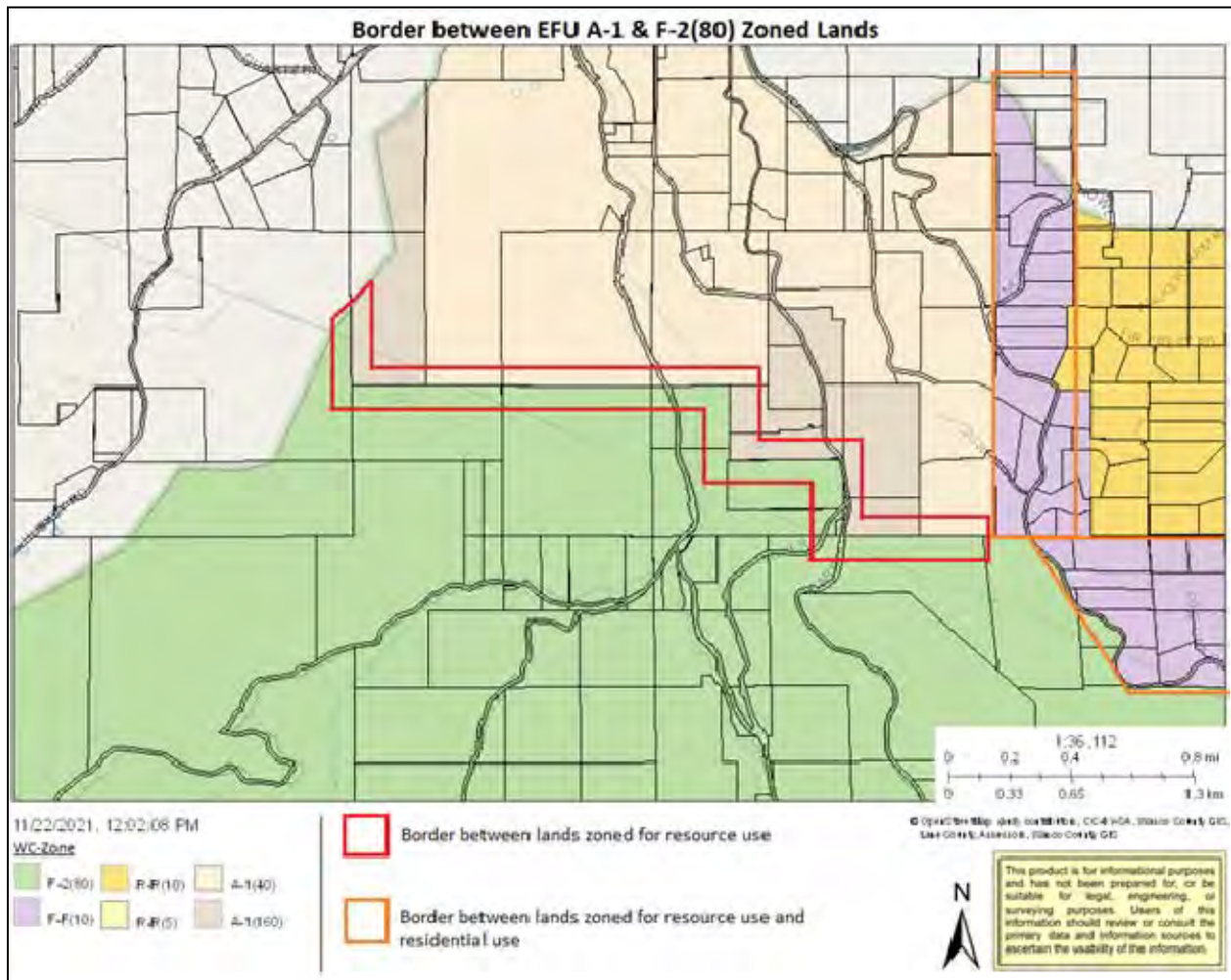
**Zoning & Use.** The property border line distance between those lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and those lands within the Forest (F-2) Zone are illustrated in the below "Border Distance between F-F(10) & F-2(80) Zoned Lands" map.



The approximate total border distance between lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone is approximately 4.35 miles in length. If rezoned to Forest-Farm (F-F 10) Zone (Non-Resource), the subject parcel's south and west property lines (approximately 0.53 miles) would be integrated into the Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone border line, which would increase the length total Forest-Farm (F-F 10) Zone (Non-Resource) and Forest (F-2) Zone border to approximately 4.88 miles.

Moving further west, the zoning map explicitly demonstrates that lands within the Forest-Farm (F-F 10) Zone (Non-Resource) are a clear demarcation between properties that are within resource zones (Forest (F-2) Zone and Exclusive Farm Use (A-1) Zone) and those within residential zones (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). Furthermore, it is clear that in this region of the county, the Forest-Farm (F-F 10) Zone (Non-Resource) does not separate resource zoned lands. (See below "Border between EFU A-1 & F-2(80) Zoned Lands").





**(3) STAFF CONCLUSIONS & RECCOMENDATIONS.** Analysis of the characteristics of adjacent lands provides following:

(1) The subject parcel's soils that were mapped by the "Wilson – Order 1 Soil Survey" and those soils mapped on adjacent parcels via the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" greatly differ in both soil series/classification and soil mapping units represented.

(2) The land use history demonstrates that the properties located to the north, northwest, and east of the subject parcel were developed for residential and small acreage forest-farm purposes. The existing land use designation and zoning pattern of these lands ensures that they are currently used for residential and (non-resource) forest-farm purposes. A majority of the north, northwest, and east adjacent parcels contain active registered addresses, and are generally smaller in size than those lands located to the south, southwest, and west. Lands to the south, southwest, and west are zoned exclusively for and actively in forestry use. The size of the subject parcel, and its historical and current use is more in line with those neighboring north, northwest, and east parcels that are within residential zoning.

(3) From the land use history provided in Section II.D of this report (See *Settlement Agreement and 2013 ZNC/CPA/EXC decision*), and from a geographical standpoint, the BPA Line has a history of being considered a logical man-made boundary for separating forestry uses from built and committed residential areas. Similar to the fire fuel break buffer zone areas and power line and road maintenance



easements, the BPA Line easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill area and forestry uses further to the south, southwest, and west. Moreover, there is a history of public examination and consideration that the BPA Line right-of-way/easement area physically separates, and therefore, mitigates the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

(4) The existing zoning maps clearly illustrate that lands within the Forest-Farm (F-F 10) Zone (Non-Resource), are situated between lands within resource zones (Forest (F-2) Zone and Exclusive Farm Use (A-1) Zone) and lands within residential zones (R-R (5) Rural Residential and Rural Residential (R-R (10)) Zone). It is also clear that within the Sevenmile Hill area, the subject 40.13 acre parcel owned by David Wilson (2N 12E 22 4400), the small 0.45 acre parcel owed by Wasco County (2N 12E 22 4500), and approximately 0.32 acres of private access road (Old Sevenmile Hill Road) are the only lands within the Forest (F-2) Zone that directly abut residentially zoned property.

Considering these facts, staff recommends the Planning Commission consider staff's analysis of the characteristics of adjacent lands in making its decision regarding this request.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

(c) *The relationship between the exception area and the lands adjacent to it;*

**FINDING:** The following analysis of the relationship between the "exception area" and the lands adjacent to it are provided from the above facts, analysis, and findings for OAR 660-004-0028(2)(a) and OAR 660-004-0028(2)(b).

**STAFF CONCLUSIONS & RECCOMENDATIONS.**

Soils Analysis. The subject parcel's soils that were mapped by the "Wilson – Order 1 Soil Survey" and those soils mapped on adjacent parcels via the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part" differ greatly in both soil classification and soil mapping units represented.

It is clear from the "Wilson – Order 1 Soil Survey" that the subject 40.13 acre parcel ("exception area") contains a majority (20.79 acres / 51.8%) of soil mapping units that are considered "Generally Unsuitable" for large and small scale agricultural and forestry uses. Additionally, the subject parcel, which is designated "Forestry", contains a wider variety of soil mapping units than is provided for in the Order 3 USDA "Soil Survey of Wasco County, Oregon, Northern Part".

The below "Adjacent Property Soil Mapping Units & Designation" map illustrates that the Order 3 USDA soil mapping units represented on all of the surrounding lands in the subject area, which are designated "Forestry", "Forest-Farm", and "Residential", contain one or more of the Wamic series soil mapping units (51D Wamic-Skyline Complex; 50D Wamic; 49B Wamic; 49C Wamic; 50E Wamic). The Wamic mapping units appear to be represented "on virtually every landform in this area," (Wilson – Order 1 Soil Survey, Page 2), regardless of the parcel's land use designation or zone.

For example, the below “Adjacent Property Soil Mapping Units & Designation” map illustrates four tax lots that all contain the same single soil mapping unit (49C Wamic); however, tax lots (2N 12E 22 tax lot 4300, 4200, and 4000), are designated “Forest-Farm” and within the Forest-Farm (F-F 10) Zone (Non-Resource), while tax lot 2N 12E 0 2700, is designated “Forestry” and within the Forest (F-2) Zone.

**Adjacent Property Soil Mapping Units & Designation**

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This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

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© OpenStreetMap (and) contributors, CC-BY-SA, NRCS, Lake County, Assessor, Walco County GIS

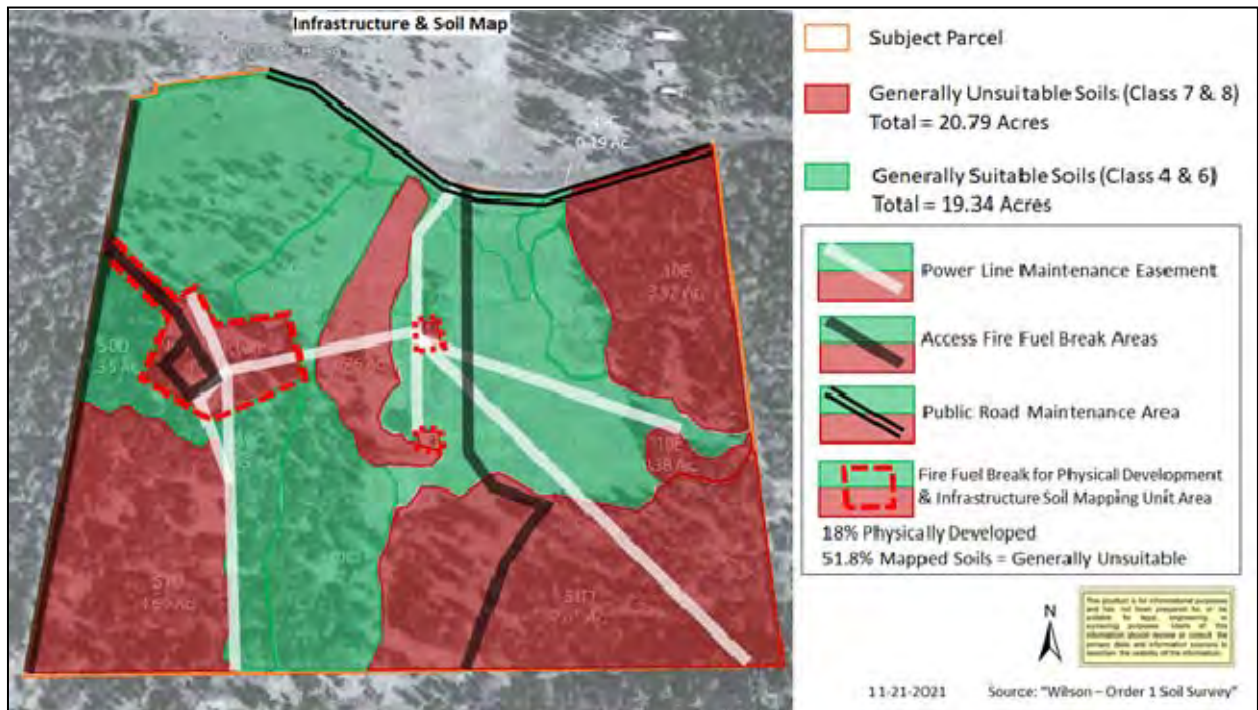
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concerning the pervasiveness of the Wamic soil series, and that “there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain” (Wilson – Order 1 Soil Survey, Page 2), tends to raise a noble question concerning the accuracy of the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”, which was published in 1982.

**Land Use & Zoning.** The land use history demonstrates that the properties located to the north, northwest, and east of the subject parcel were developed for residential and small acreage forest-farm purposes. The existing land use designation and zoning pattern ensures that these lands are currently used for residential and (non-resource) forest-farm purposes. A majority of these adjacent parcels contain active registered addresses, and the parcels are generally smaller in size than those lands located to the south, southwest, and west. Units of land located to the south, southwest, and west of the subject parcel are larger, mostly undeveloped, and within the “Forestry” land use designation. Land use history demonstrates that these properties have historically been in forestry use, and have never been and are currently not used for residential purposes. Regarding the subject parcel’s size and its historical and current use, it is clear that the property’s existing relationship is more in line with those adjacent residentially zoned lands located to the north, northwest, and east, as opposed to lands located to the south, southwest, and west.

Compared with most parcels located to the south, southwest, and west, the subject parcel contains substantial physical development. Approximately 18% of the parcel is physically developed. The size and scope of the subject parcel’s residential development mimics a majority of the residentially zoned parcels located to the north, northwest, and east. Parcel size and residential development on lands located to the north, northwest, and east can prevent or significantly diminish forestry uses within the overall area due to conflicting resource and residential uses. Additionally, if the subject parcel’s diminished soil capacity (20.79 acres / 51.8%) and location pattern is taken into consideration and added to its physical development (approximately 18%) locations, one begins to see potential limitations in the parcel’s ability to maintain “the forest land base and to protect the state’s forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.” OAR 660-015-0000(4).

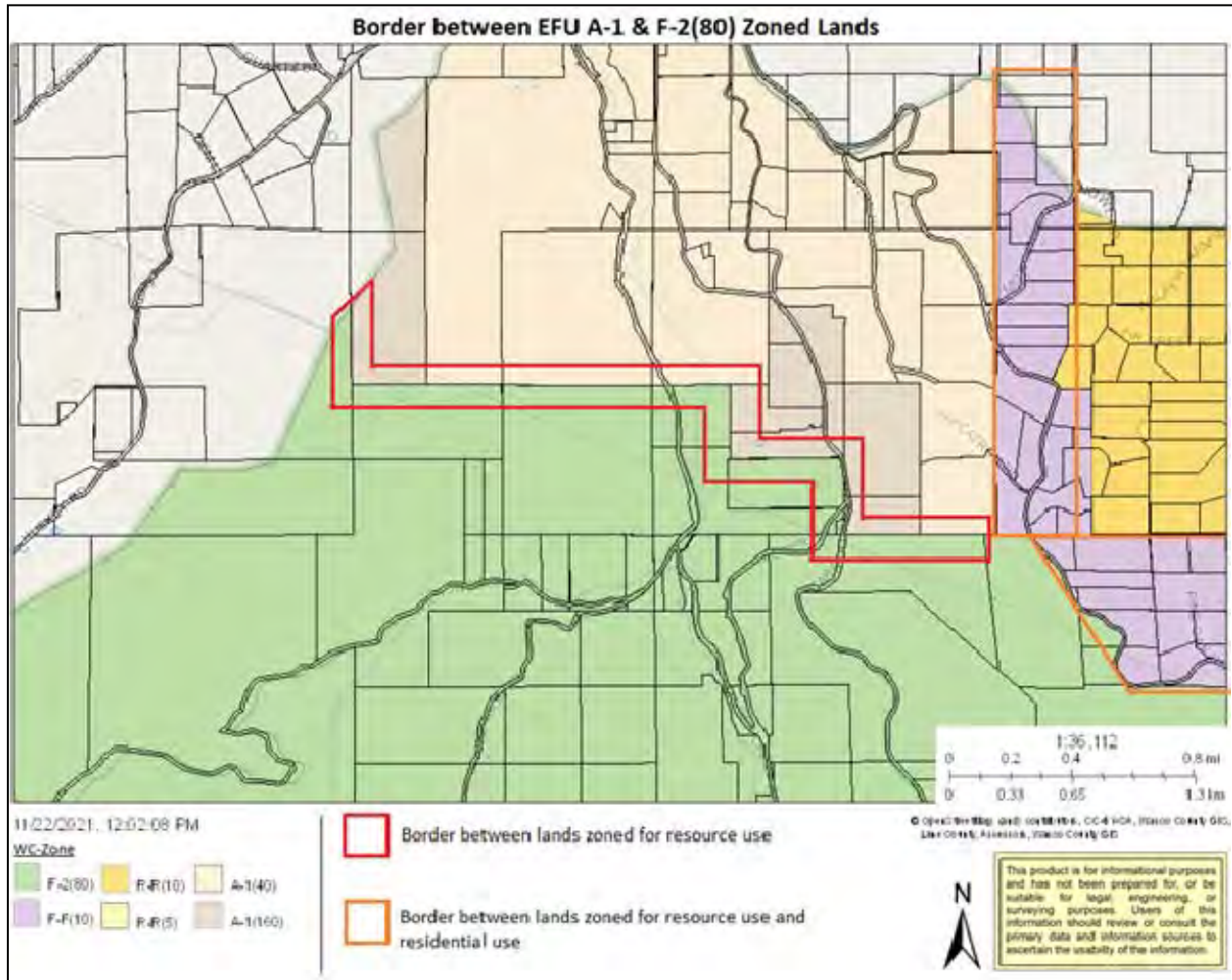
Taking into consideration those limitations caused by “Generally Unsuitable Soil” locations and physical development on the property in relation to “Generally Suitable Soil” locations, the subject parcel’s relationship between “active” forestry uses occurring on neighboring south, southwest, and west properties and the subject parcel’s “potential” forestry uses are seriously diminished. (See below “Infrastructure & Soil Map” for reference).



In the Sevenmile Hill area of Wasco County, those properties directly abutting *all* of the designated resource lands (Agriculture and Forestry) and that separate those lands from "Residential" designated lands, are within the Forest-Farm (F-F 10) Zone (Non-Resource). See the below maps for details ("Border between F-2(80) & Residential Zoned Lands" map and "Border Distance between EFU A-1 & F-2(80) Zoned Lands" map).







In the Sevenmile Hill area, the subject parcel and two two small properties are the only lands within the Forest (F-2) Zone that directly abut residentially zoned property. In this case, a forest zoned property abutting residentially zoned property is completely out of line with the zoning pattern, and not at all in relation to every other unit of land within the Sevenmile Hill area of Wasco County that is within a resource zone. This fact is an interesting conundrum that might be resolved by approving Mr. Wilson's request.

Considering the aforementioned facts provided throughout this report, staff concludes that outside of being designated "Forestry" and within the Forest (F-2) Zone, the subject parcel's relationship with those adjacent south, southwest, and west lands designated "Forest" are significantly diminished. Alternatively, the subject parcel's relationship with those lands to the north, northwest, and east are increased due to their similar use and development patterns.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(2) *Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

(d) *The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed within the findings for OAR 660-004-0028(6).

**OAR 660-004-0028:**

*Exception Requirements for Land Irrevocably Committed to Other Uses*

(3) *“Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

(a) *Farm use as defined in ORS 215.203;*

(b) *Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

(c) *Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”*

**FINDING:** The following analysis of whether the subject parcel “exception area” is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable is provided from the above facts, analysis, and findings for OAR 660-004-0028(2)(a), OAR 660-004-0028(2)(b), and OAR-660-004-0028(2)(c).

The impracticability analysis includes the following: (1) Applicable criteria standards and explanation; and (2) STAFF CONCLUSIONS & RECOMMENDATIONS.

**(1) Applicable Criteria Standards and Explanations.**

This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

*ORS 215.203(2)(a) provides:*

*“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human*

*or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)*

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) provides:

- (a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;*

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. The subject parcel is not in farm use as its defined by state law. The south adjacent parcel is actively engaged in farm use, contains an approved agricultural structure, and is within farm/forest tax deferral (Current Property Class: 549 FARM DFU MH). Additional commentary concerning the south adjacent parcel's use was provided by Melanie Brown Wasco County Chief Appraiser for the Wasco County Assessor's Office:

Melanie Brown Wasco County Chief Appraiser (November 24, 2021):

The account you are requesting information about should be in the name of David W Wilson. His property is in applied for Farm Use. He has to support a qualifying income and it can't be a hobby farm. We send out Income Questionnaires every 3 years, which we will be sending them out next month for the 2022-23 tax year. He did meet the income requirement 3 years ago. According to what he does as a farming practice, he raises livestock and sells enough of them to qualify.

A copy of the Melanie Brown's commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

OAR 660-006-0025(1) describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

OAR 660-006-0025(1)

*These general types of uses are:*

- (a) Uses related to and in support of forest operations;*
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;*

- (c) *Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.*
- (d) *Dwellings authorized by ORS 215.705 to 215.755; and*
- (e) *Other dwellings under prescribed conditions*

In regards to subsection (c), no aggregate sites have been identified on this property, nor is there anything about the subject parcel's location that makes it significant for communication towers. In regards to subsections (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwelling units under current rules in the Forest (F-2) Zone. This leaves uses provided for in subsections (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice," according to Webster's New World Dictionary (2nd College Ed., 1980). "Capable" means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (Unabridged Ed., 1993) defines "impracticable" as "1a: not practicable: incapable of being performed or accomplished by the means employed or at command: infeasible \* \* \* c: IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the "exception area". The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

## **(2) STAFF CONCLUSIONS & RECCOMENDATIONS.**

In the above findings, staff has provided significant analysis of the subject parcel's physically developed & undeveloped areas, significant analysis of adjacent lands, and thorough examination of the relationship between the "exception area" and adjacent lands. Based on the above facts, analysis, and findings for OAR 660-004-0028(2)(a), OAR 660-004-0028(2)(b), and OAR-660-004-0028(2)(c), staff concludes that resource use on the subject parcel has become impracticable according to its commonly understood definition. Below, staff has reiterated why the resource use on the subject parcel is impracticable.

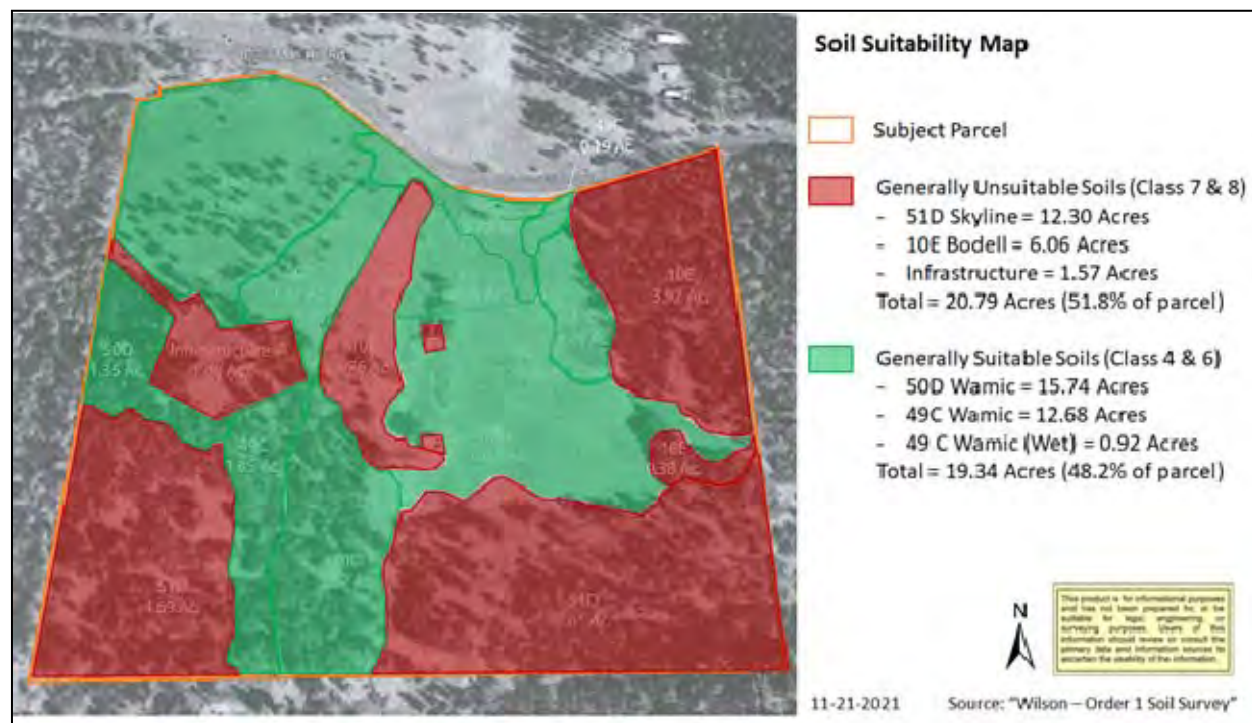
Soils Analysis. In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner's "Third Assignment of Error" which argued that Wasco County's findings were "inadequate to explain why the county found that the uses listed within OAR 660-004-0028(3) were impracticable. In part, the petitioners (appellants) asserted that the undisputed evidence concluded that soil types on the property support Ponderosa Pine harvest, and that the county's findings were "inadequate to explain why the remaining open portion of the subject property could not be planted and [used] for forestry purposes." (LUBA Opinion No. 2019-065, Page 14).

The submitted "Wilson – Order 1 Soil Survey", which is systematically described and analyzed throughout this report, clearly refutes both the soil classifications and soil mapping units that are



mapped for the subject parcel in the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”. The

“Wilson – Order 1 Soil Survey’s” “Findings and Conclusions” and remarks made within the 23 individual “Soil Profile Documentation Sheets”, provide clear and objective evidence that the areas of the subject parcel containing “Generally Unsuitable Soils” (51.8%) are not favorable for field crops and pasture, large or small scale commercial woodlands, or wildlife habitat. (See below “Soil Suitability Map” for reference).



Furthermore, the fact that the “Wilson – Order 1 Soil Survey” found a wider diversity of soil classes and soil mapping units than are mapped in the Order 3 USDA “Soil Survey of Wasco County, Oregon, Northern Part”, brings into question the relationship based on soil taxonomy between the subject parcel and its neighboring parcels. Additional details concerning the “Wilson – Order 1 Soil Survey” can be found throughout this report.

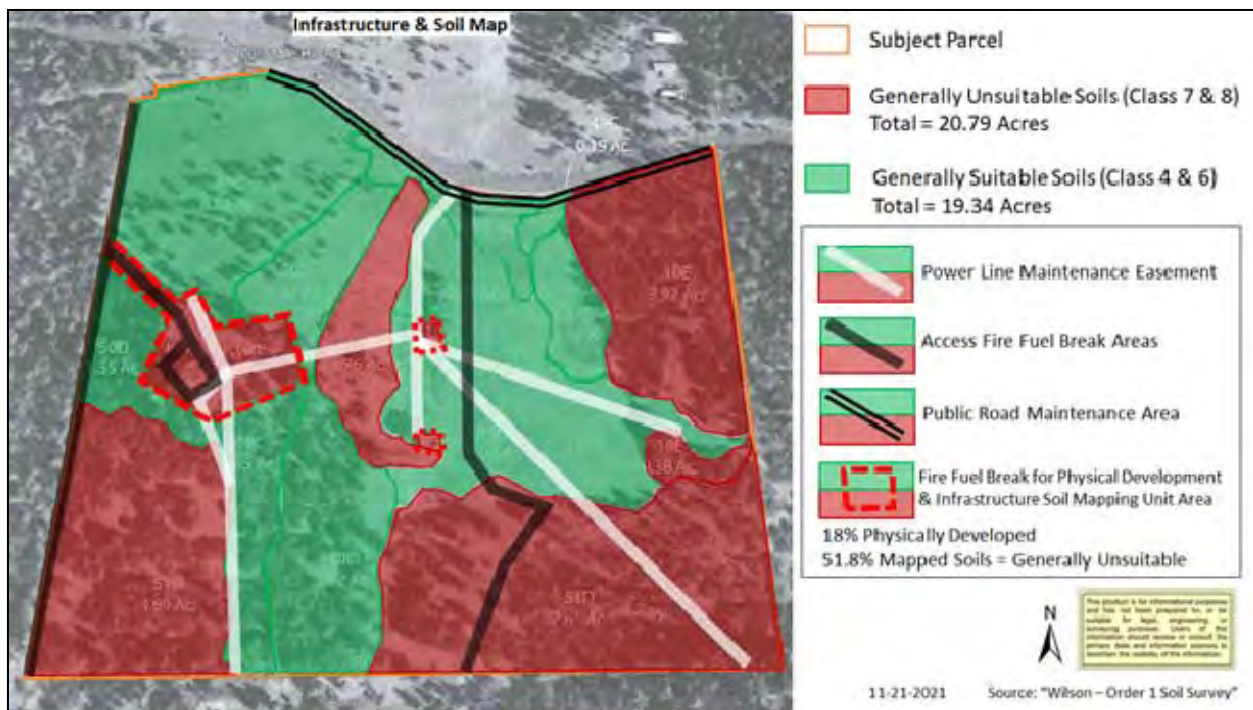
The new soil mapping provides that the “Generally Suitable” soils that can undisputedly support Ponderosa Pine, Winter Wheat, and Grass Hay only equal 19.34 acres (48.2%) of the parcel. Excluding existing physical development, fire buffer fuel break areas, power line maintenance areas, and public road maintenance areas, the above map illustrates a dispersed area of the parcel that is fit for resource use. Further, the “generally suitable” soils are primarily located on the subject parcel’s north side where residential use and zoning dominates.

Further analysis provides that the “exception area” is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides (north, northwest, and east adjacent parcels), will require added expense related to fire protection, fencing and general control of the area if the subject parcel was actively used for forestry or farmed for profit. Also, residential density surrounding the subject parcel significantly limits the use of pest control techniques to regulate insects and invasive vegetation. Additional nuisance type conflicts with residences are likely to arise because of the noise associated with forestry and farm for profit operations. There are also inherent safety risks associated

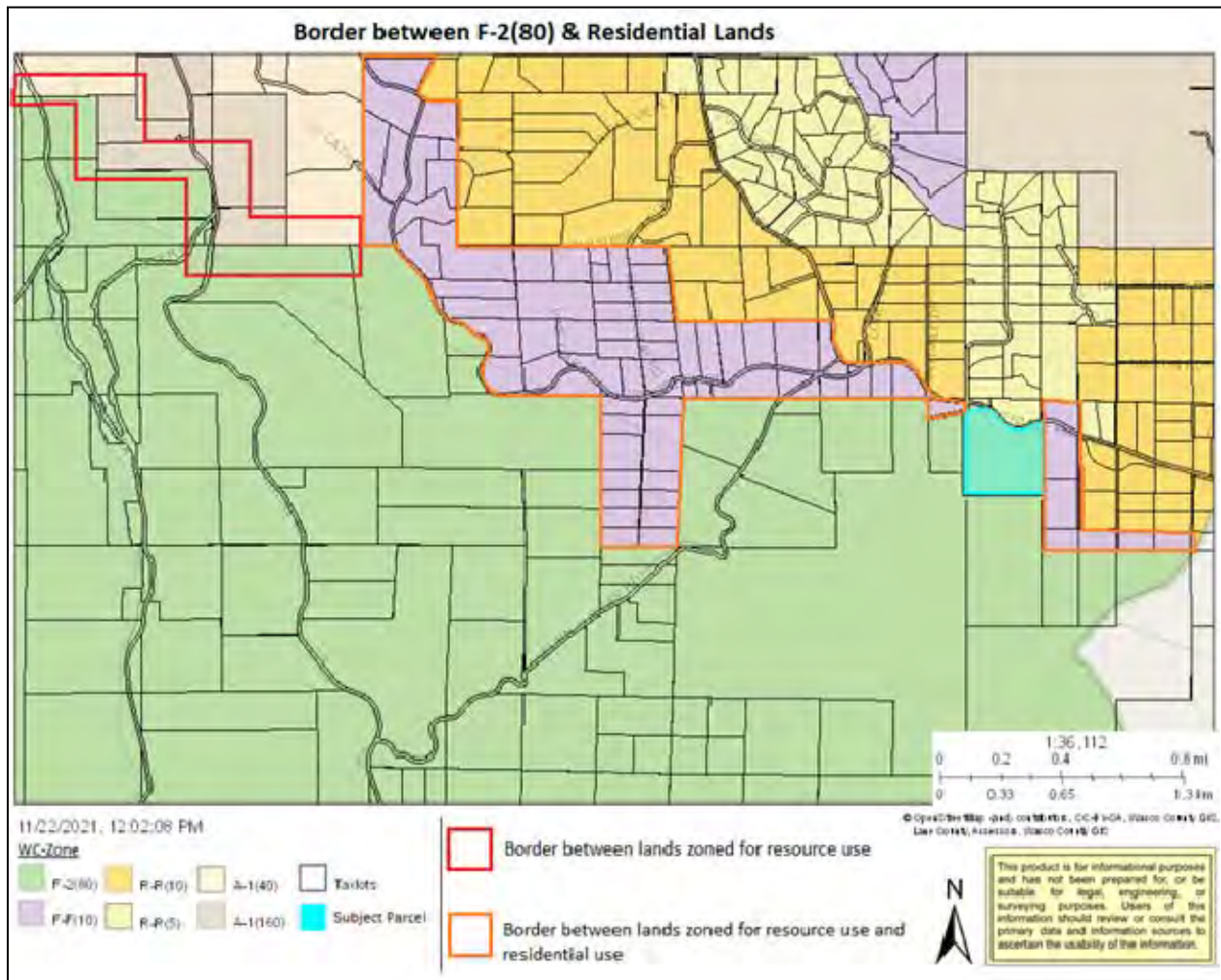
with forestry and farm operations that must be considered if the subject parcel were to be actively used for small-large scale forestry or farm for profit operations, which it currently is not.

Approximately 18% of the parcel is physically developed. The size and scope of the subject parcel's residential development mimics a majority of the residentially zoned parcels located to the north, northwest, and east. The subject parcel contains substantial physical development compared with most parcels located to the southwest, and west, that are actively in forest use.

If the subject parcel's diminished soil capacity (20.79 acres / 51.8%) is taken into consideration and added to its physical development (approximately 18%) locations, the on-site accommodation for forestry and farm for profit use is further reduced. (See below "Infrastructure & Soil Map" for reference).



Finally, the land use designation and zoning pattern for the Sevenmile Hill area clearly illustrates that lands within the Forest-Farm (F-F 10) Zone (Non-Resource) are situated between lands designated for forestry resource use and lands designated for residential use. The subject parcel is one of only three exceptions to the aforementioned pattern. (See the below "Border between F-2(80) & Residential Zoned Lands" map).



When examined individually, each one of the aforementioned issues and conflicts is not enough to justify an exception under this section; however, if the miscellany of the aforementioned issues and conflicts is examined in the totality, the impracticability of resource use activities on the subject parcel gains a great amount of worth.

The greatly diminished soil capacity of the subject parcel; the scattered mapping of “generally suitable” soils that are located mostly on the subject parcel’s north side where residential use and zoning dominates; the existing physical development and residential use of the subject parcel; the risk of increased conflicts between resource uses and residential uses; the surrounding residential uses, and the fact that the subject parcel is the only resource land in the Sevenmile Hill area that directly abuts residentially zoned property, all combined, significantly limits the parcel’s ability for farm use for profit, or to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a “forest” environment.

These issues and conflicts combined, seriously limit the parcel’s ability to achieve Goals 3 and 4 because the uses or activities allowed by the applicable goals that in turn help effectuate Goals 3 and 4, cannot be carried out in practice by the usual method, custom, or convention on this parcel, and thus, due to the totality of the circumstances provided, make the allowed resource uses impracticable.

This section also mandates that a justification for an exception to Goal 4 consider the suitability of the area for farm uses. Due to the aforementioned issues and conflicts, as well as the existing parcel size,



climate and development in the general area, the parcel cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses. Additionally, the subject parcel has been removed from farm/forest tax deferral (Current Property Class: 401 TRACT RES IMPR). The area can support small-scale, “peripheral” farm activities taking place on some lands within the Forest-Farm (F-F 10) Zone (Non-Resource) and residential zoned properties where the residential use represents the primary and most highly valued use.

Based on the above facts, analysis, and findings for OAR 660-004-0028(2)(a), OAR 660-004-0028(2)(b), and OAR-660-004-0028(2)(c), staff concludes that resource use on the subject parcel has become impracticable according to its commonly understood definition, and recommends that the Planning Commission approve the request based on the “exception area” being irrevocably committed to other uses.

OAR 660-004-0028:

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (4) *A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.*

**FINDING:** All applicable factors of subsection (6) are addressed below. Staff’s conclusion that resource use within the “exception area” is impracticable is supported by analysis and findings of fact concerning all of the record evidence pertaining to this Remand request, as described throughout this report. A conclusion that the “exception area” is irrevocably committed will be based staff’s analysis and findings of fact concerning all of the record evidence pertaining to this Remand request, as described throughout this report.

OAR 660-004-0028

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (5) *Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the “exception area”. This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

OAR 660-004-0028

*Exception Requirements for Land Irrevocably Committed to Other Uses*

- (6) *Findings of fact for a committed exception shall address the following factors:*

- (a) *Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the above findings for OAR 660-004-0028(2)(b). Existing adjacent uses to the north, northwest, and east are residential, and

zoned as such. The south adjacent parcel is zoned for forestry use, but is not actively used for forestry. Lands to the south, southwest, and west of the subject parcel are zoned for, and used for commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the “exception area”. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. The record supports previous findings for Chapter 11, Section H regarding statewide planning goals, supports this conclusion.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail in the findings for OAR 660-004-0028(2)(b), and in the attached supporting documents provide that most of the lands to the north, northwest, and east within the Sevenmile Hill area contain development patterns that were established prior to the adoption of Statewide land use planning goals. Many of the small parcels that characterize the area were created between 1900 and 1920 by subdivision and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s) have non-resource residences located on them now, as does the subject parcel in the proposed “exception area.” Lands to the south, southwest, and west were historically created by deed prior to state and county-wide land use laws, and many were later partitioned into smaller units of land in the early 1980s.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*



**FINDING:** A tract of land is defined as “one or more contiguous lots or parcels in the same ownership.” (WC-LUDO Definitions, Page 48). In this case, a tract of land consisting of the subject 40.13 acre parcel is owned by David and Jolene Wilson and the south adjacent 69.3 acre parcel is also owned by David Wilson. The south adjacent parcel is bisected by the BPA Line, contains one residence, and multiple associated accessory buildings. Neither the subject parcel or south adjacent parcel is currently engaged in forestry uses.

As noted throughout this report, the subject parcel’s infrastructure, soil quality, and current use, eliminate the property’s ability to be used for farm use. The subject parcel contains small areas that are used for grass hay fields, but is not within farm/forest tax deferral status (Current Property Class: 401 TRACT RES IMPR), and the land is not employed “for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops...” and is not used for any other defined farm use. (WC-LUDO Definitions, Page 18). Mowing natural grasses, maintenance of rural property, and maintaining small grass hay fields are not necessarily farm uses.

Further commentary from Soil Scientist Gary Kitzrow provides:

Gary Kitzrow, Soil Scientist (November 26, 2021):

Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

The south adjacent parcel; however, is actively engaged in farm use, contains an approved agricultural structure, and is within farm/forest tax deferral (Current Property Class: 549 FARM DFU MH). Additional commentary concerning the south adjacent parcel’s use was provided by Melanie Brown Wasco County Chief Appraiser for the Wasco County Assessor’s Office:

Melanie Brown Wasco County Chief Appraiser (November 24, 2021):

The account you are requesting information about should be in the name of David W Wilson. His property is in applied for Farm Use. He has to support a qualifying income and it can't be a hobby farm. We send out Income Questionnaires every 3 years, which we will be sending them out next month for the 2022-23 tax year. He did meet the income requirement 3 years ago. According to what he does as a farming practice, he raises livestock and sells enough of them to qualify.

A copy of the Melanie Brown’s commentary is available for inspection at the Wasco County Planning Department under File 921-18-000086-PLNG, and can be found in Attachment D Exhibit 5.

This subsection provides that “contiguous ownerships shall be considered together in relation to the *land’s actual use*” (Emphasis added); however, the facts indicate that the subject parcel and its south adjacent neighbor are not in the same use. Although both parcels may be considered a tract due to common ownership, the parcels are used for completely different purposes, and so cannot be considered together in relation to their actual uses when those uses are polar opposites of each other, especially when the south adjacent parcel’s income qualifies the property for tax benefits.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to this subsection, the nature of the subject parcel’s small size, alone, is not enough to constitute an irrevocable commitment. However, also according to this subsection, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In this case, the

subject parcel contains one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally, subsection (6)(c)(B), encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. With regards to the subject parcel, there is no buffer to the south or southwest, as the property to the immediate south is an active farm, and properties to the southwest are in commercial forestry. The next parcel south of that is a 336 acre parcel used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north, northwest, and west are residential. The facts provide that the subject parcel does not necessarily stand alone amongst larger farm or forest operations, but nor is it buffered from them. In point of fact, like all of the lands in the Sevenmile Hill area that are designated for forestry use and are already buffered from lands designated for residential use by property within the Forest-Farm (F-F 10) Zone (Non-Resource), an approved goal exception will create a Forest-Farm buffer zone between the adjacent south forestry parcel and the residential lands to the north.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided throughout this report, the “neighborhood characteristics” can best be described as commercial timberland to the south, southwest, and west, and rural residential development within to then north, northwest, and east. The “regional characteristics” include the Sevenmile Hill area that is located approximately six miles west of The Dalles. The Sevenmile Hill area’s zoning and use pattern mimics the subject parcel’s immediate neighborhood with farm and forestry resource use in the south, southwest, and west, and residential use in the north, northwest, and east, being hemmed in by Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is one man-made feature separating the proposed exception area from existing commercial timberlands to the south. The BPA Line and right-of-way/easement, which forms an approximate 150-foot wide cleared area between the residence on the subject parcel and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 439 acre adjacent property to the southwest of the subject parcel is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

*(f) Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*

- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** As provided above for the OAR 660-004-0025:

In *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065), the Land Use Board of Appeals agreed with the petitioner's "Fourth Assignment of Error", which argued that staff's findings were not supported by substantial evidence in the record, where the county found that approximately 87 percent of the subject parcel was not physically developed, but still approved a physically developed exception. As noted above, staff conducted thorough analysis of the subject parcel's physical development, and concluded that approximately 18% of the subject parcel is physically developed.

As provided in *Sandgren v. Clackamas County*, and explicitly referred to by LUBA in *Dooley et al.*, in order to "approve a physically developed exception, the county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded" (*Sandgren v. Clackamas County*, 29 Or LUBA 454, 457 (1995)). The overall demonstration of clear and objective evidence is more straightforward under OAR 660-004-0025 compared to OAR 660-004-0028; however, the standard is demanding, and requires the applicant demonstrate forestry uses are no longer an option. (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18). Additionally, as provided by LUBA in *Dooley et al.*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.

In the present case, even if the County accepts the applicant's estimation that 32.81% of the total area of the subject parcel is physically developed, in order to approve the request, the County is "required to determine that the property is "physically developed to the extent that it is no longer available" for forestry uses." (See *Dooley et al v. Wasco County*, (LUBA Opinion No. 2019-065, Page 18), ORS 197.732(2)(a).

Based on the above facts, analysis, and findings, staff concludes that the parcel does not meet the required standards of OAR 660-004-0025, and recommends that the Planning Commission deny the request based on the physically developed exception.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- b. OAR 660-004-0028(7): *The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable*

*factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

## ATTACHMENT D – EXHIBIT 1

“1997 TLSA full report”

“1998 TLSA memo”

“TLSA Study Area Ground Water Evaluation – Wasco County, Oregon”



## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

EXHIBIT 2

**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR)  
Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

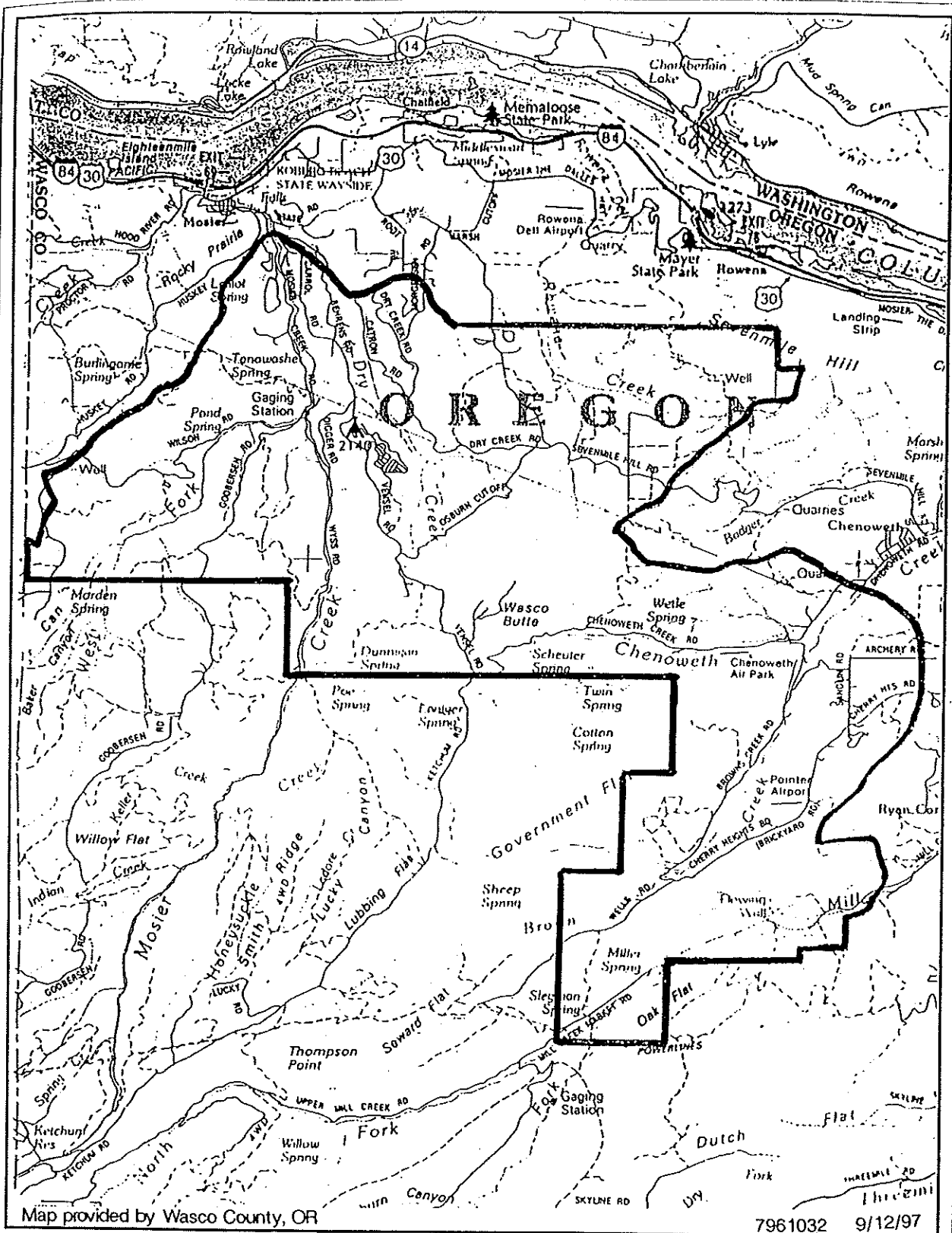
Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**



Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

 SRI/SHAPIRO/AGCO  
INCORPORATED

# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLSA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLSA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLSA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLSA with at least 25% capacity remaining are shown below.

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

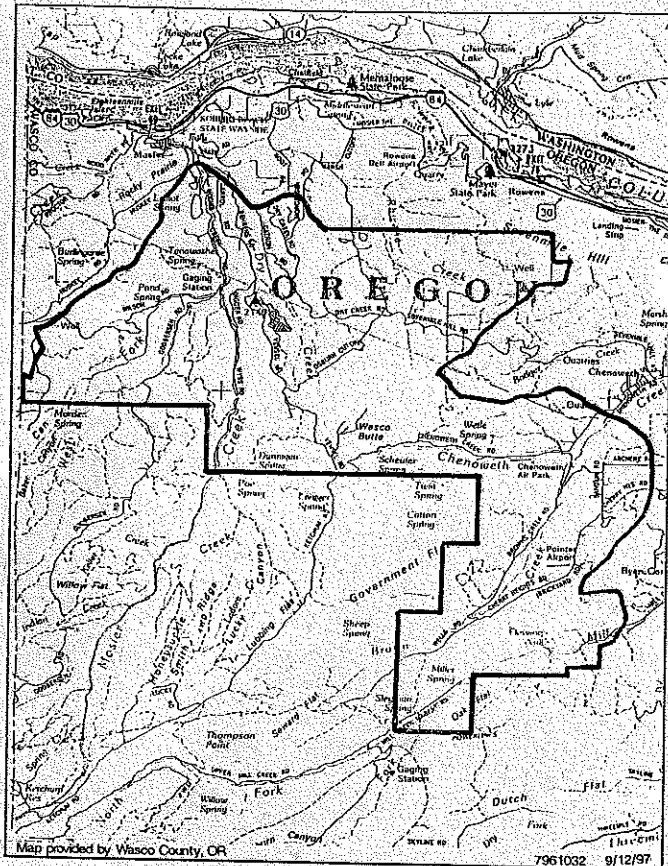
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# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
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**Prepared by**

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**In cooperation with**

Suzanne Rock  
**Northwest Economic Associates**

**September 12, 1997**



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- Appendix 1. Background Materials and Standards Related to Action Items Identified in Section 2.0 (Policy Recommendations and Action Items)
- Appendix 2. Record of Community Involvement
- Appendix 3. Record of Goal Development for Project
- Appendix 4. Groundwater Evaluation Reports and Background Materials
- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites

## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

### **1.2 Purpose**

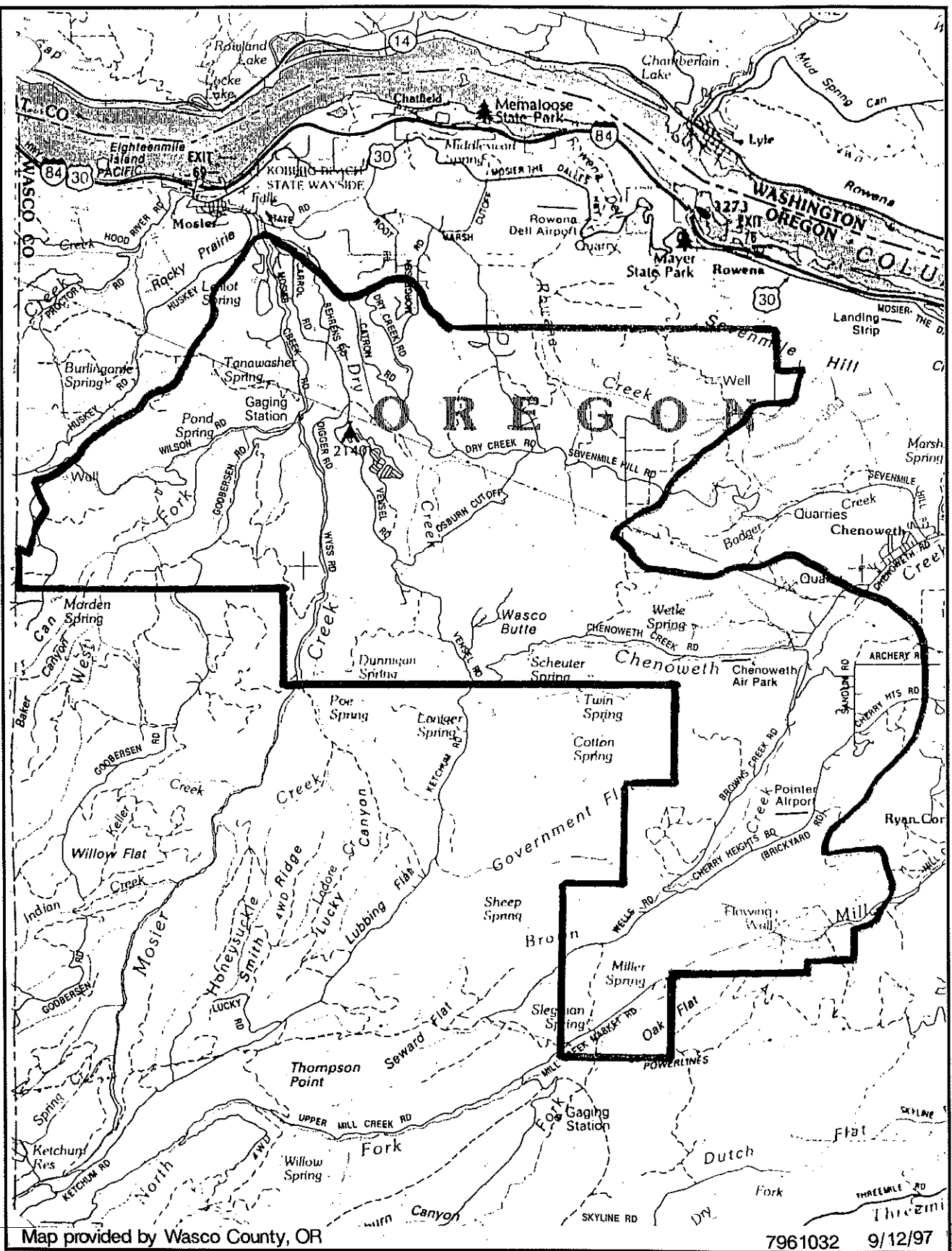
#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.





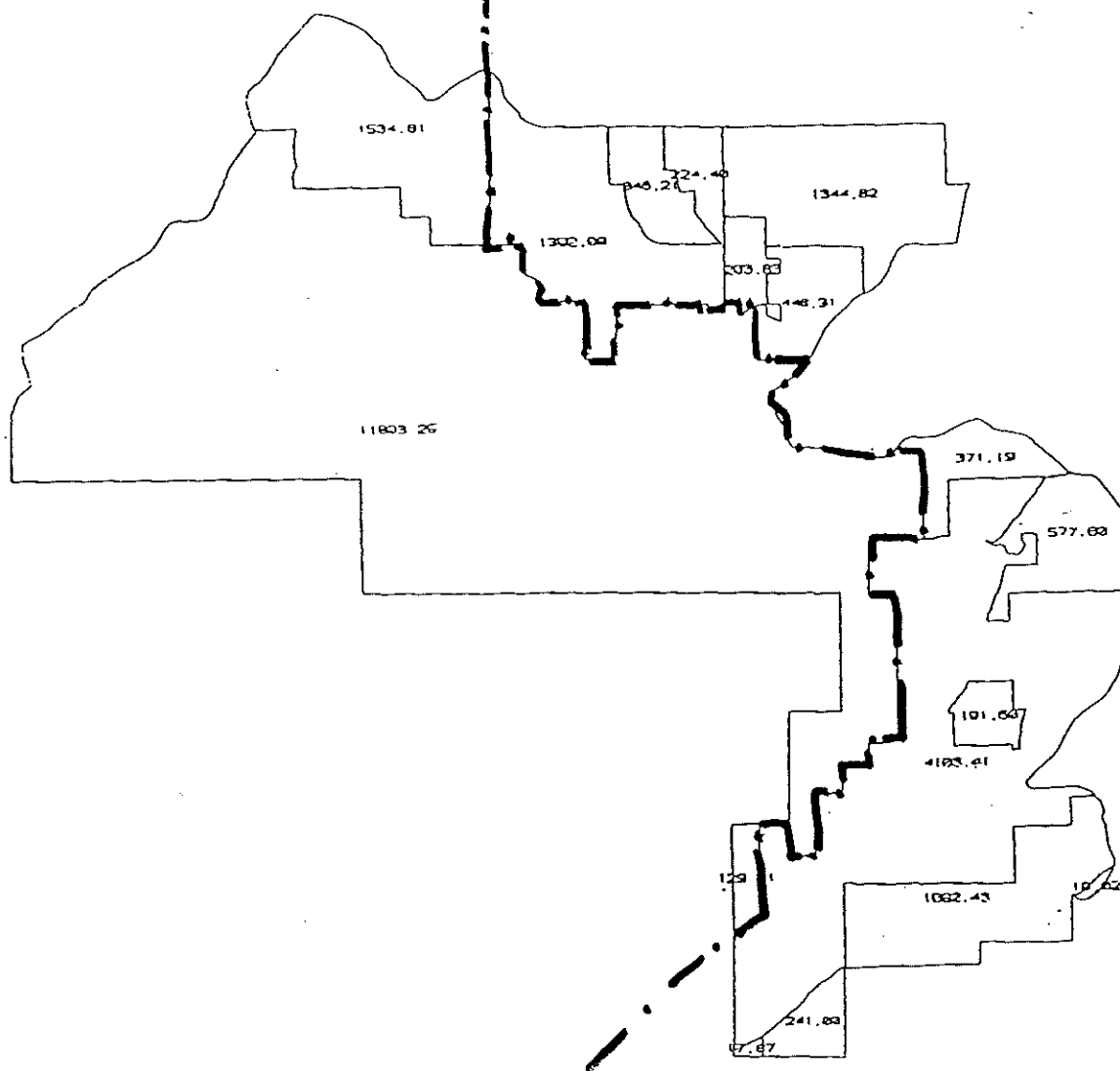
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.2 : ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. : RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?*

*What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.



2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLSA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

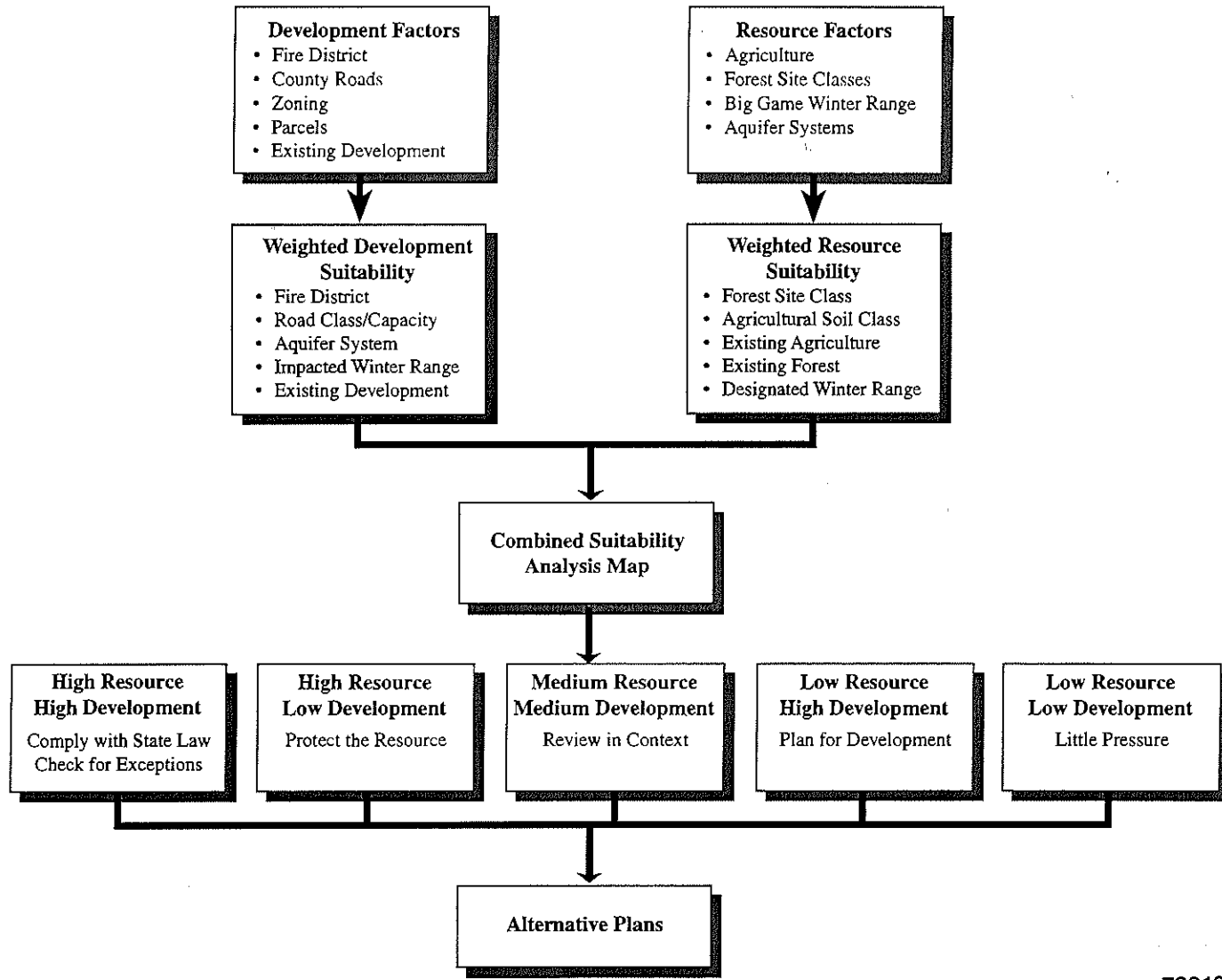
The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems

Public Review Comment Log  
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Wasco County Transition Lands Study Area  
Simplified Flow Diagram

FIGURE  
4

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WASCO COUNTY COMMISSION AG AND BAP BOKET  
March 16, 2022  
December 7, 2021  
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Wasco County TLSA Project: Opportunities and Constraints Analysis

1: Agricultural Suitability

2: Forest Suitability

SOURCE MAPS

Zoning	Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))
Existing Ag (Field&Perennial)	Existing registered field and perennial crops
Ag Soil Classes	High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)
Parcels	Parcel boundaries/ownership

Zoning	Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))
Forest Site Classes	Forest Site Classes 4, 5, 6, and 7
Soils	Soil classes
Parcels	Parcel boundaries/Ownership/Centerpoints

ANALYSIS MAPS

Agricultural Suitability Weighted Values	Soil Class: High Value (Class 1-2) = 2 pt. Class 3 - 6 = 2 pt. Existing Agriculture = 1 pt.	Forest Suitability Weighted Values	Forest Site Class (Predominantly): Class 6 = 1 pt. Class 5 = 2 pt. Class 4 = 3 pt. Existing Forest Use ≥ 80 ac. in F-2 (80) zone = 1 pt.
--	--	------------------------------------	---

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a



Part of the Commission's agenda for the year  
March 15, 2022  
December 7, 2021

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 3: Big Game Winter Range Availability

## 4: Fire Districts/Response Time

SOURCE MAPS

Big Game Winter Range	Big Game Winter Range boundary from Comprehensive Plan
Impacted Winter Range	Impacted winter range inventory from ODFW
Low Elevation Winter Range	Low elevation winter range inventory from ODFW
Rivers and Streams	Surface water features coverage

Fire Hazard	Extreme and High fire hazard
Fire Districts	Wasco County Rural Fire District (RFD) boundaries Mosier RFD Oregon Department of Forestry
Response Time	Fire response time (in minutes) by section and Wasco Co. RFD

ANALYSIS MAPS

Big Game Winter Range	1 pt.	Fire District Coverage	1 pt.
-----------------------	-------	------------------------	-------

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition	Development Values Weighted Compositions
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)	

CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE 5b



# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads

Roads in TLSA

Road Capacity

Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning

Zoning

Developed  
Parcels

Existing Developed (house)

Aquifer Units

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepening, or deep static water level.

†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

CONTINUED ON FIGURE 5d

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

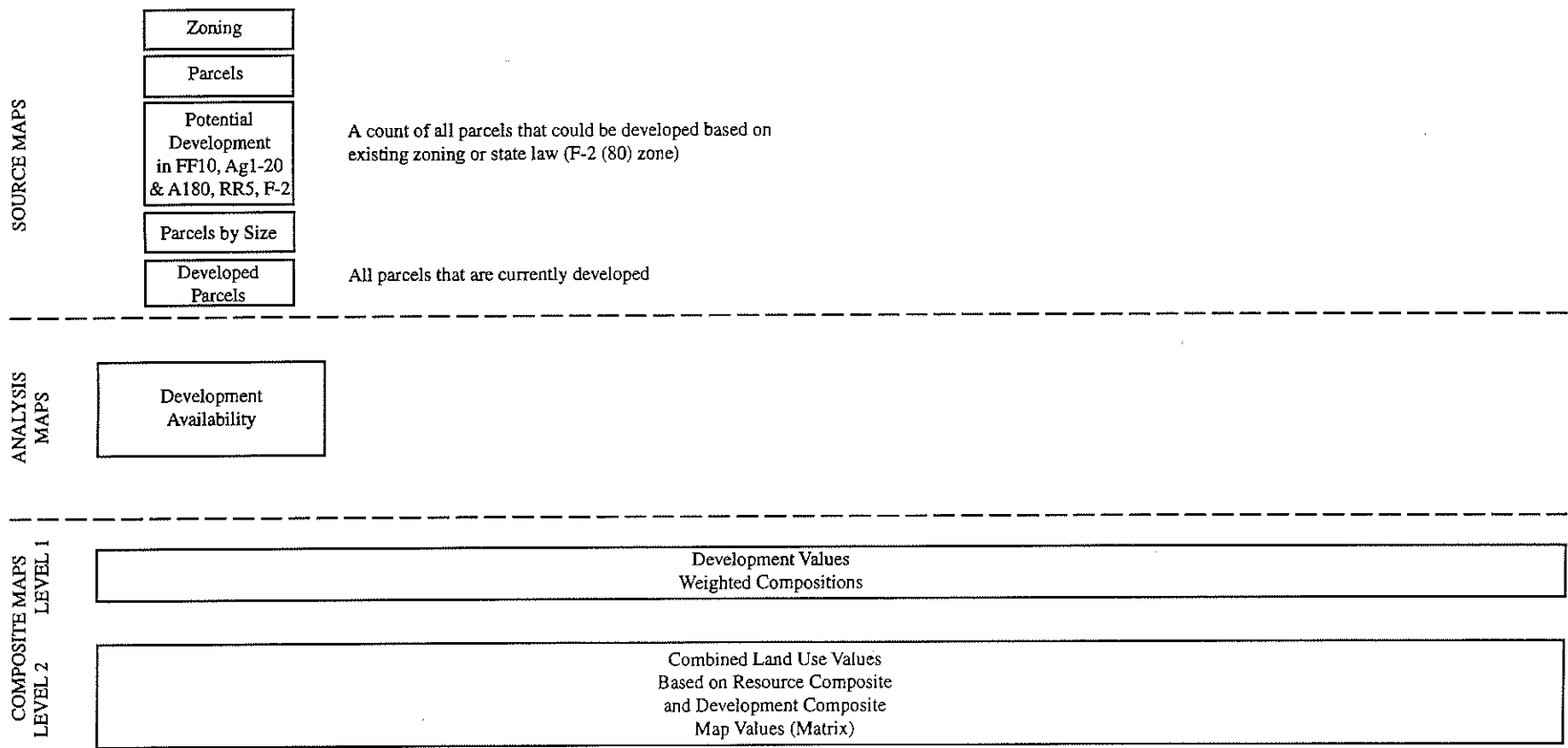


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Public Comment Period  
March 15, 2022  
December 7, 2021

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

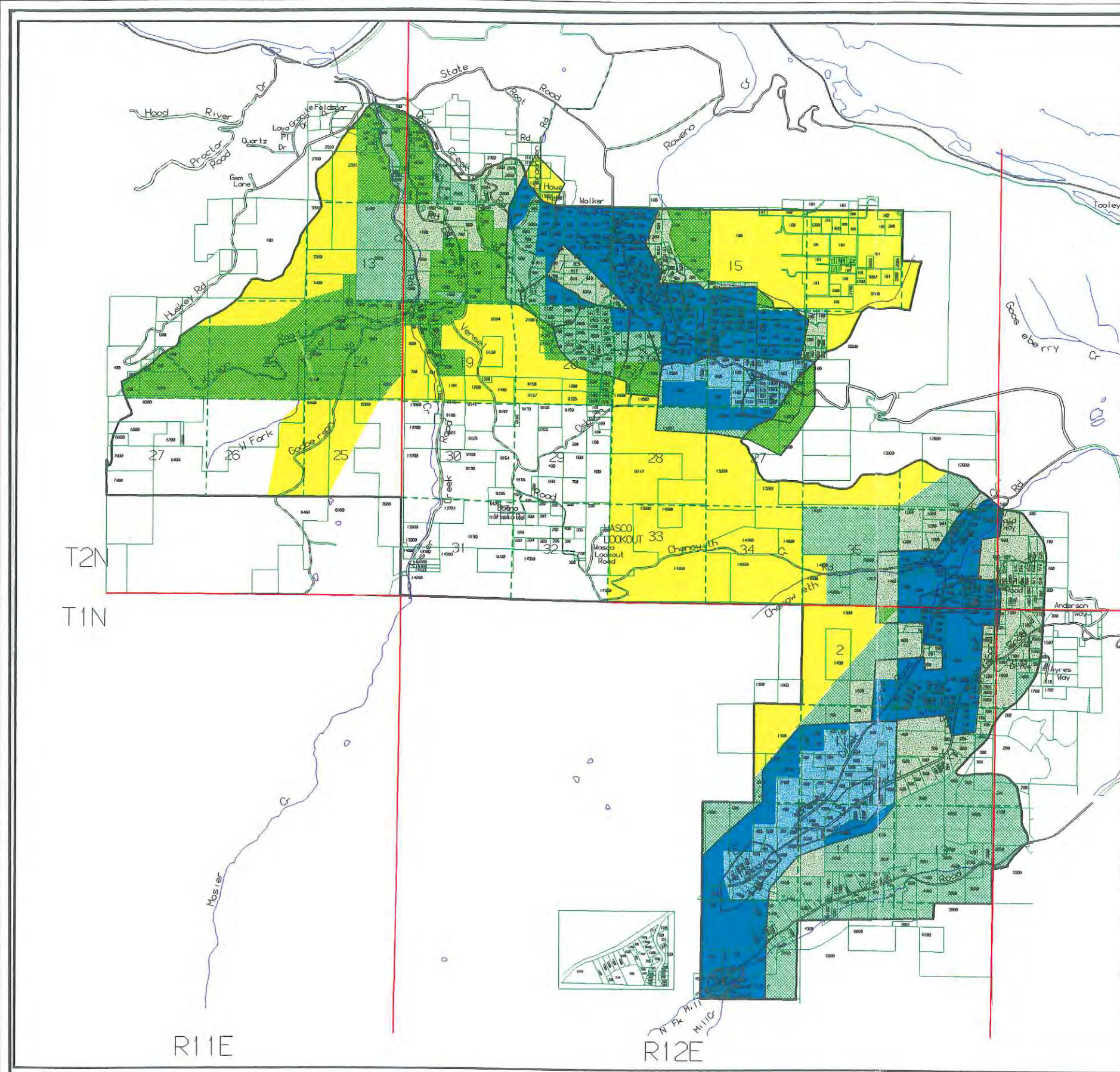
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

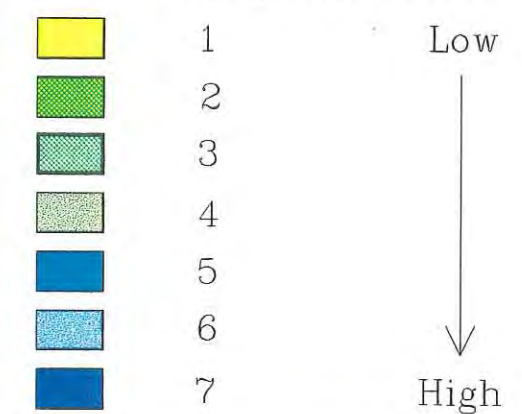




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

- Fire District  
In District = 1 point
- Roads  
Class III With 75% Capacity Remaining = 2 points  
Class I With 75% Capacity Remaining = 1 point
- Water  
Green Aquifer System = 2 points  
Yellow Aquifer System = 1 point
- Recognized Impacted Winter Range  
Impacted Winter Range = 1 point



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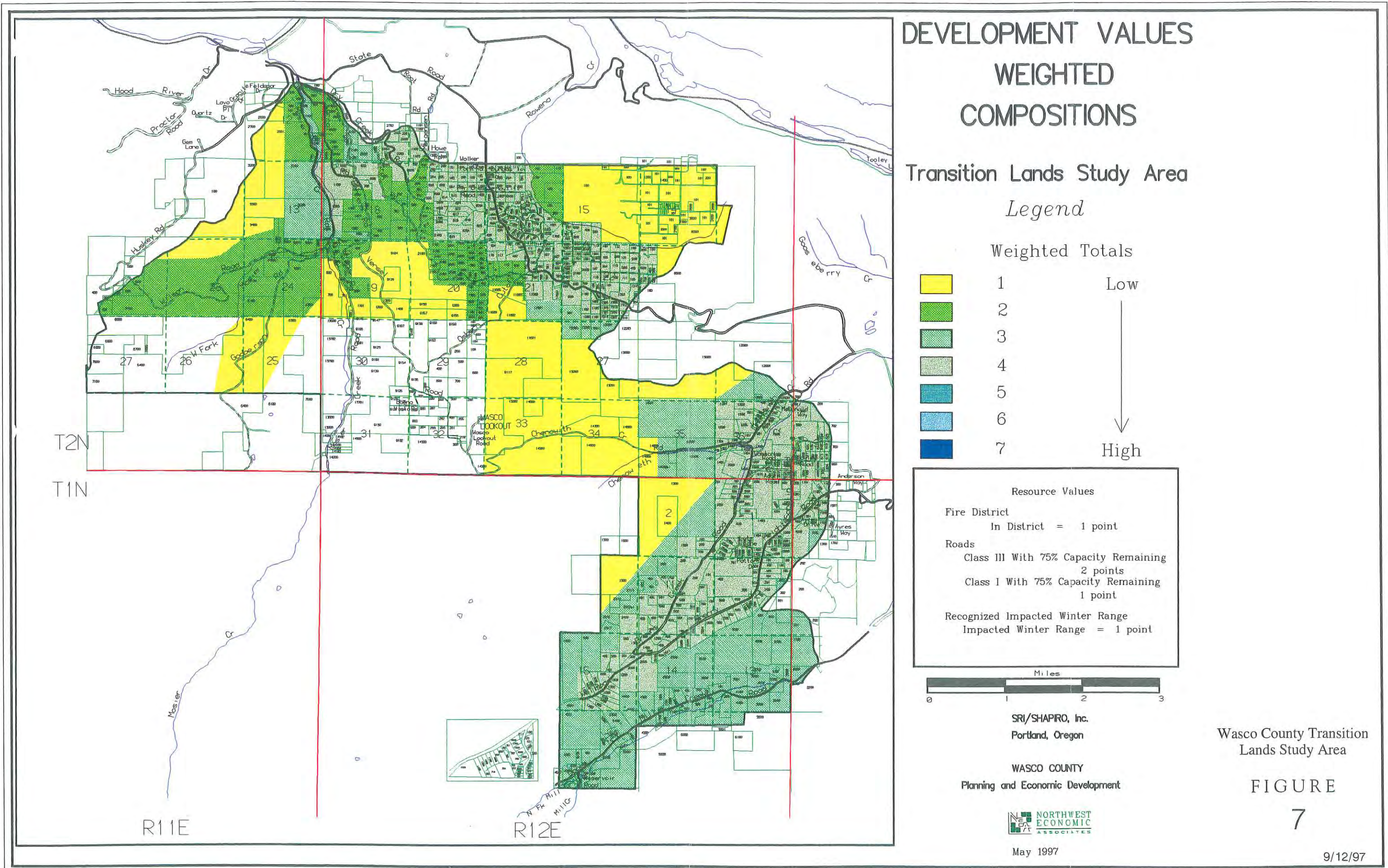
May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
6

9/12/97



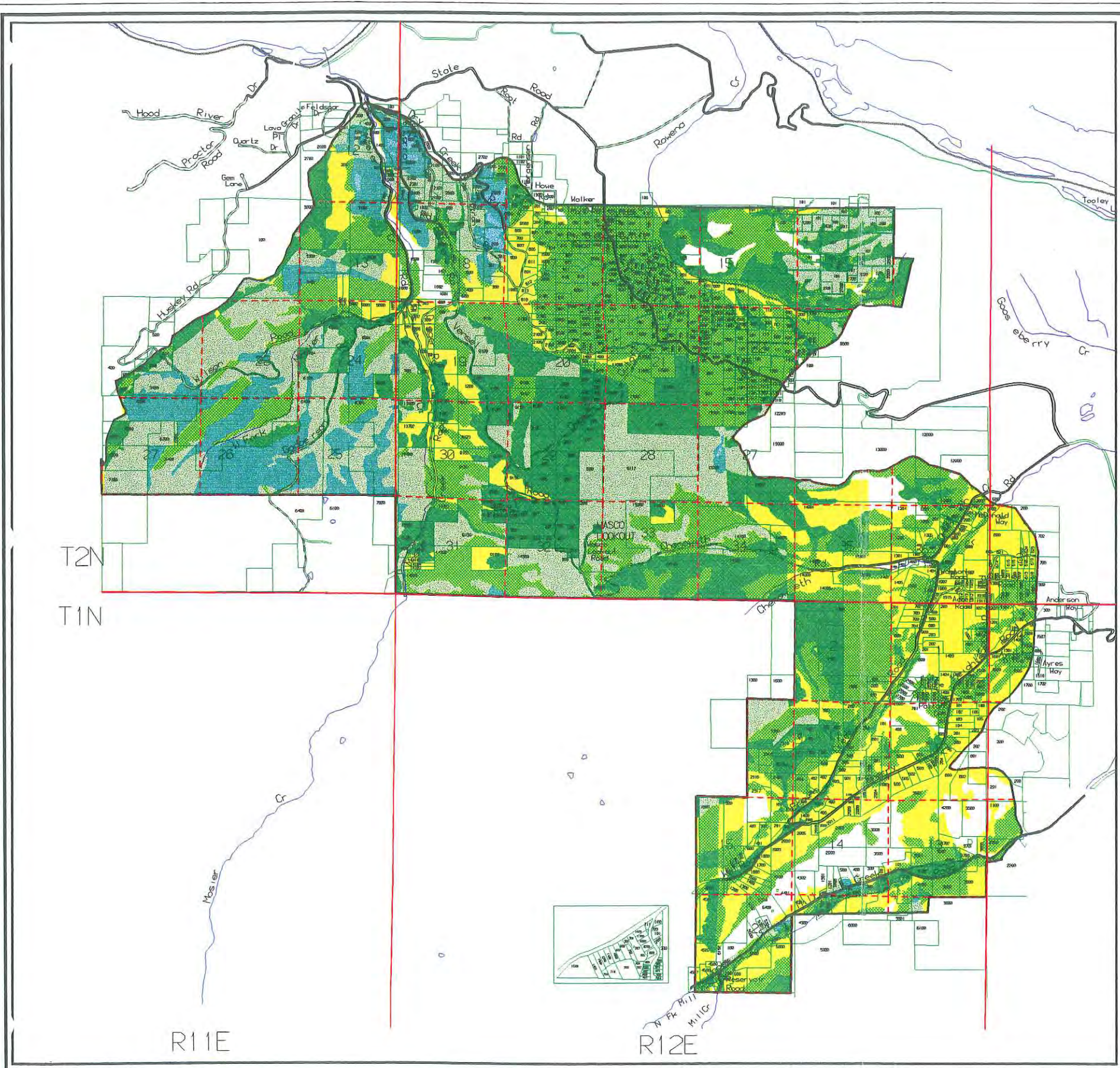


Map from Northwest Economic Associates, 1997

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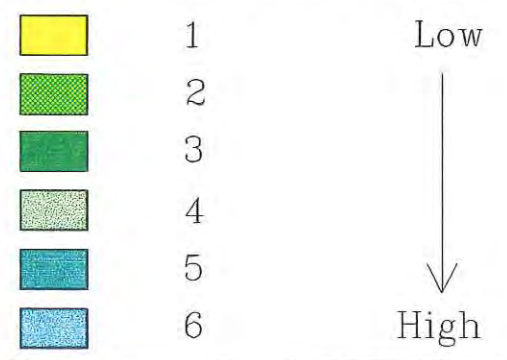
# FOREST & AGRICULTURE RESOURCES

## WEIGHTED COMPOSITIONS

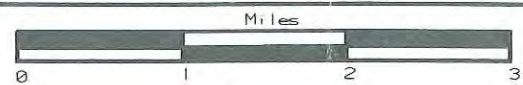
Transition Lands Study Area

Legend

Weighted Totals



Resource Values	
Forest Site Classes	
Class 4	= 3 points
Class 5	= 2 points
Class 6	= 1 point
Agricultural Soil Classes	
Class 1-2	= 2 points
Class 3-6	= 1 point
Existing Agriculture	
Agriculture	= 1 point
Existing Forest	
F2(80) Parcels >= 80	= 1 point
Designated Big Game Winter Range	
Big Game Winter Range	= 1 point



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May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
8

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Map from Northwest Economic Associates, 1997

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# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill		Mill Creek-Cherry Heights	
FF-10	= 125	FF-10	= 256
RR-5	= 52	RR-5	= 50
Ag	= 8	Ag	= 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

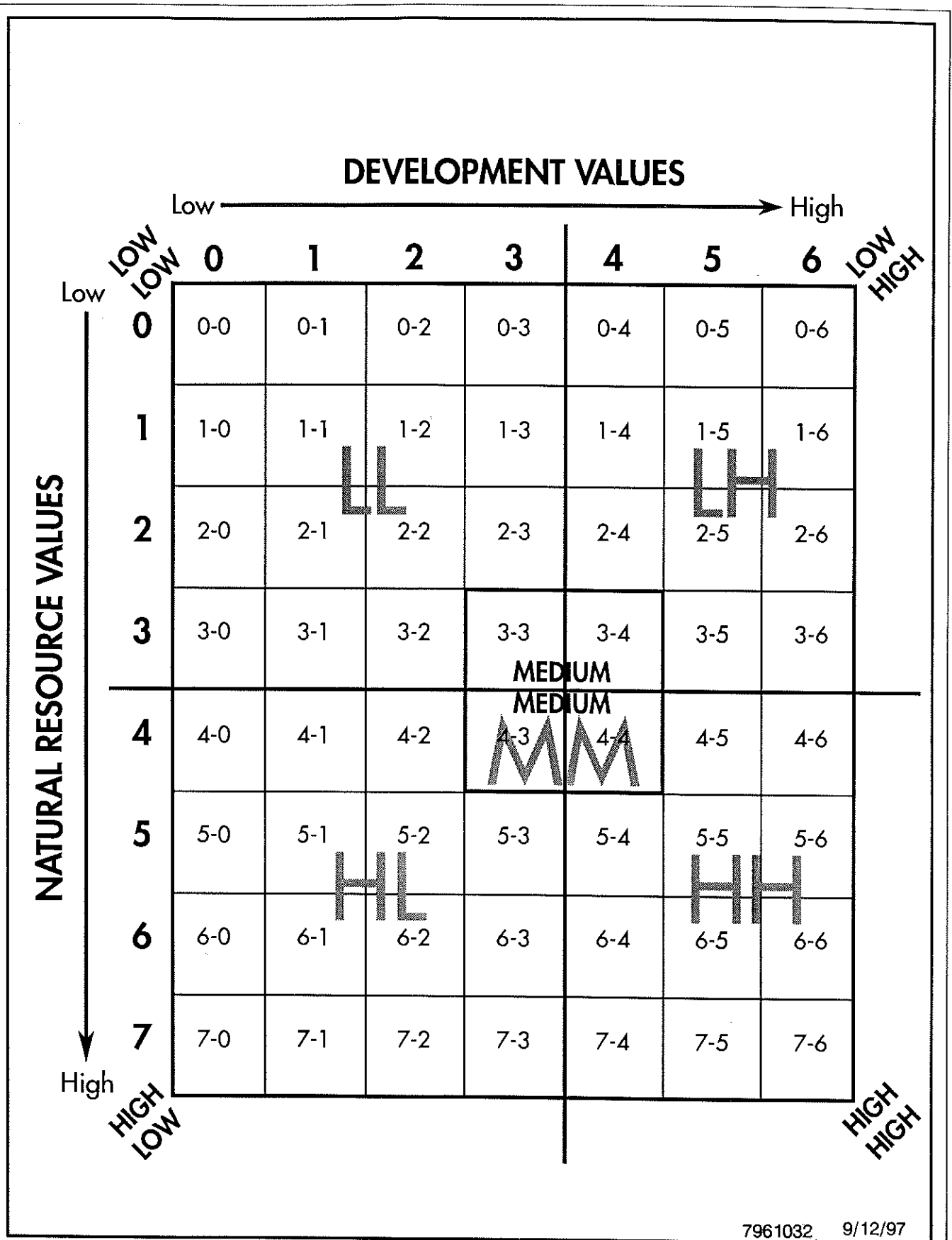
Tables from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

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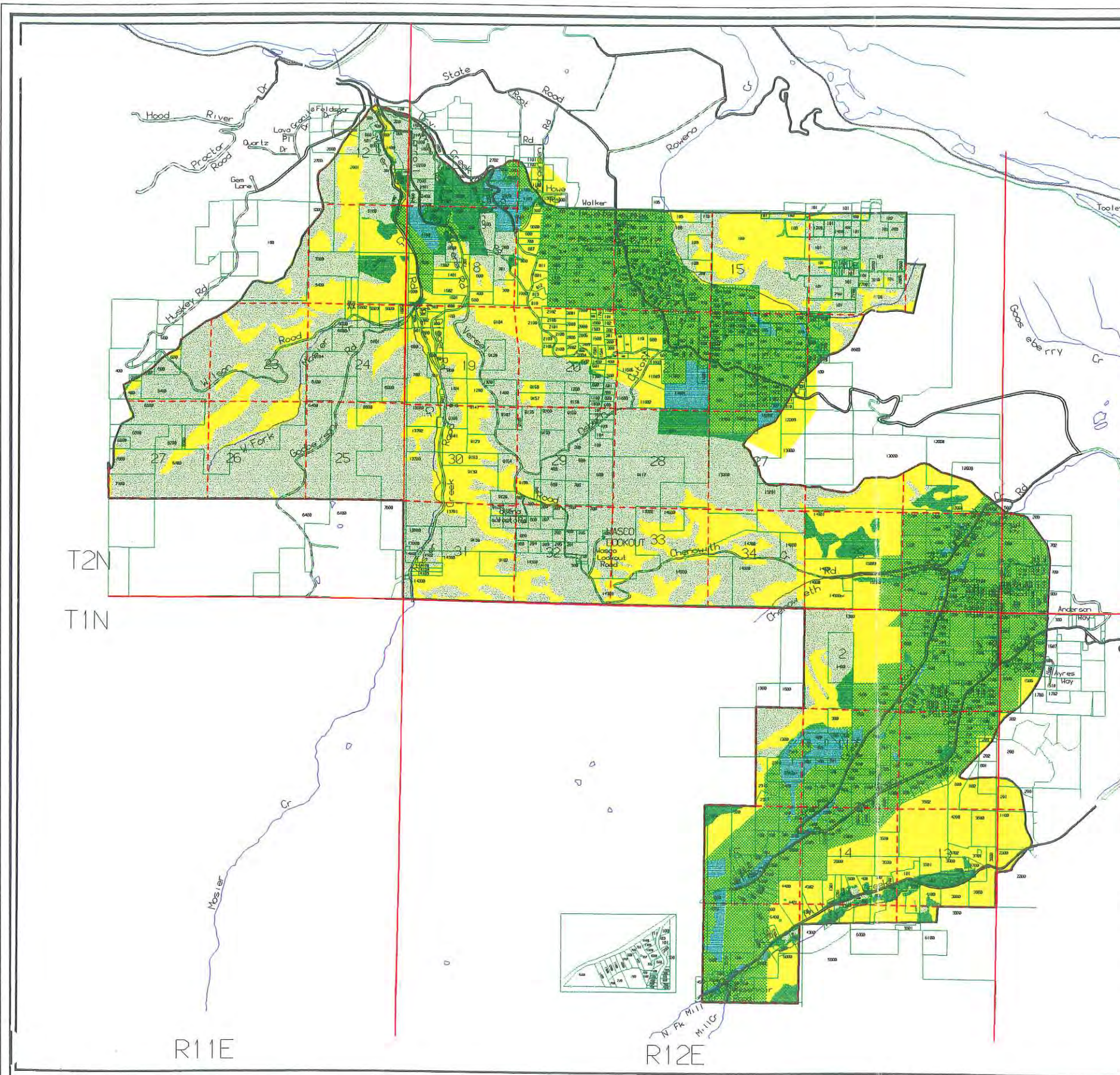
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Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

FIGURE  
10

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# COMBINED LAND USE VALUES (based on resource composite & development composite map values)

## Transition Lands Study Area

### Value Comparison

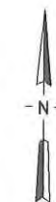
Forest & Agriculture Values      Development Values

L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7

F&A-Dev Medium Ranges

M/M 3-3, 3-4, 4-3, 4-4

0 1 2 3 4 5 6 7  
Low High



Miles  
0 1 2 3

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June 1997

Wasco County Transition  
Lands Study Area

FIGURE  
11

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- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

#### 5.1.1 Seven Mile Hill Area

In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

FIGURE  
12

# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend



IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

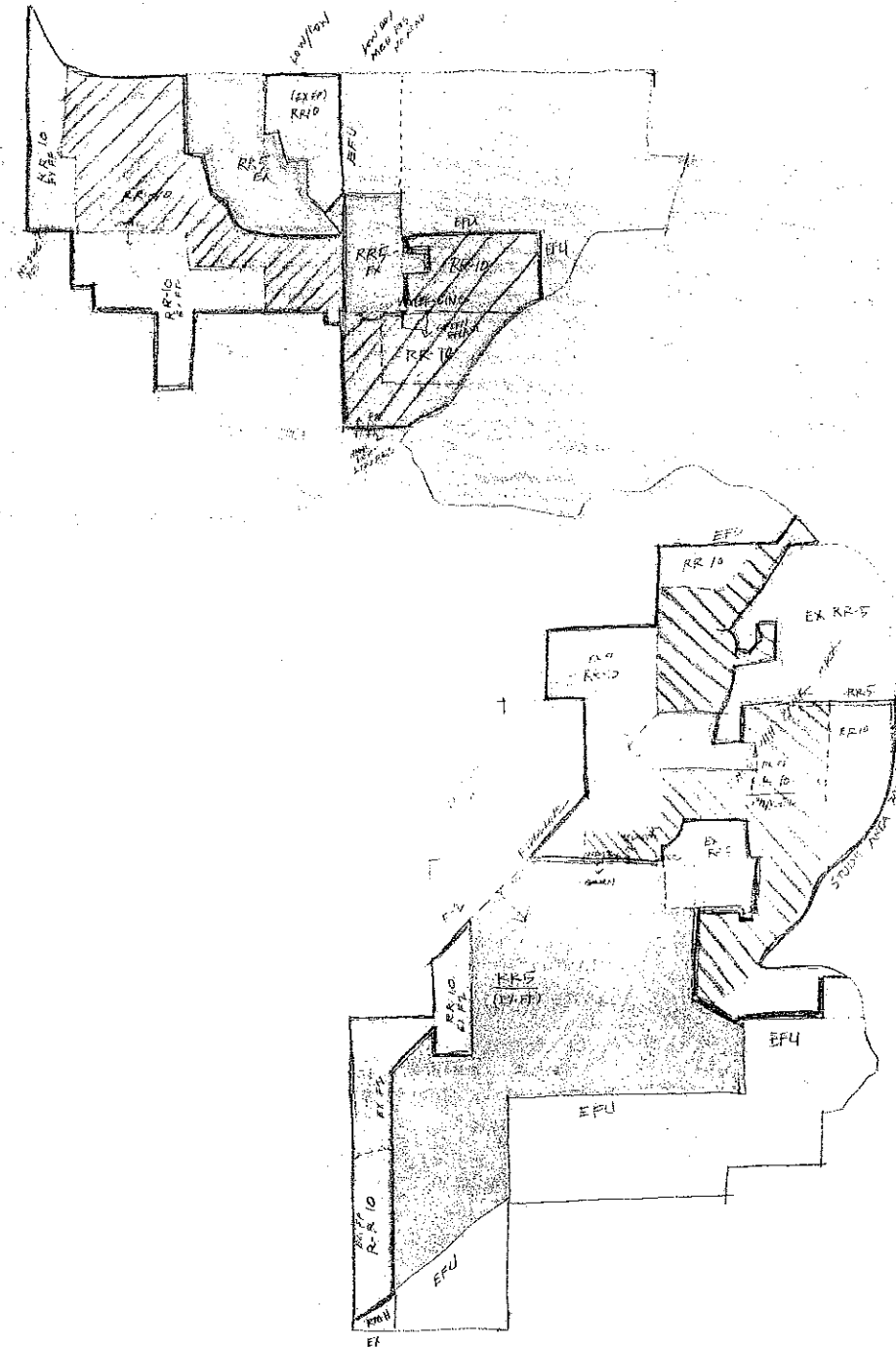
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



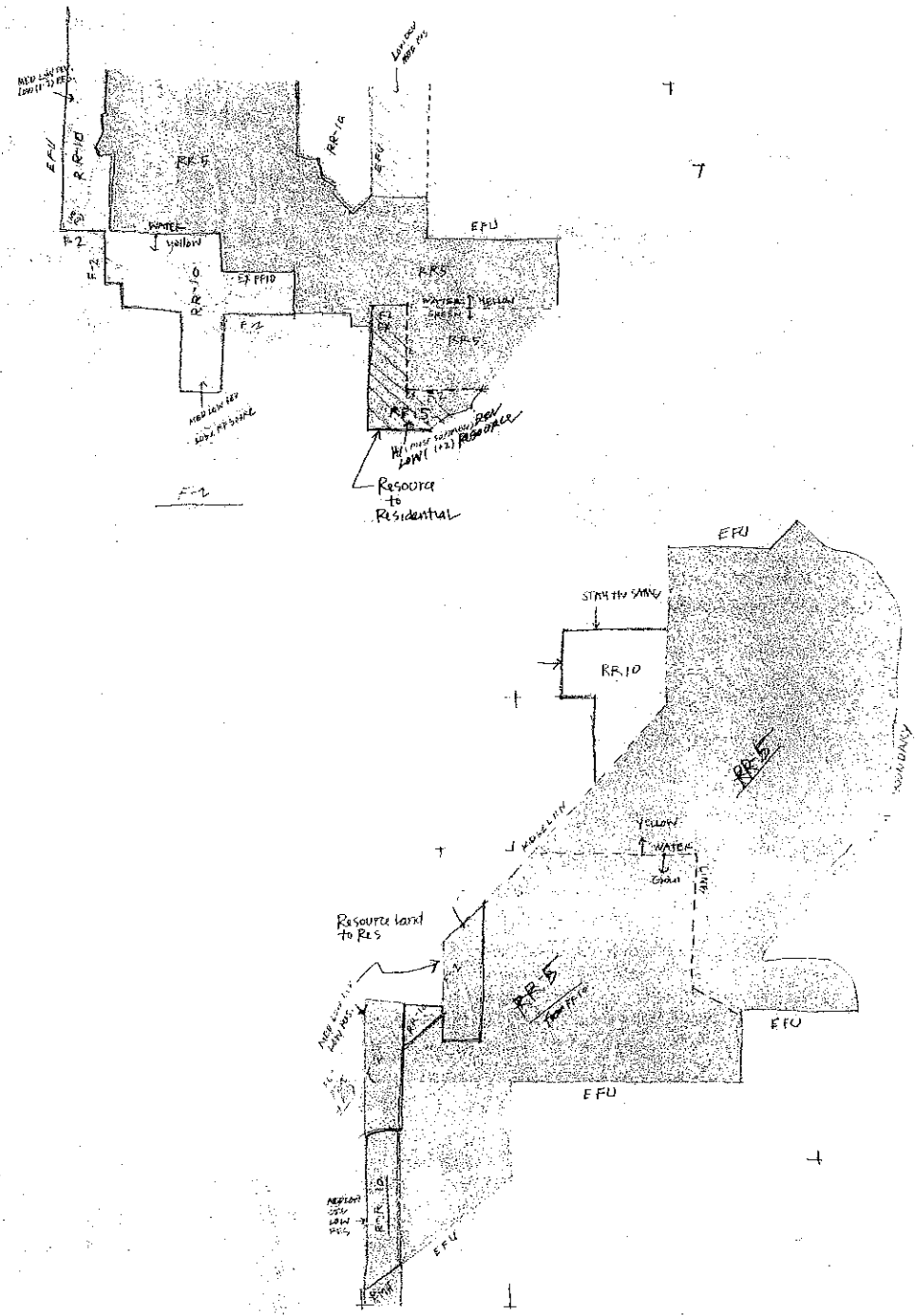
Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

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FIGURE  
13

ALTERNATIVE FOR  
MAXIMUM  
DEVELOPMENT



PROS

MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR) - taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully - taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts - increasing revenues within the same service area.
  - Maximum accommodations for rural housing - could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat - quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.



Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

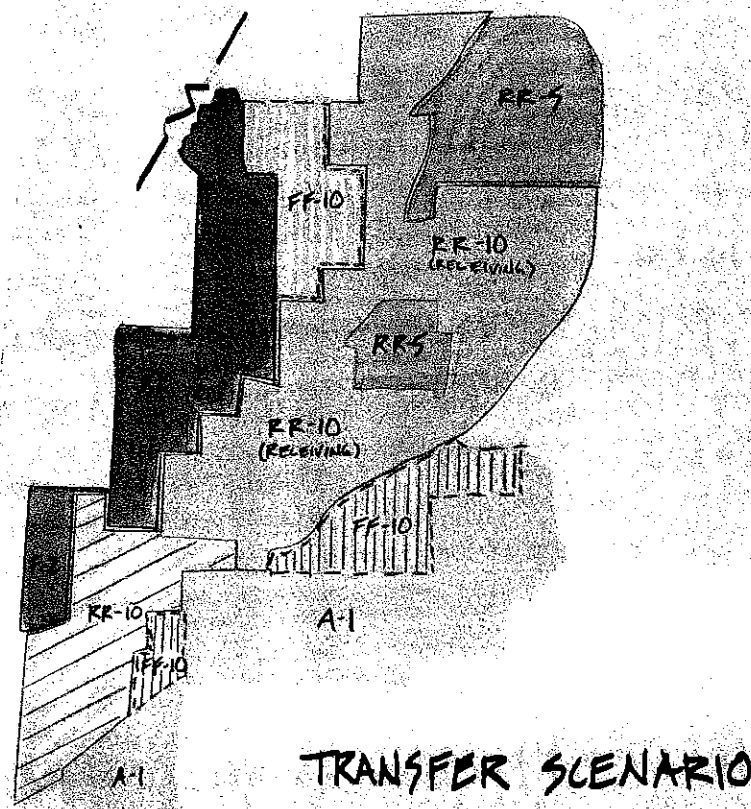
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

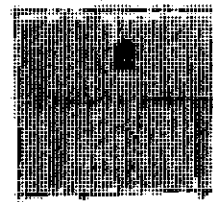
FIGURE  
15



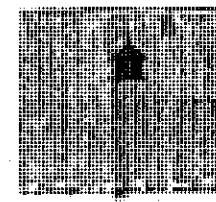
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VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



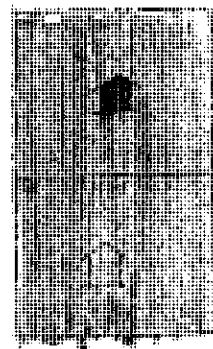
5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

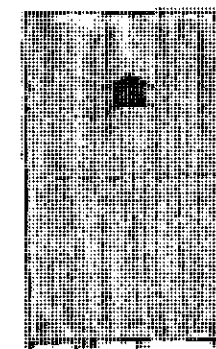
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 10 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

20AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSIER  
7 MILE HILL)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)

(170,000<sup>00</sup>)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16

### **6.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### **6.1.3 Intent and Impacts of the TDR Alternative**

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

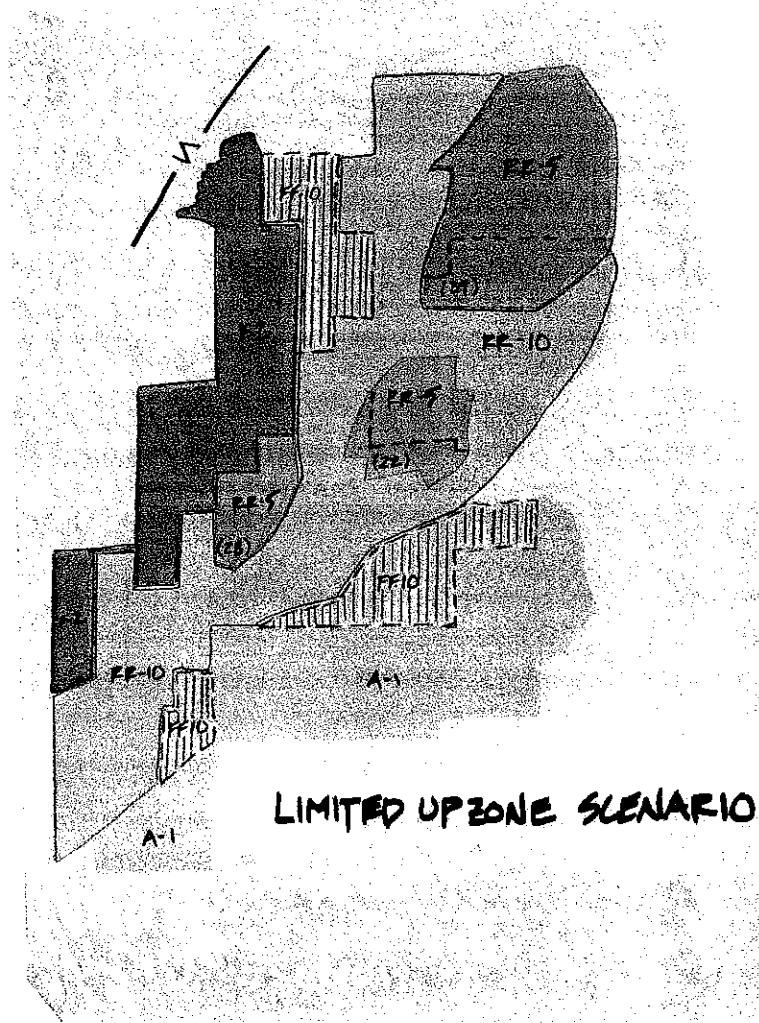
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### **6.2 Limited Upzone Alternative**

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### **6.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

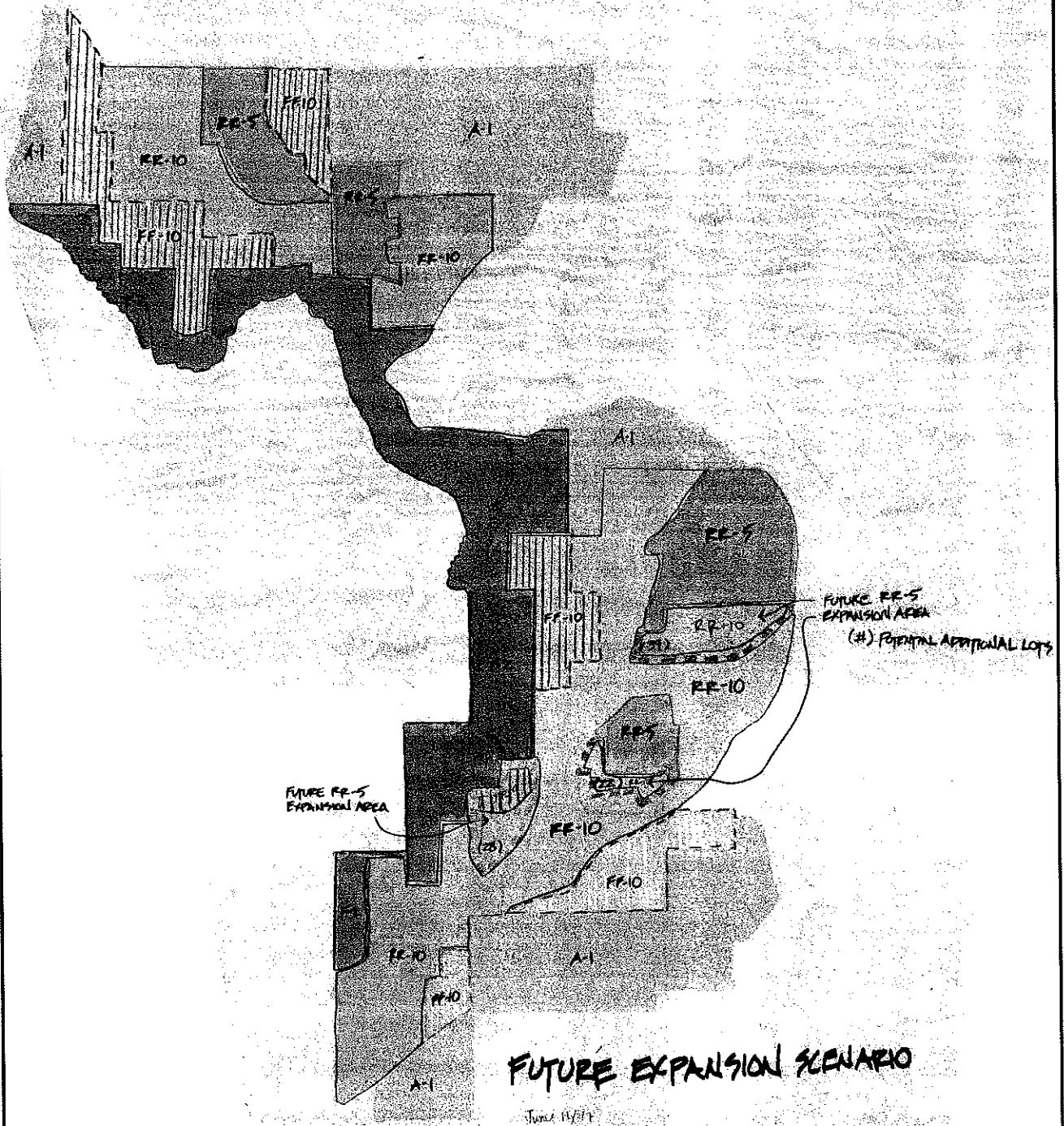
## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.



Map from Wasco County, OR, 1997

7961032

9/12/97

# Wasco County Transition Lands Study Area Future Expansion Alternative

FIGURE  
18



SRI/SHAPIRO/AGCO  
INCORPORATED



## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.



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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervy

**EXHIBIT 4**



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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervey

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

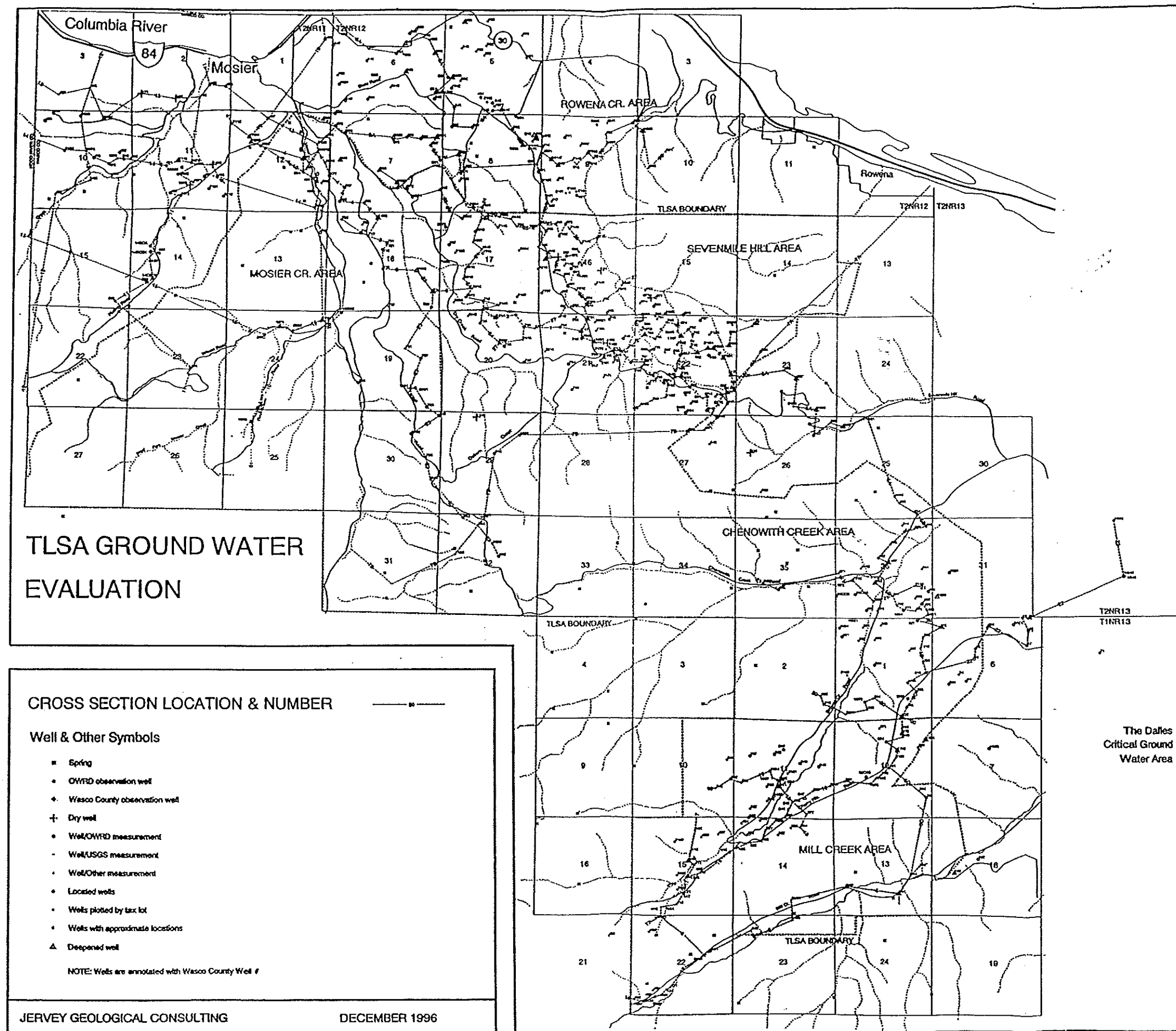
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

## GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

## DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year



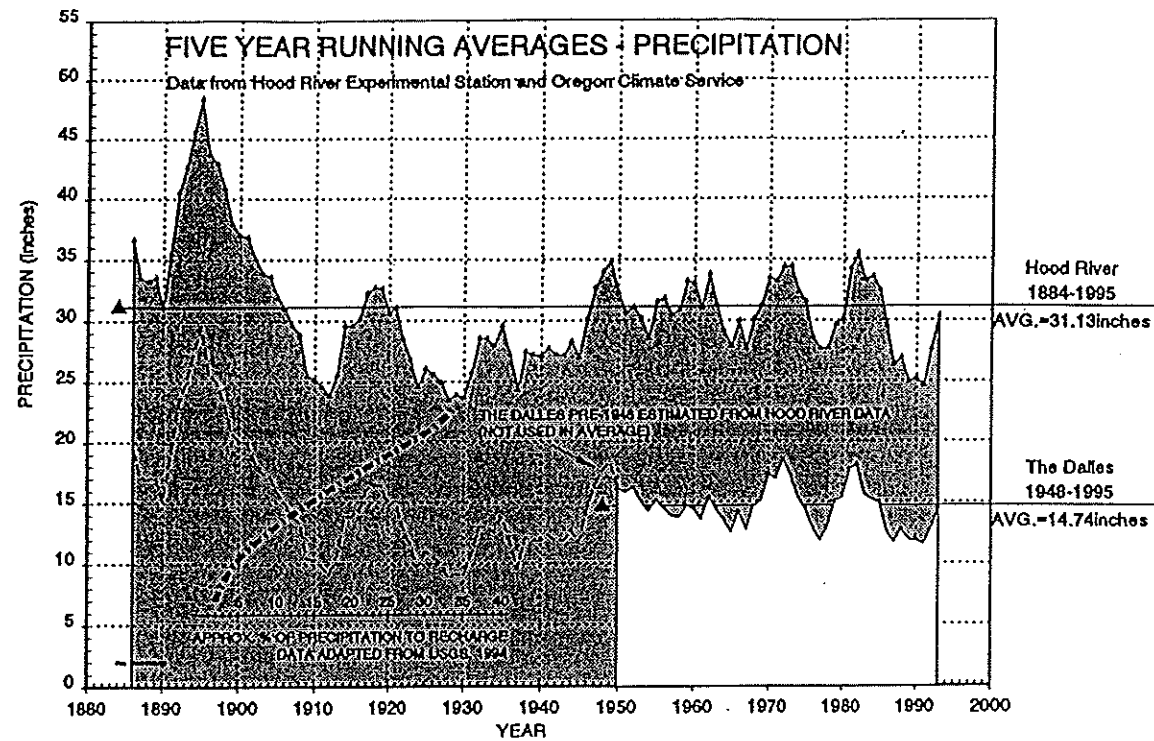


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

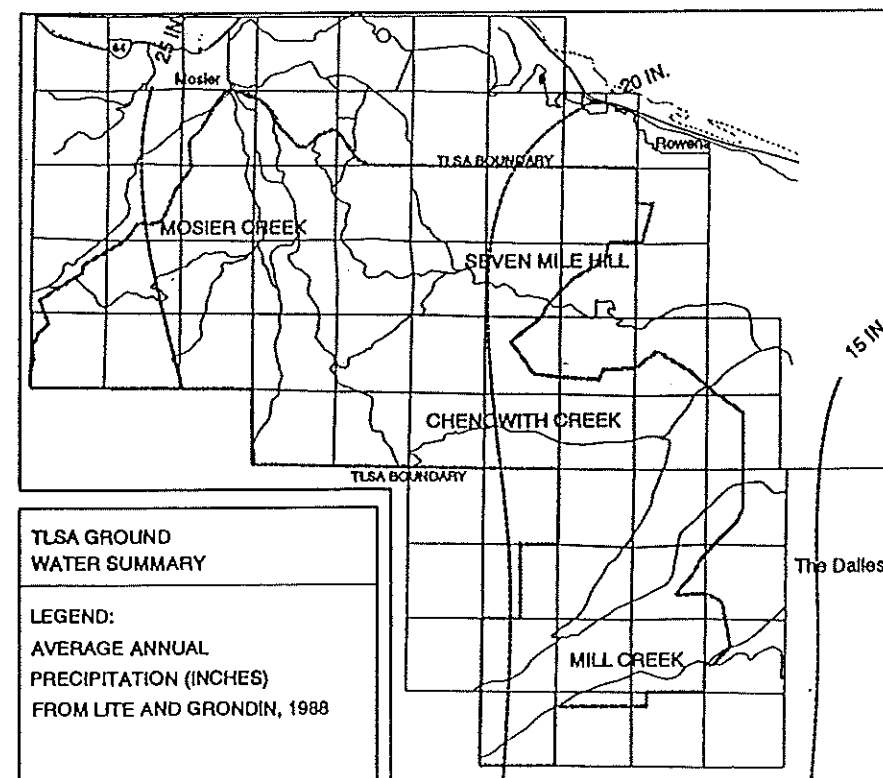


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				99,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

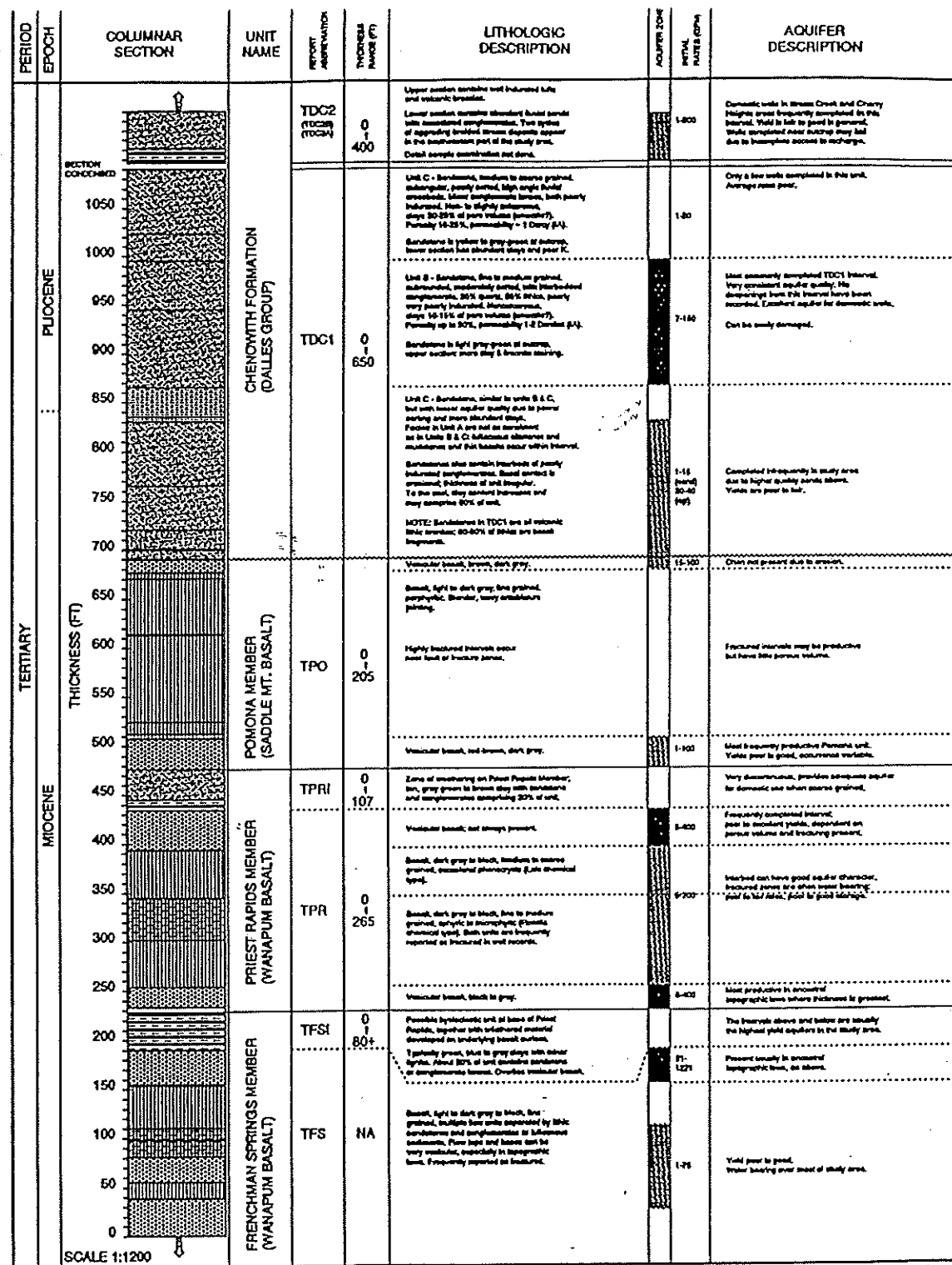
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

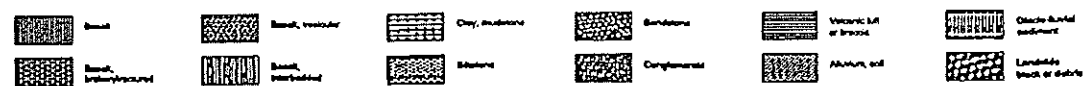


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).

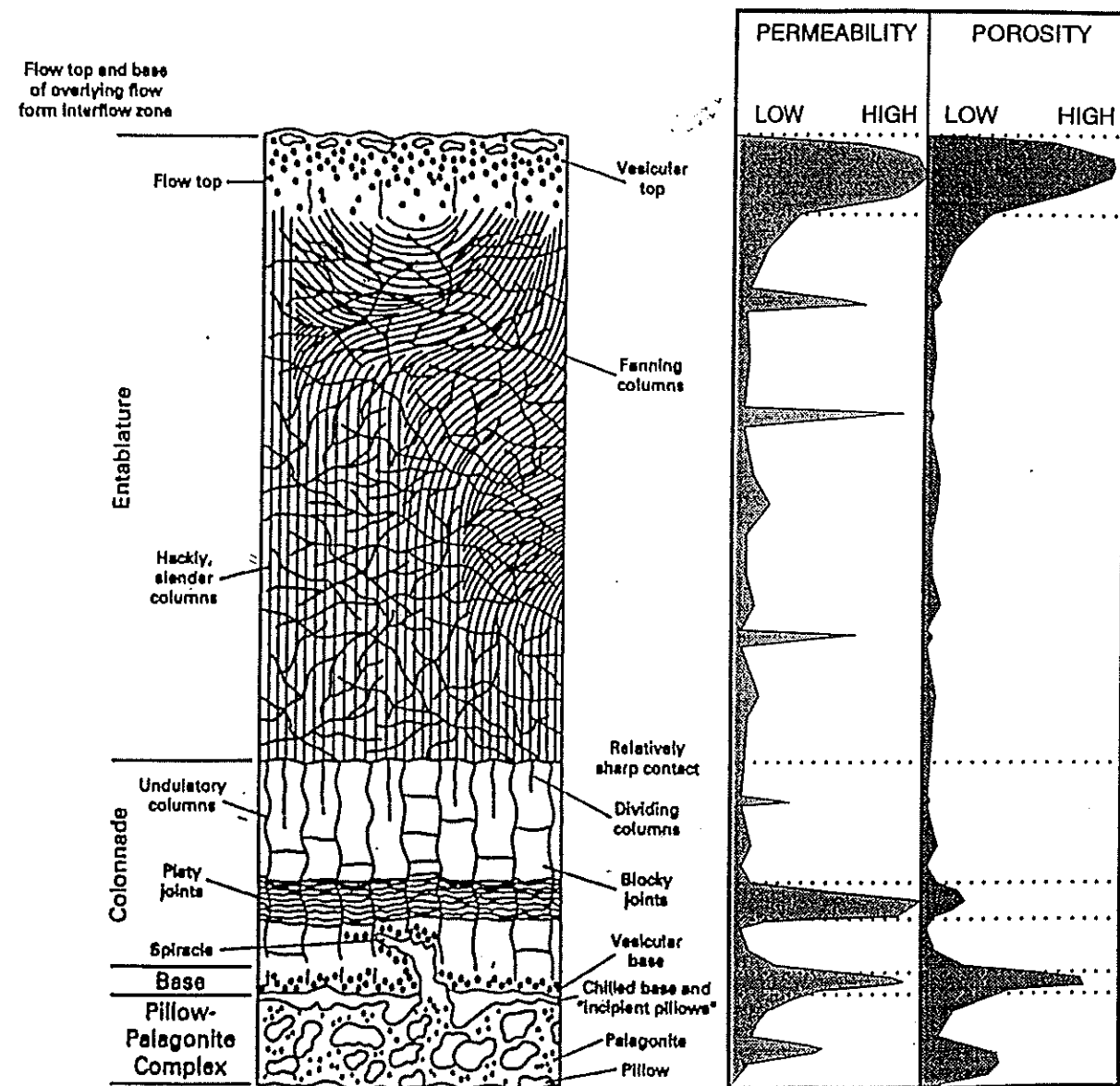


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).



general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

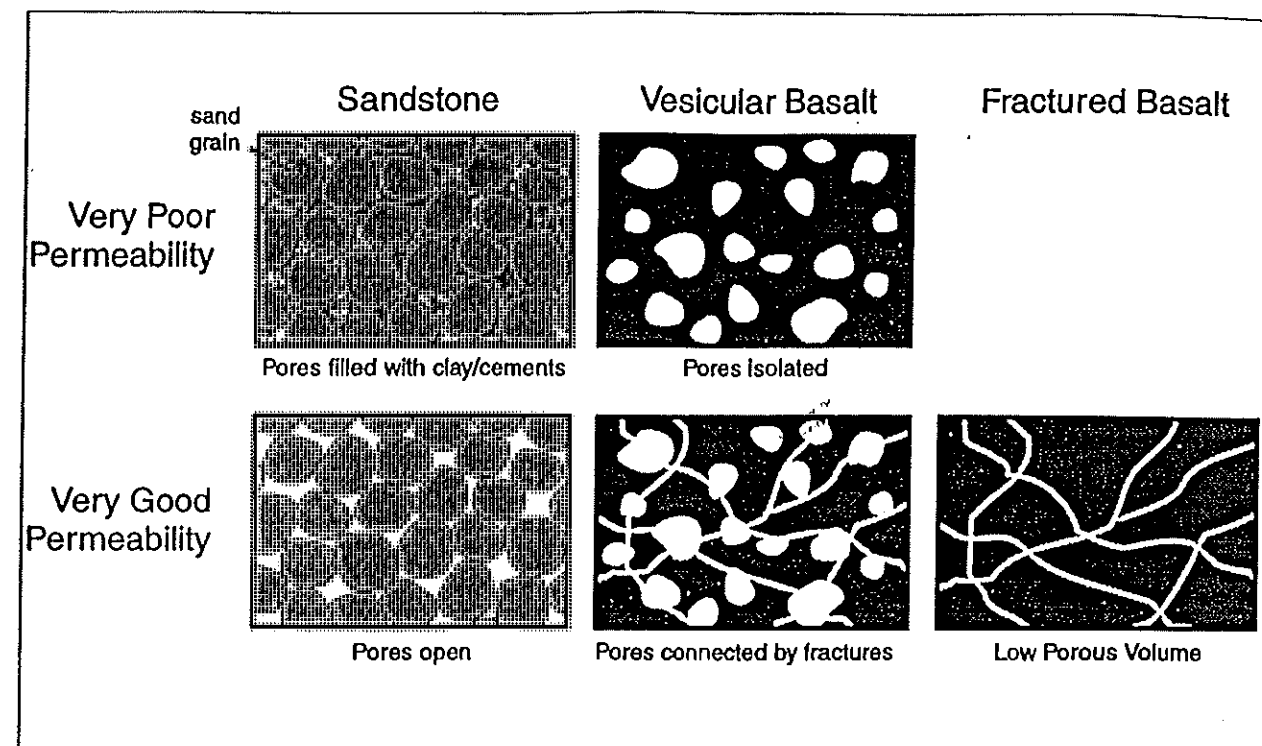


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

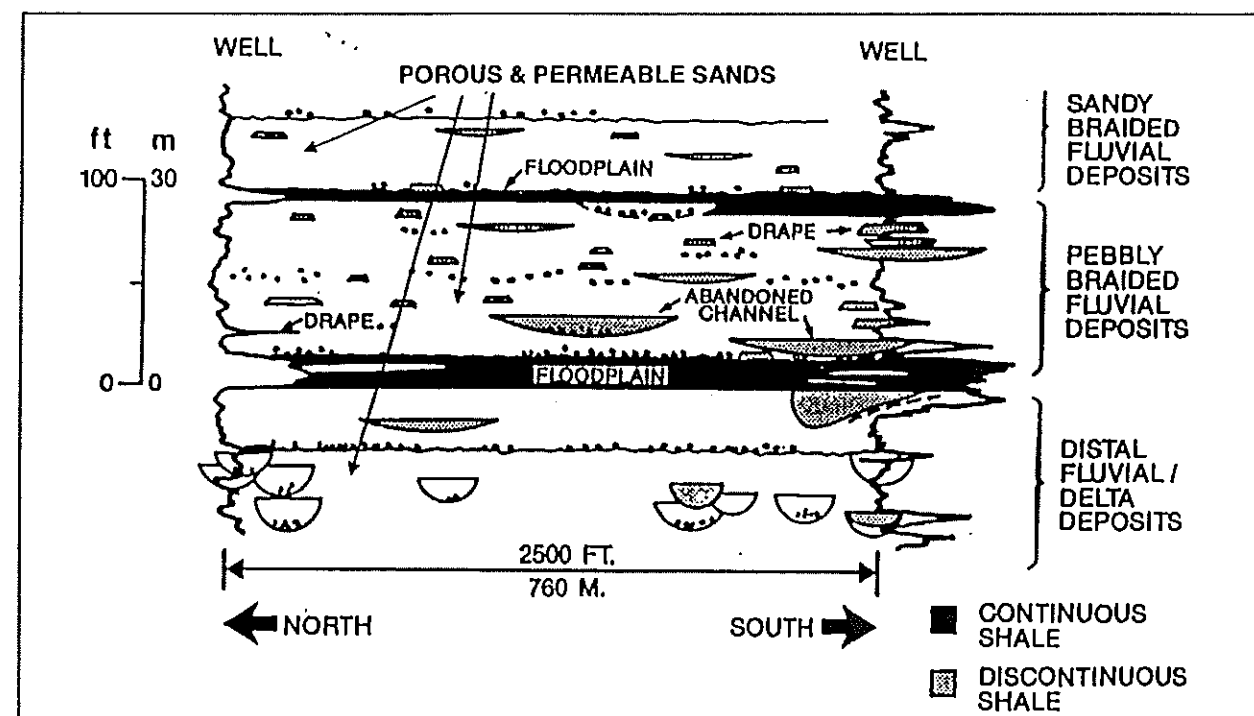


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

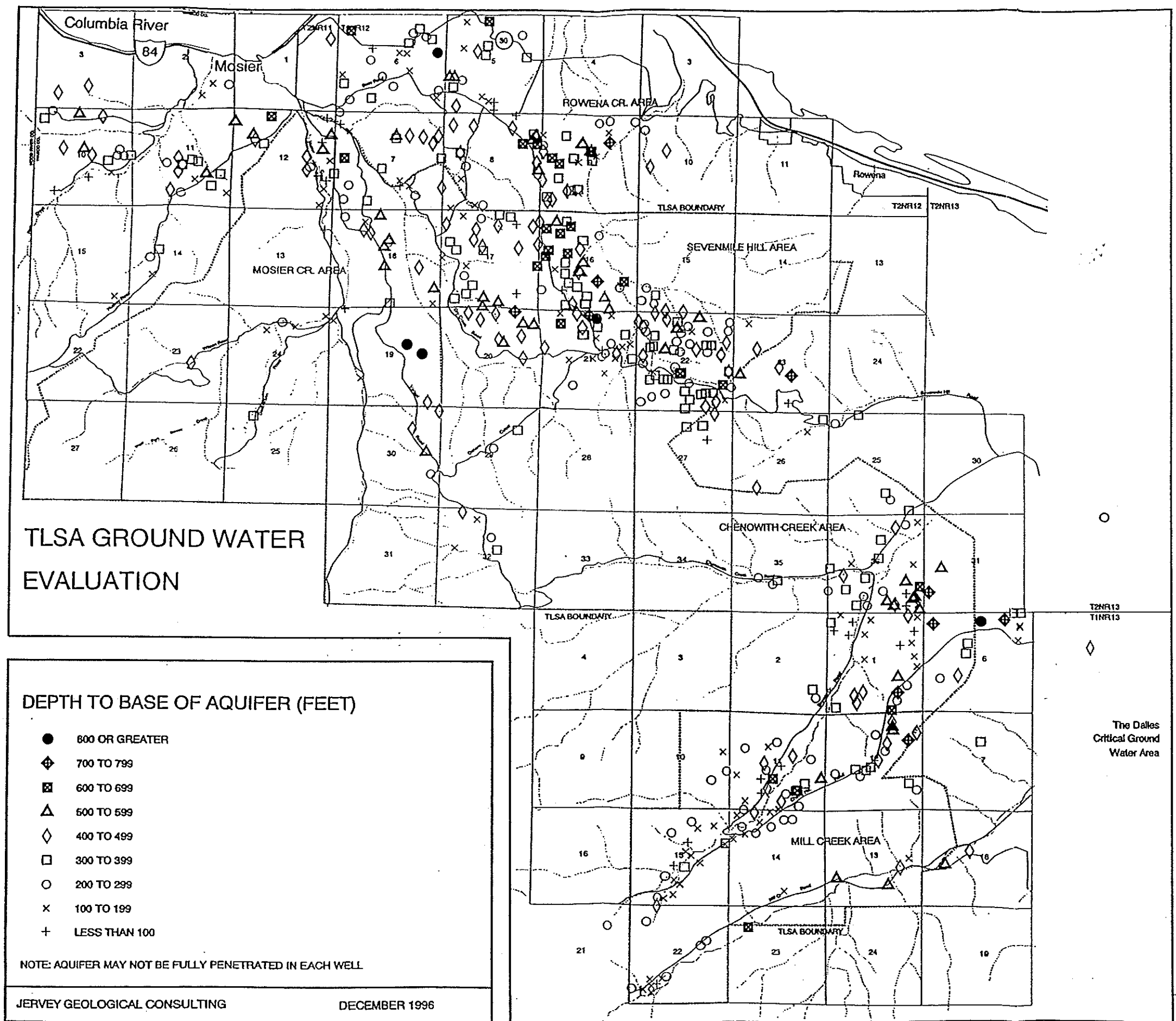
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

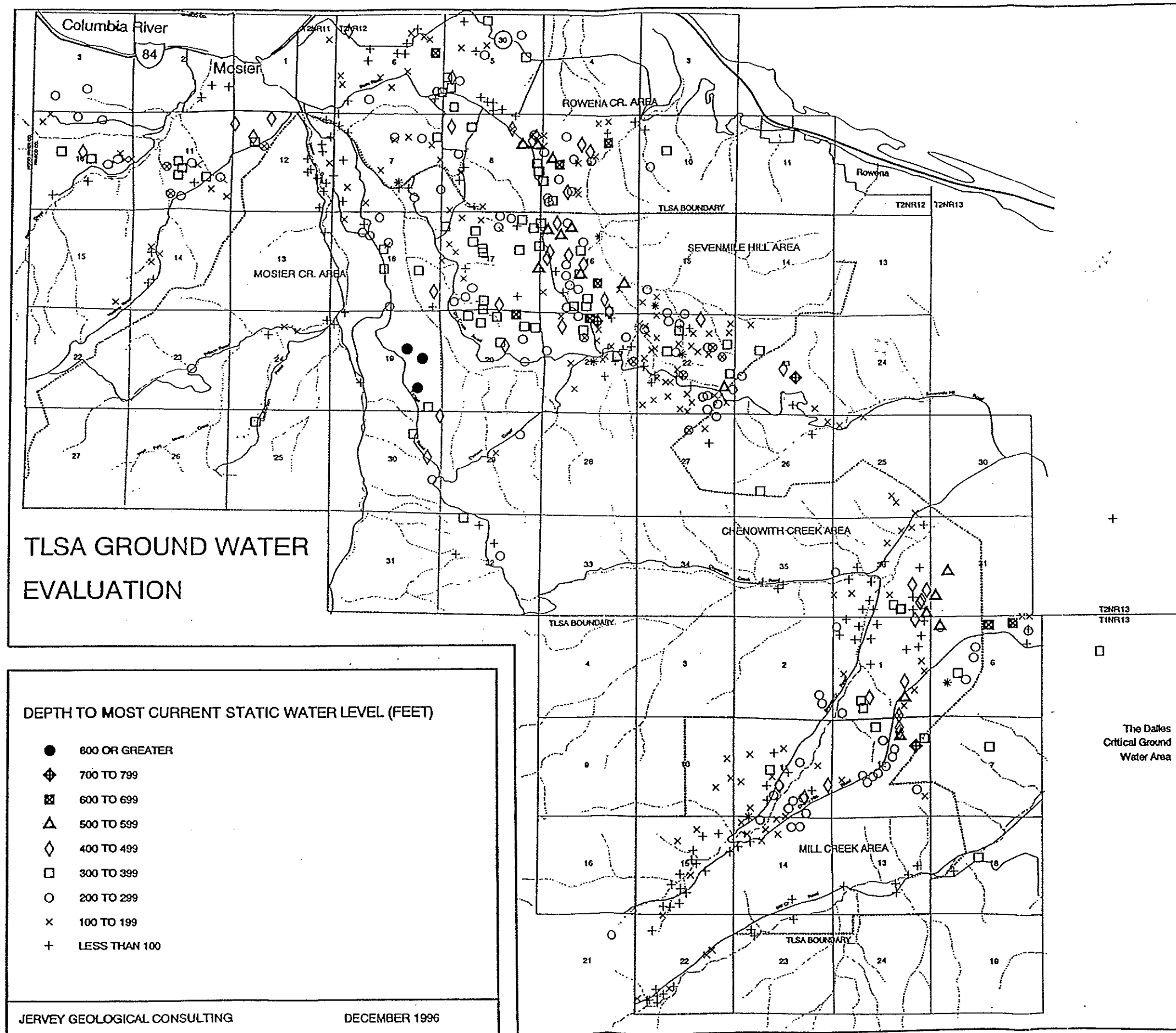
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

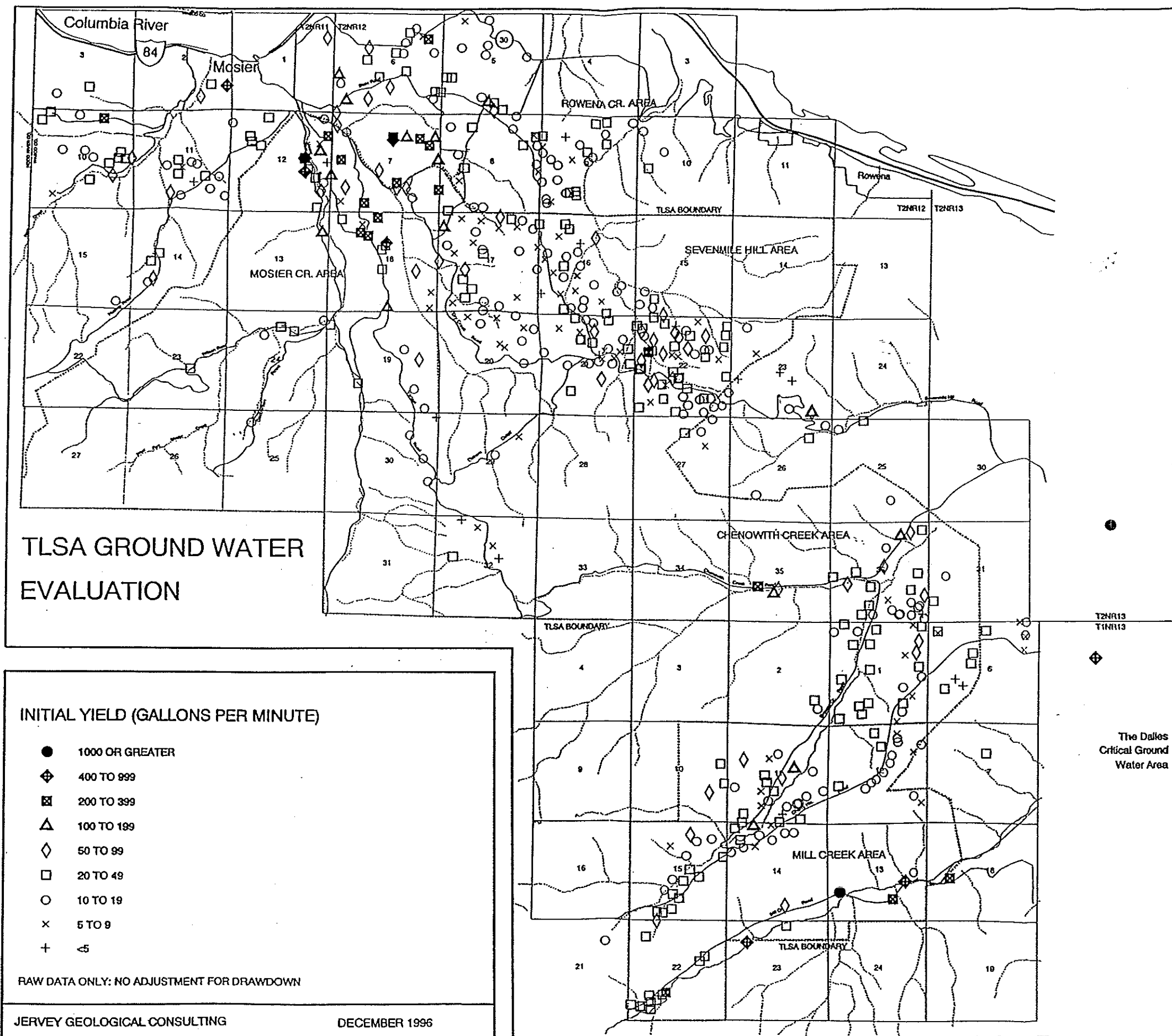
The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

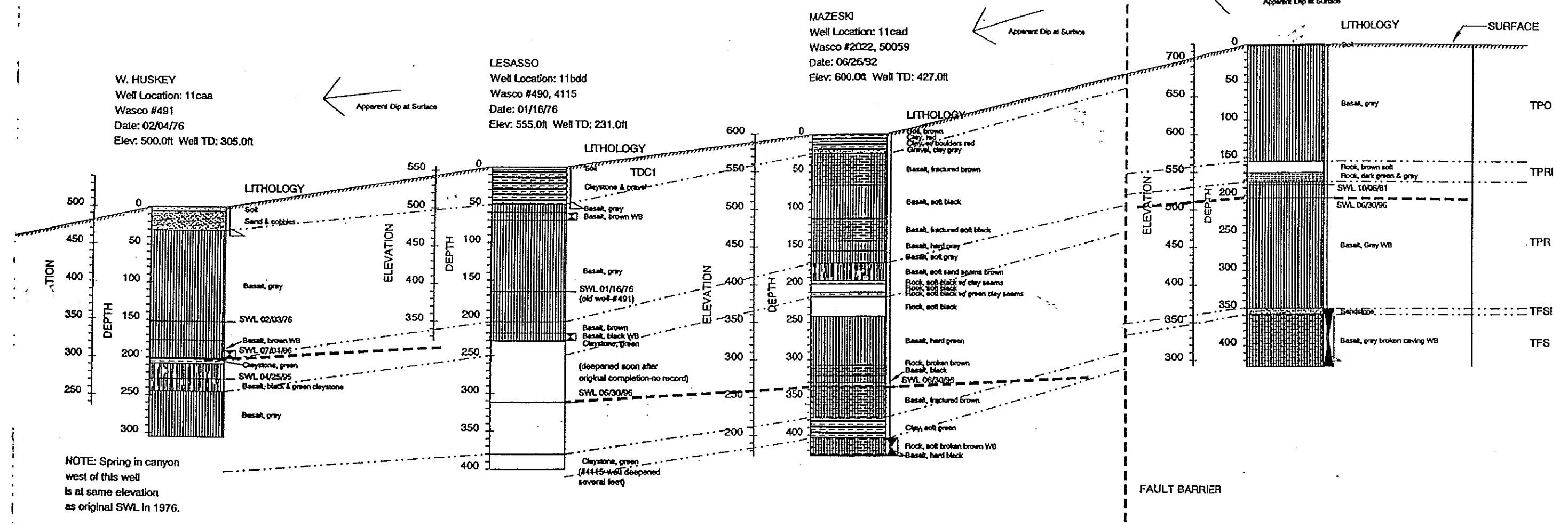
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



TLSA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt

as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepenings (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

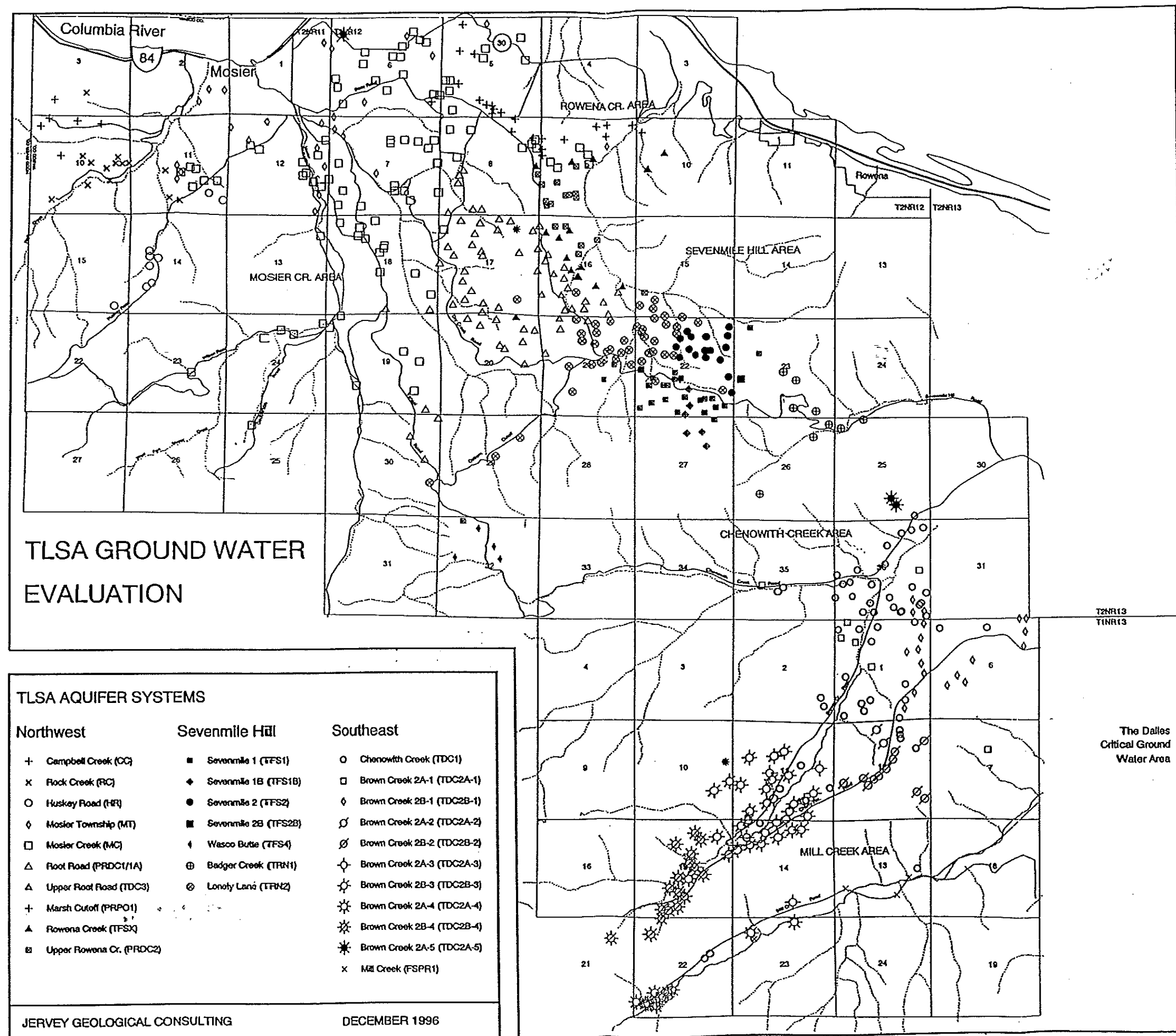
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DEPTH	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH H2O	# OF DEEPEENINGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	P	COMMENT	
NORTHWEST TLSA															
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61	1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TFR	14	719	286	30	545	174	113	0	1	0	4	-26	56	
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58	
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0		* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58	HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61	HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60	2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60	SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53	
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56	SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61	
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59	
SEVENMILE HILL															
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57	HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55	
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53	
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60	
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53	ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52	SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*		* SIMILAR TO TRN2?
SOUTHEAST TLSA															
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58	
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50	
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56	1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77	

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.





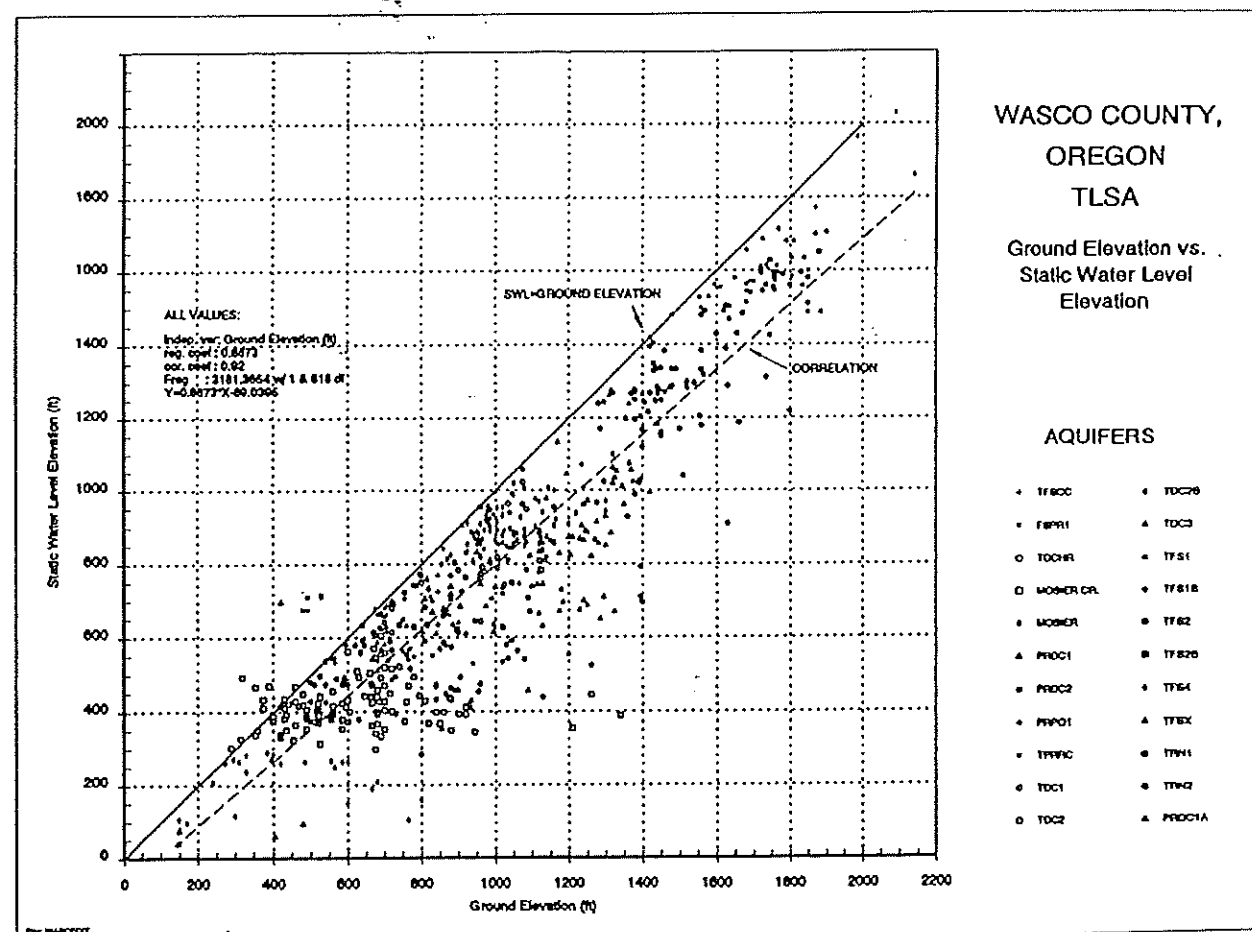


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

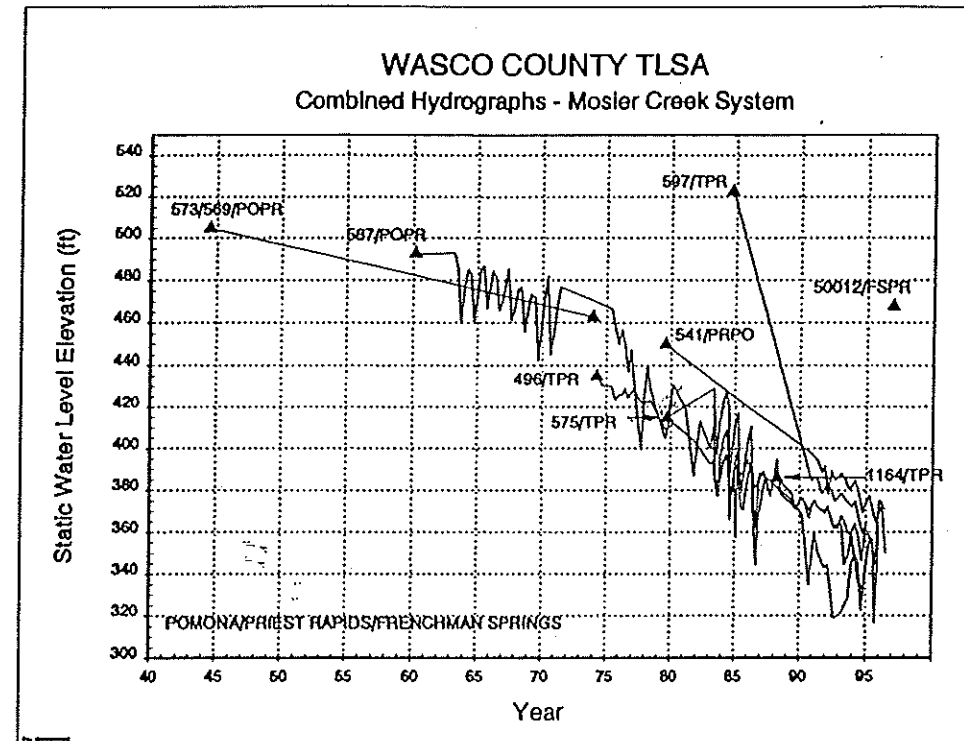


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

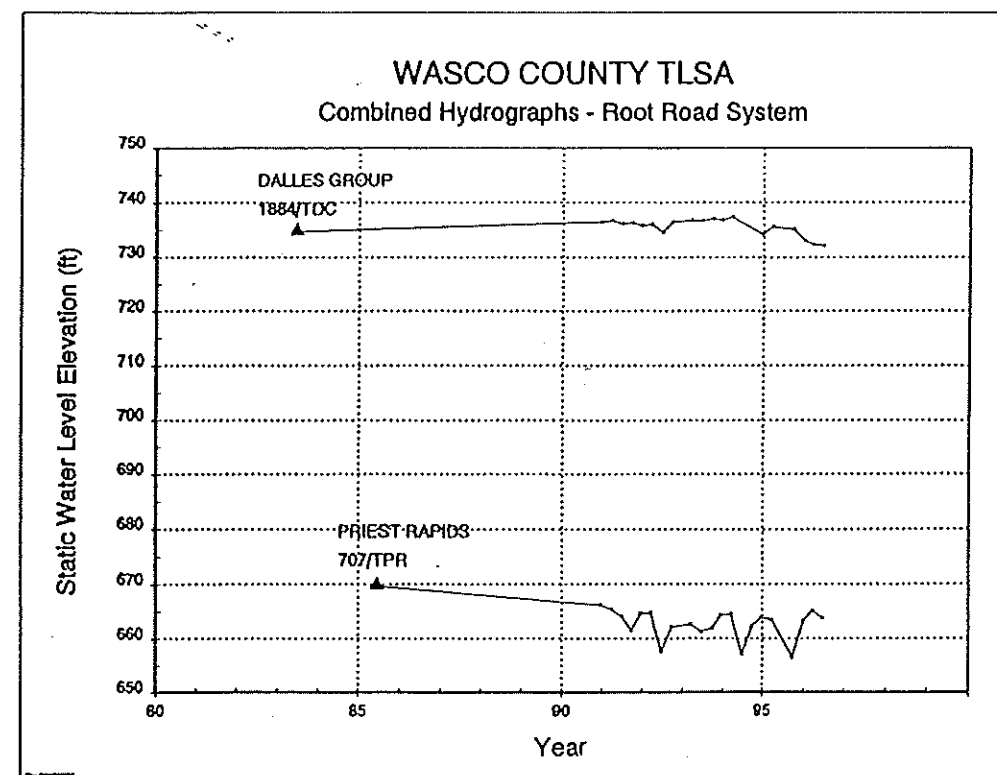


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

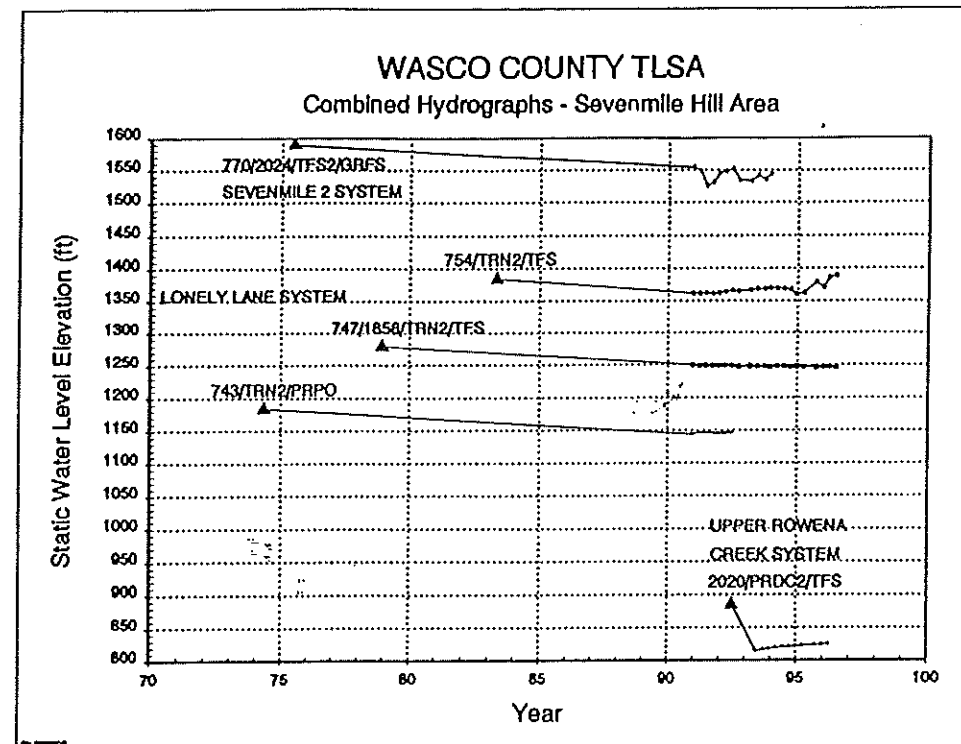


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

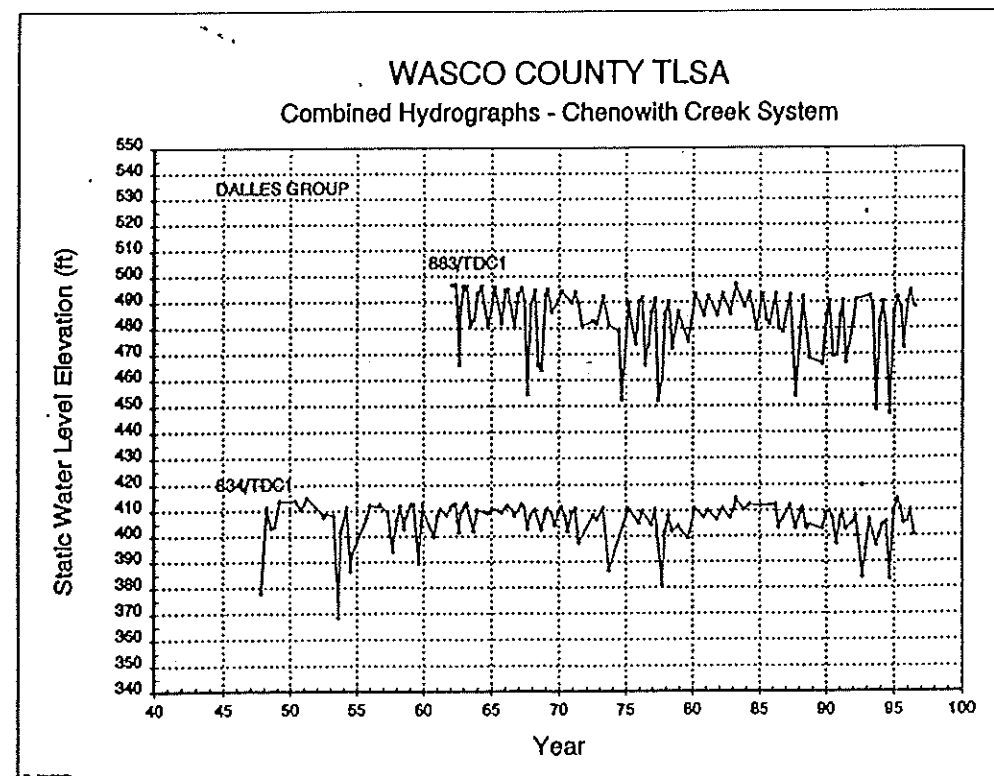


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

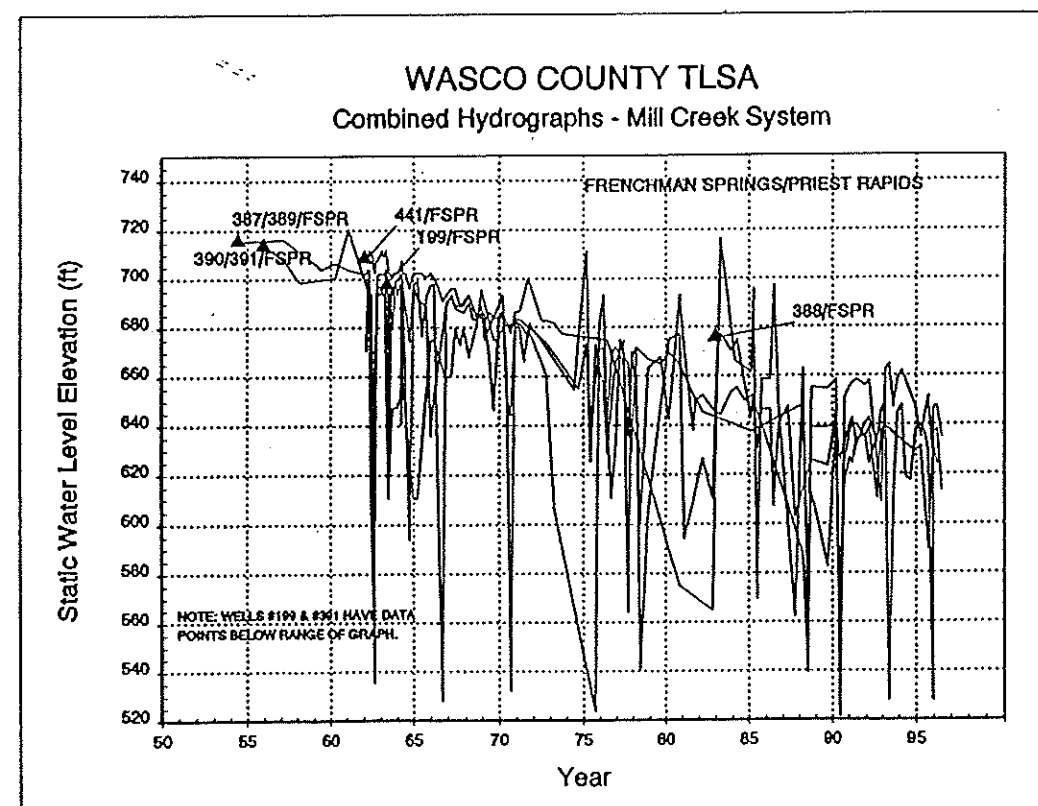


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no



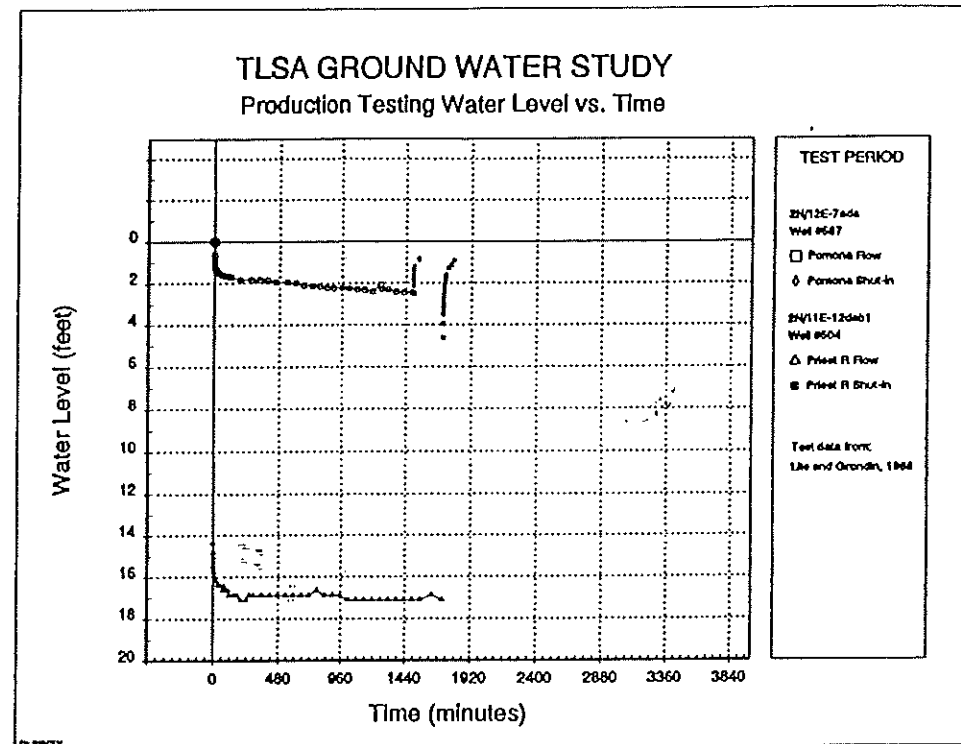


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

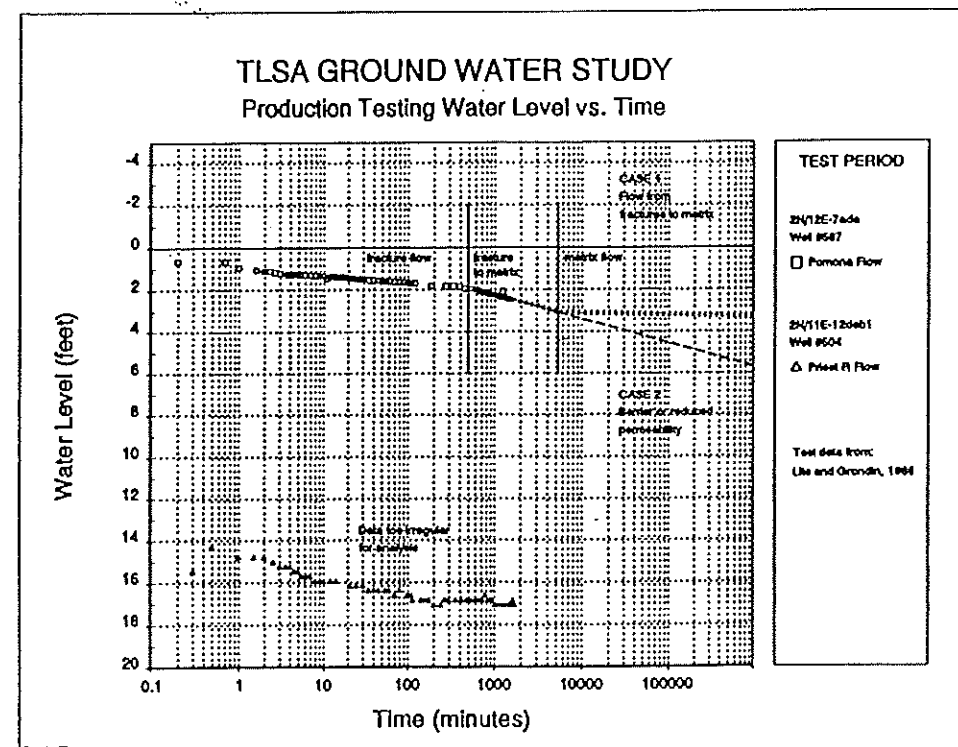


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

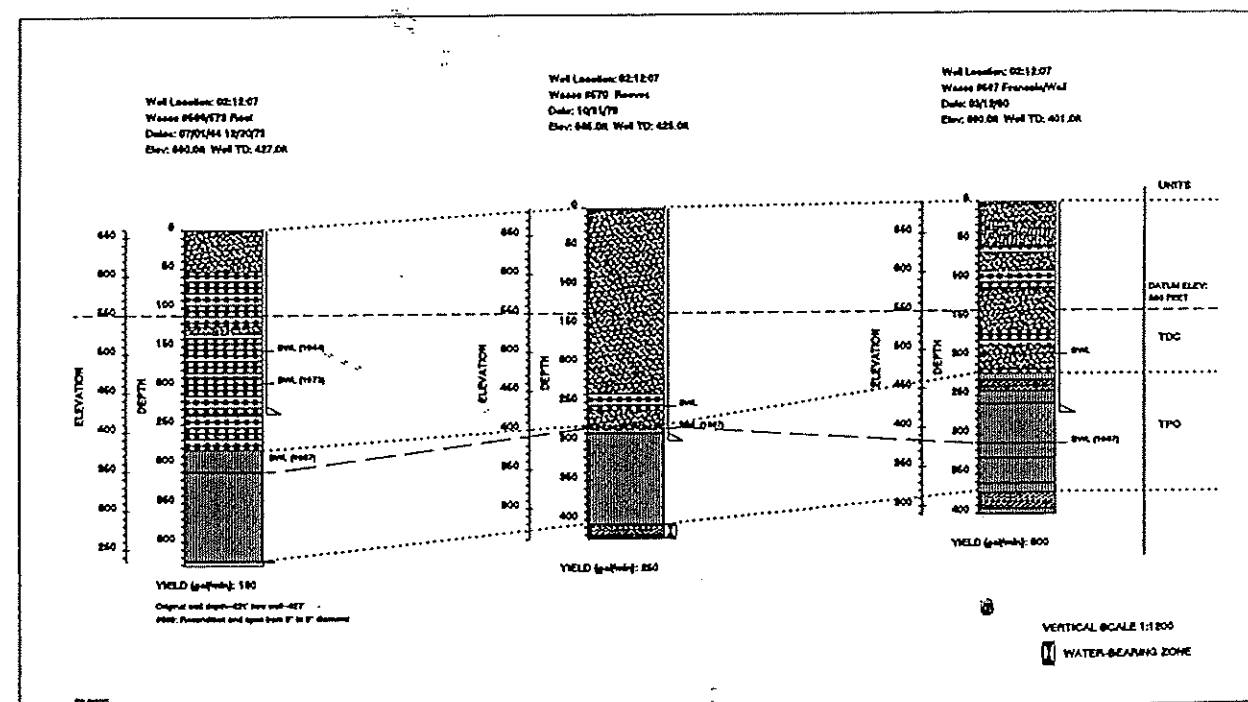


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

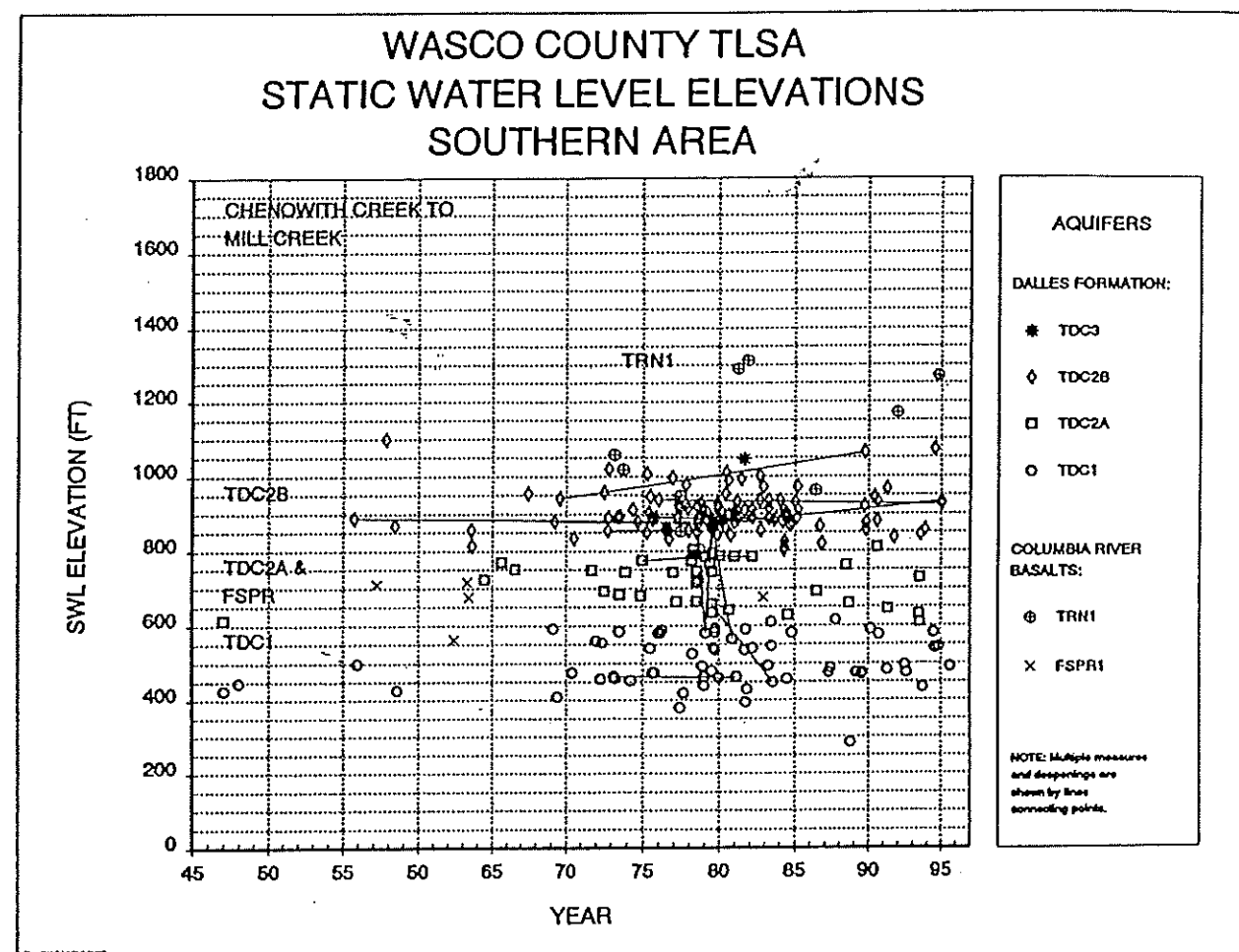


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

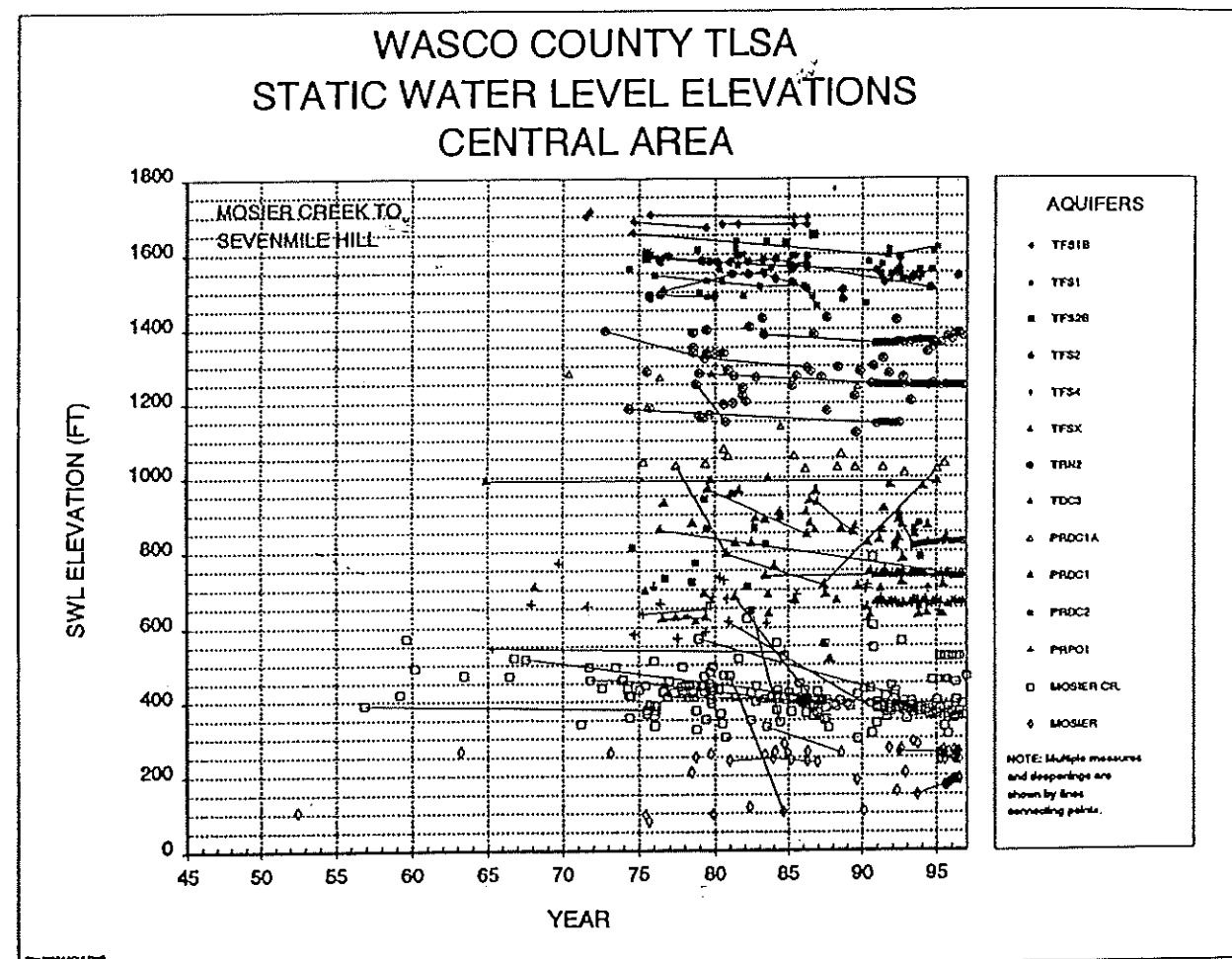


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.

significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPEMED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A



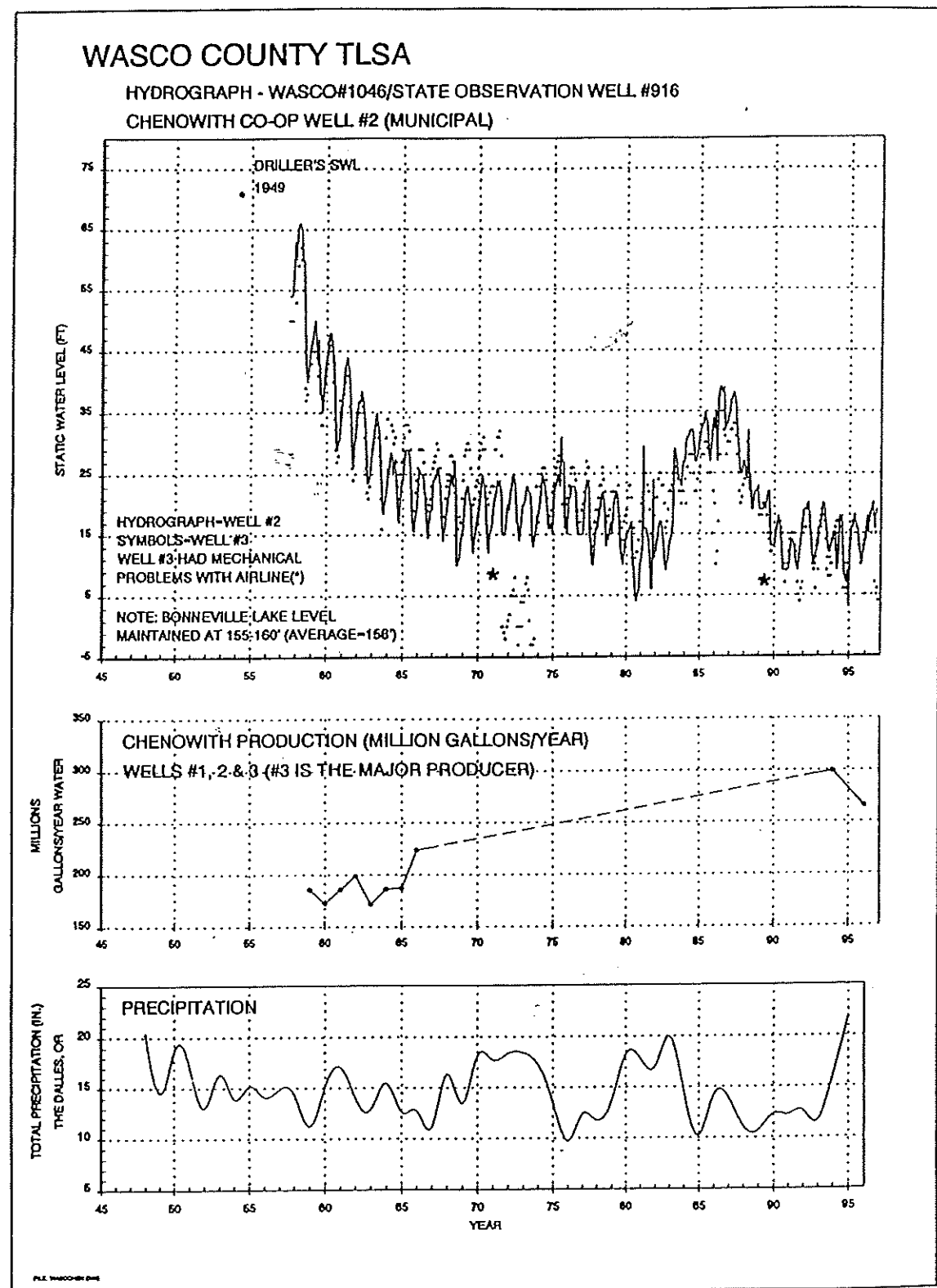


Figure 14. Chenowith Co-op water well data, 1949-1996.

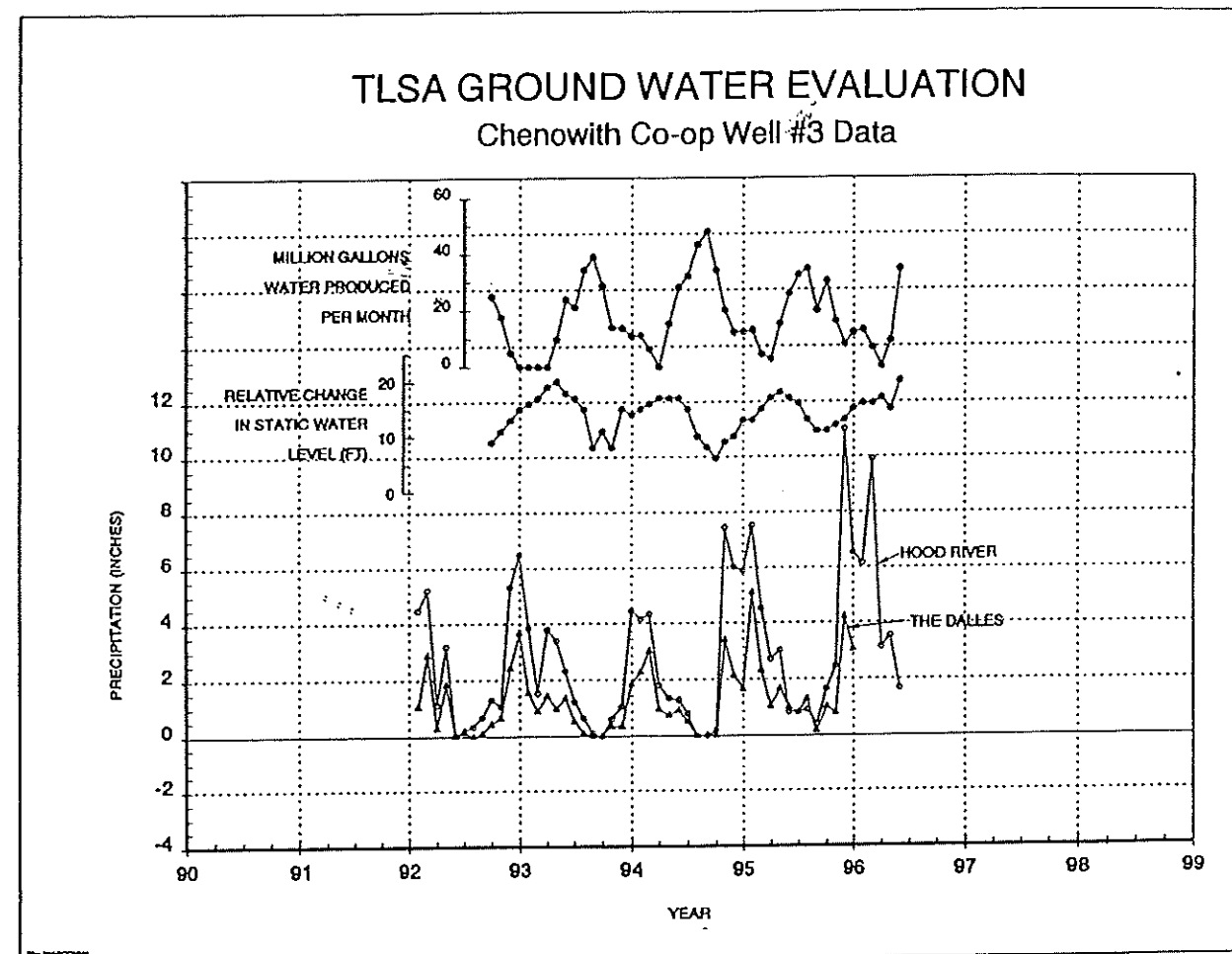


Figure 15. Monthly detail,Chenowith Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

#### 1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

#### 2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

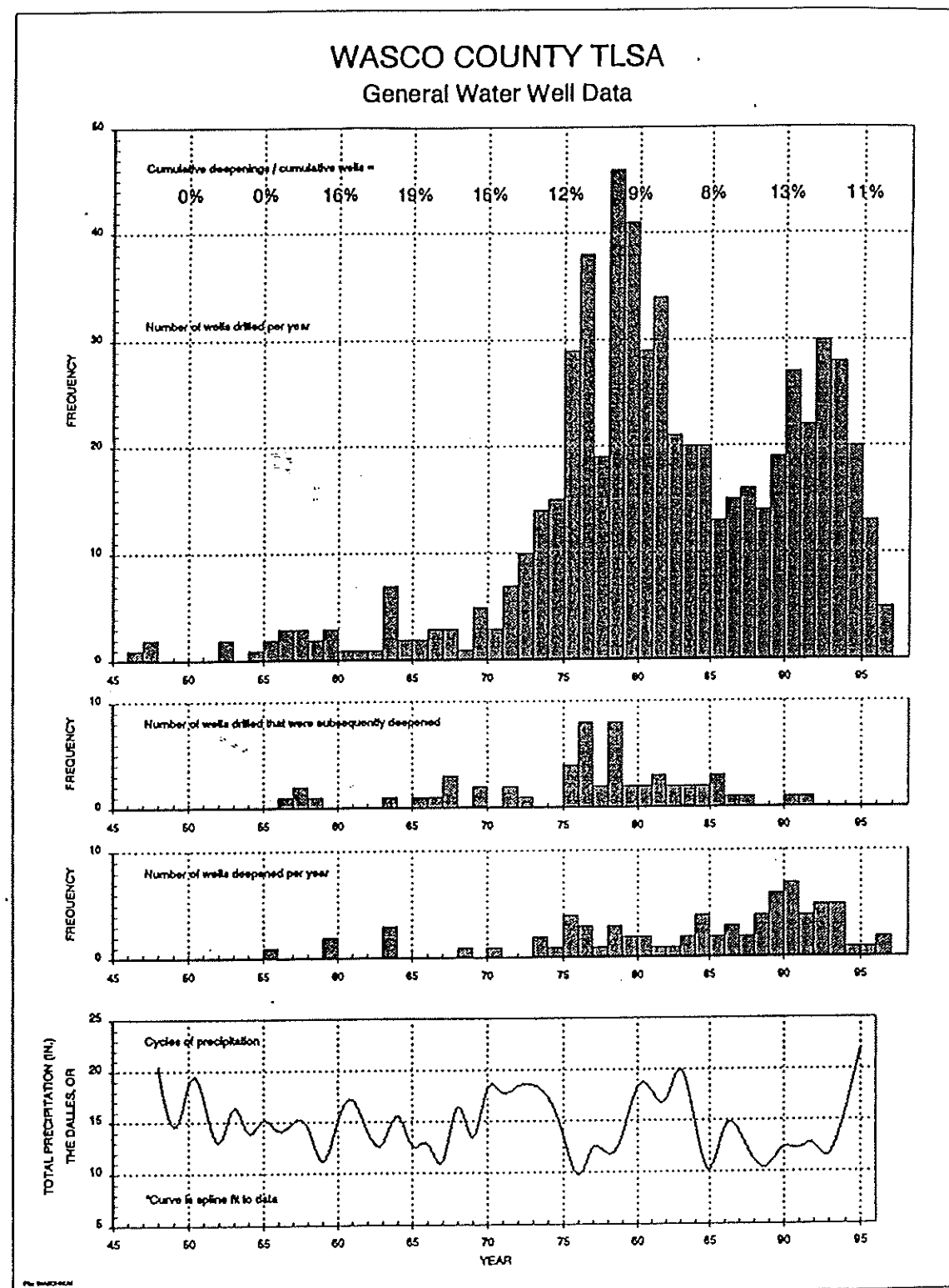


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?



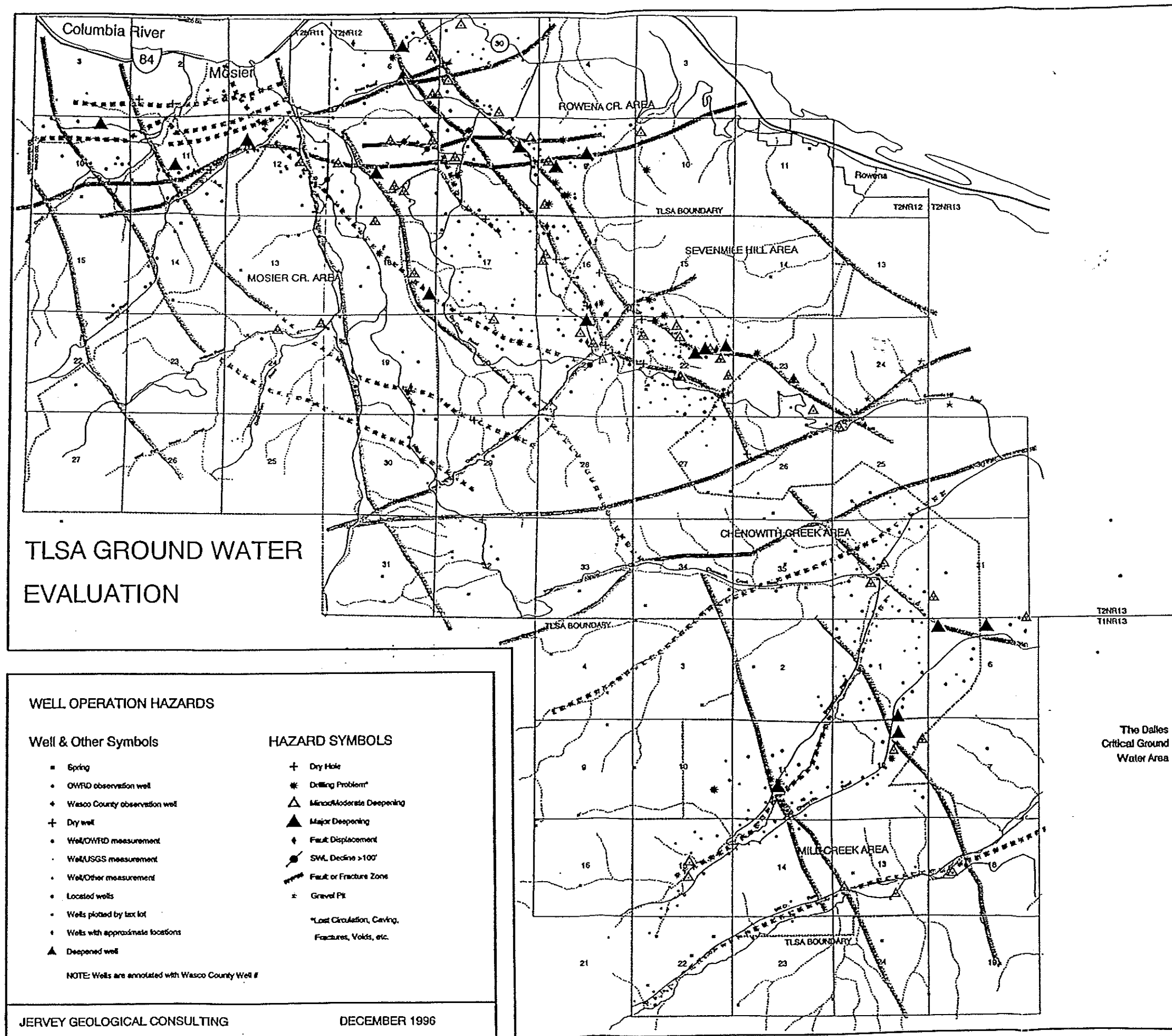




Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

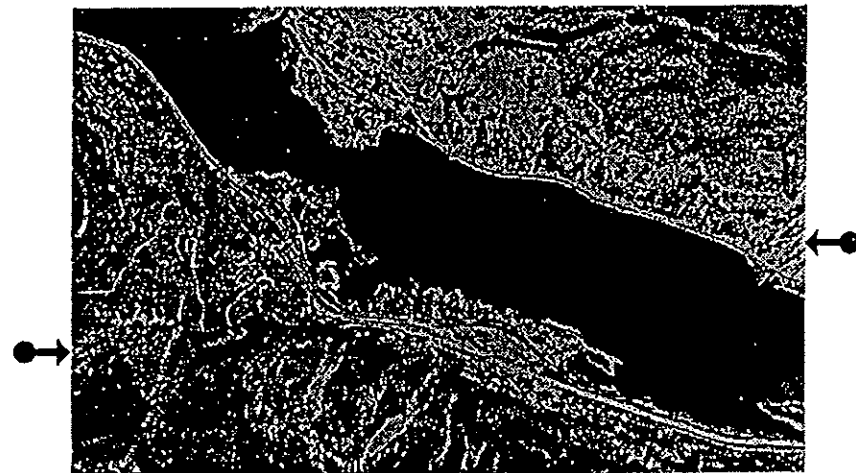


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

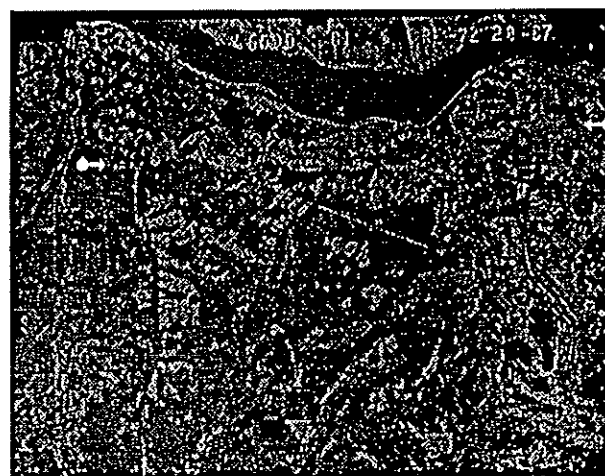


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

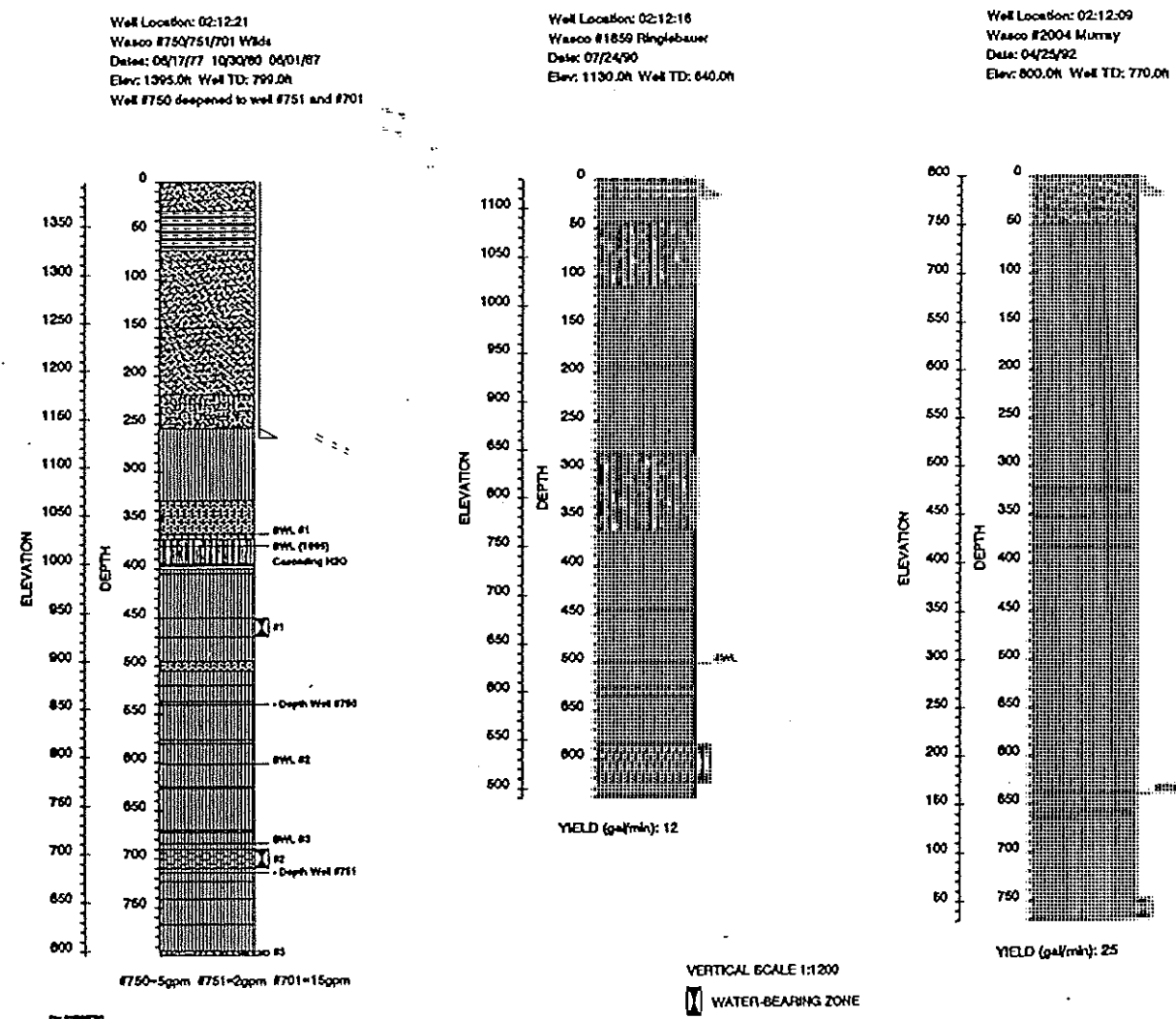


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

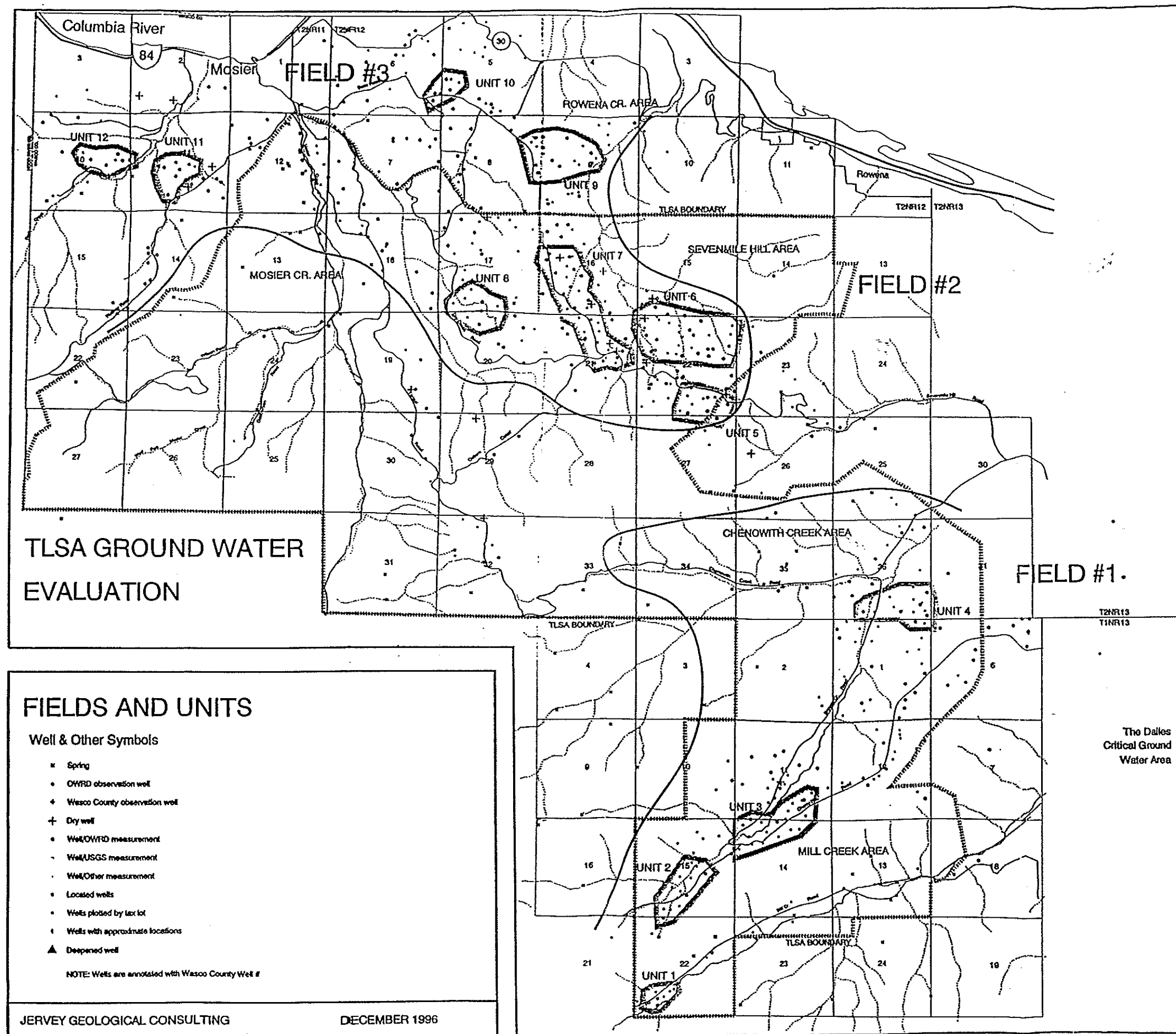
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.





REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by land-owners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		WELL DISTANCE FEET	AVERAGE WELL DISTANCE FEET		DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	AREA ACRES		LOWER 1/3	UPPER 2/3		
1	TDC2A	8	49	6	388	318	3	
2	TDC2A&B	12	142	12	604	416	4	
3	TDC2B	19	212	11	653	478	5	
4	TDC1&2B	17	177	10	708	491	5	HIGH
5	TPS1&1B	12	123	10	602	393	4	
6	TFB2/TRN2	33	342	10	599	386	3	HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3	HIGH
8	PRDC1	9	138	15	798	580	8	
9	PRPO1 HC TPSX	18	216	12	-	-	-	HIGH
10	HC	7	68	10	-	-	-	
11	MT/RC	7	97	14	-	-	-	
12	RC	7	91	13	-	-	-	

Table 3. Summary of well spacing in TLISA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

**ACKNOWLEDGEMENTS**

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

**RESIDENTS/LAND OWNERS OF WASCO COUNTY:**

Sue Bennett	Carol Goter	Mark and Diane Mazeski
Frans Bosman	Wayne Haythorn	Sandra and Deane Preston
Steven Cain	Delbert and Elaine Huskey	Bill and Jeanne Reeves
Brenda and Ron Carroll	Jack and Betty Huskey	Mike Sandoz
Linda Cartwright	Ken and Wendy Huskey	Carole Schmidt
Janine and Joseph Czerniecki	Wayne and Helen Huskey	Tamara Shannon
Betty Daniel	Greg Koonce	Mary Soden
Jim Deaton	Frank and Mary Kurz	Fred and Sylvian Stewart
Jackie Fulps	Nick and Mary Linebarger	

**PUBLIC AGENCIES/PRIVATE COMPANIES**

Larry Toll/Staff Wasco County Watermasters Office	Jerry Schmidt Oregon Water Consultants, Inc.
Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenowith Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

**WATER WELL DRILLERS**

All well drillers in the past and present have contributed information to this study. Those who were especially helpful (in the detail of their well records and/or their comments on the subject) include:

Charles Austin	Leonard Marinelli
Greg Byrd	Charles Moore
Gilbert Clayton, Jr. and Sr.	Richard Murray
Harry Douthit	Clyde Root

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.



## ATTACHMENT D – EXHIBIT 2

“Settlement Agreement”

## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not

approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.


15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

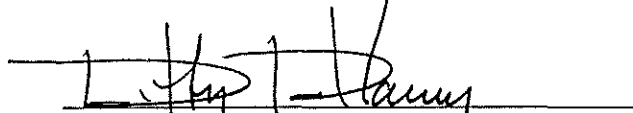
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

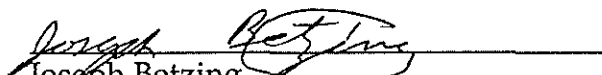
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing

## ATTACHMENT D – EXHIBIT 3

“Original Application”



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

FILE NUMBER: 921-18-000086-PLNG

FEE: 0 (paid previously)

**LAND USE APPLICATION COVERPAGE**

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>APPLICANT INFORMATION</b>		<b>OWNER INFORMATION</b>	
Name: <u>David W. Wilson</u>		Name: <u>Same</u>	
Address: <u>7100 Seven Mile Hill Road</u>		Address: _____	
City/State/Zip: <u>The Dalles, Oregon 97058</u>		City/State/Zip: _____	
Phone: <u>(541) 490-3730</u>		Phone: _____	
Email: _____		Email: _____	

**PROPERTY INFORMATION**

Township/Range/Section/Tax Lot(s)	Acct #	Acres	Zoning
2N 12E 22 4400	884	40.1	F-2

Property address (or location): 7100 Seven Mile Hill Road

Zoning Designation: F-2 Environmental Protection District: EPD 8

Proposed Use: F-F Permitted Subject to Section: \_\_\_\_\_

Water source: Well Sewage disposal method: Septic

Are there wetlands/waterways on your property? ☒ NO ☐ YES (description) \_\_\_\_\_

Name of road providing access: Seven Mile Hill Road

Current use of property: Residential Use of surrounding properties: Residential, farm

Do you own neighboring property? ☐ NO ☒ YES (description) Tax lots 4800, 2100

**DETAILED PROJECT DESCRIPTION (proposed use, structures, dimensions, etc.):** \_\_\_\_\_

Zone change from F-2 to F-F

☐ Additional description/maps/pictures attached

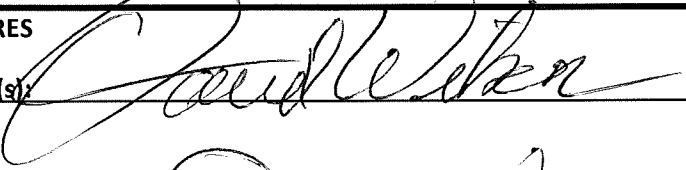
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**LEGAL PARCEL STATUS**

Partition, Subdivision, OR

Most Recent Pre-9/4/1974 Deed #: PLAPAR-17-05-0002 Date Filed: September 8, 2017

Current Deed #: \_\_\_\_\_ Date Filed: \_\_\_\_\_

*The deed and a map showing the property described in the deed(s) must accompany this application.***SIGNATURES**Applicant(s):  Date: 5/4/18Property Owner(s):  Date: 5/4/18

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PLEASE NOTE:** Before this application will be processed, you **must** supply all requested information and forms, and address **all listed or referenced criteria**. Pursuant to ORS 215.428, this office will review the application for completeness and notify Applicant of any deficiencies within 30 days of submission. By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.

**ALL LAND USE APPLICATIONS MUST INCLUDE:**

- ☐ Application Fee – Cash or Check (credit cards now accepted with additional fee)
- ☐ Site Plan
- ☐ Elevation Drawing
- ☐ Fire Safety Self-Certification
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_**APPLICATIONS FOR PROPERTIES IN THE NATIONAL SCENIC AREA MUST ALSO INCLUDE:**

- ☐ Scenic Area Application/Expedited Review
- ☐ Color and Material Samples
- ☐ Landscaping Plan
- ☐ Grading Plan
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_

**SHADED AREA TO BE COMPLETED BY PLANNING DEPARTMENT**

**Legal Parcel**

Deed/Land Use Action: \_\_\_\_\_

☐ NO

☐ YES

**Previous Map and Tax Lot:** \_\_\_\_\_

**Past Land Use Actions:** If yes, list file #(s) \_\_\_\_\_

☐ NO

☐ YES

Subject to previous conditions?

☐ NO

☐ YES

**Assessor Property Class:** \_\_\_\_\_

**Zoning:** \_\_\_\_\_

**Environmental Protection Districts – List applicable EPDs:**

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

**Water Resources**

Are there bodies of water or wetlands (seasonal or permanent) on property or adjacent properties? ☐ NO ☐ YES

Describe (include setback distances): \_\_\_\_\_

☐ Fish bearing ☐ Non fish bearing ☐ Seasonal Creek

☐ Irrigation ditch ☐ Wetland ☐ Pond/Lake ☐ Not identified

*(Note: Check buffers. Different zones have different setback requirements that may require a more extensive permitting process.)*

**Access:**

County or ODOT approach permit on file? ☐ NO ☐ YES, # \_\_\_\_\_

**Address:**

Address exists and has been verified to be correct?

☐ NO

☐ YES

Address needs to be assigned after approval?

☐ NO

☐ YES

**Fire District:** \_\_\_\_\_

**Fees (List Review Type and Cost):** \_\_\_\_\_



PLANNING DEPARTMENT

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FILE NUMBER: PLAZNC

FEE: \_\_\_\_\_

## ZONE CHANGE APPLICATION

Date Received: \_\_\_\_\_ Planner Initials: \_\_\_\_\_ Date Complete: \_\_\_\_\_ Planner Initials: \_\_\_\_\_

### Current Zoning

Comprehensive Plan Map Designation: FOREST

Zoning Designation: F.2 (80)

### Proposed Zoning

Comprehensive Plan Map Designation: FOREST- FARM

Zoning Designation: F.F (10)

Total Acreage to be Rezoned: 40.10

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. Describe how the original zoning was the product of a mistake; or
3. Establish that:
  - a. The rezoning will conform with the Comprehensive Plan (including but not limited to all applicable goals and policies); and,
    - Goal 1: Citizen Involvement
    - Goal 2: Land Use Planning
    - Goal 3: Agricultural Lands
    - Goal 4: Forest Lands
    - Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources
    - Goal 6: Air, Water and Land Resources Quality
    - Goal 7: Areas Subject to Natural Disasters and Hazards
    - Goal 8: Recreational Needs
    - Goal 9: Economy of the State
    - Goal 10: Housing
    - Goal 11: Public Facilities and Services
    - Goal 12: Transportation
    - Goal 13: Energy Conservation
    - Goal 14: Urbanization

- b. The site is suitable to the proposed zone (taking into consideration among other things slope, access, flooding, traffic, availability of public facilities and services, and impact to adjacent properties); and
  - c. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.
4. What effect would the proposed change have on surrounding properties? Include a description of the existing land uses within 1,000 feet of the proposed zone change.
  5. Is there a public need or demand to support this requested zone change? ☐ No ☐ Yes. If YES, please describe.
  6. Fire Safety. If converting Farm or Forest zoned land to a non-resource zone, include an analysis of how future division and residential development could meet fire safety standards.
  7. Any other information which may add to the viability of the request.

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#### SITE INFORMATION

The following maps shall be required for a complete application:

**Zoning Map:** Show area of proposed re-zoning.

**Soils Map:** If converting Forest or Farm zoned land to a non-resource zone include a soils map. These are available at the Wasco County GIS Department or the Farm Services Agency.

**Site Plan Map for the area to be rezoned and lands within at least 1000' that includes the following:**

- ☐ North Arrow
- ☐ Scale
- ☐ Boundaries or properties proposed to be rezoned (dimensions)
- ☐ All waterways, wetlands, noticeable landforms and drainage of property
- ☐ Structures (including dwelling, accessory buildings, barns, walls and fences) with location and size
- ☐ Utilities (existing)
  - Electric/Communication corridors including poles
  - Septic tanks & drain fields (primary and reserve)/Wells and supply lines
- ☐ All points of ingress and egress (roads and driveways) and whether they are public or private with their length, width and surface type
- ☐ Significant terrain features and land forms including slopes over 20%

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Zone Change will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set. A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

In case of Appeal: Written notice of the appeal must be filed with the Planning Director, within twelve (12) days of the subject decision. Forms are available at the Wasco County Planning Department.





**PLANNING DEPARTMENT**

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FILE NUMBER: **PLACPA-**\_\_\_\_\_

FEE: \_\_\_\_\_

## COMPREHENSIVE PLAN AMENDMENT

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>PROPOSED CHANGE</b>			

Indicate specific Comprehensive Plan section(s) or element(s) proposed to be amended or added:

Amend Comprehensive Plan to re-zone tax lot 2N 12E 22 4400 from F-2(80) to F-F(10)

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### FINDS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. A landowner or their representative may only initiate a quasi-judicial plan amendment. Describe how the proposal meets the standard of a quasi-judicial amendment and not a legislative amendment.

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership.

3. The amendment will be in compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable and substantial proof that such change shall not be detrimental to the spirit and intent of such goals. These goals include:

Goal 1: Citizen Involvement  
Goal 2: Land Use Planning  
Goal 3: Agricultural Lands  
Goal 4: Forest Lands  
Goal 5: Open Spaces, Scenic and Historic Areas  
and Natural Resources  
Goal 6: Air, Water and Land Resources Quality  
Goal 7: Areas Subject to Natural Disasters and Hazards

Goal 8: Recreational Needs  
Goal 9: Economy of the State  
Goal 10: Housing  
Goal 11: Public Facilities and Services  
Goal 12: Transportation  
Goal 13: Energy Conservation  
Goal 14: Urbanization

4. Demonstrate there was a mistake in the original comprehensive plan or change in the character of the neighborhood.
  5. Address factors which relate to the public need for healthful, safe and aesthetic surrounding and conditions.
  6. Include proof of change in the inventories originally developed.
  7. Amendment shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established. Provide additional studies and established need to justify the amendment.
- A response (findings of fact) to each of the questions above has been submitted? ☐ No ☒ YES

---

#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Comprehensive Plan Amendment will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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FILE NUMBER: PLAEXC

FEE: \_\_\_\_\_

## GOAL EXCEPTION APPLICATION

Date Received:

Planner Initials:

Date Complete:

Planner Initials:

### PROPOSED EXCEPTION

Indicate the Goal(s) for which the exception is requested:

Goal 4 - Forest Lands

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed goal exception?
2. Is there a public need or demand to support this requested Goal Exception? ☐ No ☐ Yes. If YES, please describe.
3. An exception is a decision to exclude certain land from the requirements of one or more applicable statewide goals. Goal Exceptions fall into three categories: Physically Developed; Irrevocably Committed; and Reasons.

Indicate which type of goal exception is being proposed and include findings for the review criteria listed below and any additional referenced criteria. These are directly from Oregon Administrative Rule and are available at [http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_004.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_004.html). Oregon Revised Statute criteria are available at <http://landru.leg.state.or.us/ors/>

a. Exception Requirements for Land Physically Developed to Other Uses

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**b. Exception Requirements for Land Irrevocably Committed to Other Uses**

- (1)** A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a)** A "committed exception" is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b)** For the purposes of this rule, an "exception area" is that area of land for which a "committed exception" is taken;
  - (c)** An "applicable goal," as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.
- (2)** Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:
  - (a)** The characteristics of the exception area;
  - (b)** The characteristics of the adjacent lands;
  - (c)** The relationship between the exception area and the lands adjacent to it; and
  - (d)** The other relevant factors set forth in OAR 660-004-0028(6).
- (3)** Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(1)(b), in Goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is "impossible." For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable:
  - (a)** Farm use as defined in ORS 215.203;
  - (b)** Propagation or harvesting of a forest product as specified in OAR 660-033-0120; and
  - (c)** Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).
- (4)** A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.
- (5)** Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.
- (6)** Findings of fact for a committed exception shall address the following factors:
  - (a)** Existing adjacent uses;
  - (b)** Existing public facilities and services (water and sewer lines, etc.);
  - (c)** Parcel size and ownership patterns of the exception area and adjacent lands:
    - (i)** Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels;

- (ii) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownerships are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.
  - (d) Neighborhood and regional characteristics;
  - (e) Natural or man-made features or other impediments separating the exception area from adjacent resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;
  - (f) Physical development according to OAR 660-004-0025; and
  - (g) Other relevant factors.
- (7) The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.
- (8) The requirement for a map or aerial photograph in section (7) of this rule only applies to the following committed exceptions:
  - (a) Those adopted or amended as required by a Continuance Order dated after the effective date of section (7) of this rule; and
  - (b) Those adopted or amended after the effective date of section (7) of this rule by a jurisdiction with an acknowledged comprehensive plan and land use regulations.
- c. Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)  
 An exception Under Goal 2, Part II(c) can be taken for any use not allowed by the applicable goal(s). The types of reasons that may or may not be used to justify certain types of uses not allowed on resource lands are set forth in the following sections of this rule:
  - (1) For uses not specifically provided for in subsequent sections of this rule or in OAR 660-012-0070 or chapter 660, division 14, the reasons shall justify why the state policy embodied in the applicable goals should not apply. Such reasons include but are not limited to the following:
    - (a) There is a demonstrated need for the proposed use or activity, based on one or more of the requirements of Goals 3 to 19; and either
    - (b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near the resource. An exception based on this subsection must include an analysis of the market area to be served by the proposed use or activity. That analysis must demonstrate that the proposed exception site is the only one within that market area at which the resource depended upon can reasonably be obtained; or
    - (c) The proposed use or activity has special features or qualities that necessitate its location on or near the proposed exception site.
  - (2) Rural Residential Development: For rural residential development the reasons cannot be based on market demand for housing, except as provided for in this section of this rule, assumed continuation of past urban and rural population distributions, or housing types and cost characteristics. A county must show why, based on the economic analysis in the plan, there are reasons for the type and density of housing planned which require this particular location on resource lands. A jurisdiction could justify an exception to allow residential development on resource land outside an urban growth boundary by determining that the rural



- location of the proposed residential development is necessary to satisfy the market demand for housing generated by existing or planned rural industrial, commercial, or other economic activity in the area.
- (3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts include, but are not limited to, the following:
- (a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports; or
  - (b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or
  - (c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.
- (4) Expansion of Unincorporated Communities: For the expansion of an Unincorporated Community defined under OAR 660-022-0010(10), appropriate reasons and facts include but are not limited to the following:
- (a) A demonstrated need for additional land in the community to accommodate a specific rural use based on Goals 3-19 and a demonstration that either:
    - (i) The use requires a location near a resource located on rural land; or
    - (ii) The use has special features necessitating its location in an expanded area of an existing unincorporated community, including:
      - (a) For industrial use, it would have a significant comparative advantage due to its location (i.e., near a rural energy facility, or near products available from other activities only in the surrounding area; or it is reliant on an existing work force in an existing unincorporated community);
      - (b) For residential use, the additional land is necessary to satisfy the need for additional housing in the community generated by existing industrial, commercial, or other economic activity in the surrounding area. The plan must include an economic analysis showing why the type and density of planned housing cannot be accommodated in an existing exception area or UGB, and is most appropriate at the particular proposed location. The reasons cannot be based on market demand for housing, nor on a projected continuation of past rural population distributions.
  - (b) Need must be coordinated and consistent with the comprehensive plan for other exception areas, unincorporated communities, and UGBs in the area. Area encompasses those communities, exception areas, and UGBs which may be affected by an expansion of a community boundary, taking into account market, economic, and other relevant factors;
  - (c) Expansion requires demonstrated ability to serve both the expanded area and any remaining infill development potential in the community at time of development with the level of facilities determined to be appropriate for the existing unincorporated community.
- (5) Expansion of Urban Unincorporated Communities: Expansion of an urban unincorporated community defined under OAR 660-022-0010(9) shall comply with OAR 660-022-0040.

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information pursuant to the attached instructions. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Goal Exception will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

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P:\Development Applications\GoalException.docx

Last Updated 7/13/2017

**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells, and there is a well on the subject property serving the existing residence and associated accessory buildings. The general conclusion of the Groundwater Study is that this area has capacity to support additional residential development. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the



TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

- 1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."
- 1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

1.3. The following provisions apply and are addressed in the following sections.

1.4. Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

1.5. Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

1.6. The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_)

### **1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is "To maintain and improve the quality of the air, water and land resources of the state." The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is "To protect people and property from natural hazards." Goal 7 calls for local governments to adopt measures "to reduce risk to people and property from natural hazards." The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts." If the zoning is changed to F-F(10), "Parks, playgrounds, hunting and fishing preserves and campgrounds" would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is "To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens." The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is "To provide for the housing needs of citizens of the state." The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid- Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the



area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

"1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - "TPR"). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and



(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 Forest Lands.”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 north south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## 2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### 2.3.1 OAR 660-004-0028(1) provides:

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### 2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### 2.3.3 (b) “the characteristics of the adjacent lands;”

#### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911;

Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.



The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

#### 2.3.4 (c) The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of

these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

- (a) Farm use as defined in ORS 215.203;
- (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;
- (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other

agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice." Webster's New World Dictionary, 2nd College Edition, 1980. Capable means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (unabridged ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of "forest products" can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores."

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, "peripheral" farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared

for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject



property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas

to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6** (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7** “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3 OAR 660-004-0040(6) and (7) provide:**

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;



(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

"Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);"

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<sup>1</sup> Missing text in published version of Section 9.010.

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable

plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff s office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

### Goal 12-Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road

is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property, which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and



increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.





## SOIL INTERPRETATIONS RECORD

49C WAHIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

FROST-FREE PERIOD IS 100 TO 150 DAYS.											
ESTIMATED SOIL PROPERTIES											
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLAS- TICITY INDEX					
0-7	IL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5	
7-28	IL, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5	
28-44	IL, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10	
44	UWB										
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM3)	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS (I)	WIND EROD. GROUP (PCI)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	1-2	MODERATE
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43			LOW
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43			
44											
FLOODING			HIGH WATER TABLE		CEMENTED PAV.	BEDROCK	SURF SLOPE		HYDRO- POTENTIAL		
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	DEPTH (IN)	HARDNESS	DEPTH (IN)	INITIAL	TOTAL	GROUP	ACTION
NONE		26.0				-	140-60	HARD	-	-	B MODERATE
SANITARY FACILITIES						CONSTRUCTION MATERIAL					
SEVERE-PERCS SLOWLY						FAIR-AREA RECLAIM, THIN LAYER					
SEPTIC TANK ABSORPTION FIELDS						ROADFILL					
SEVERE-SLOPE						IMPROBABLE-EXCESS FINES					
SEWAGE LAGOON AREAS						SAND					
SEVERE-DEPTH TO ROCK						IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (TRENCH)						GRAVEL					
MODERATE-DEPTH TO ROCK, SLOPE						FAIR-SLOPE					
SANITARY LANDFILL (AREA)						TOPSOIL					
FAIR-AREA RECLAIM, SLOPE, THIN LAYER											
DAILY COVER FOR LANDFILL						POND RESERVOIR AREA					
						SEVERE-SLOPE					
BUILDING SITE DEVELOPMENT											
MODERATE-DEPTH TO ROCK, SLOPE						SEVERE-PIPING					
SHALLOW EXCAVATIONS						EMBANKMENTS DIKES AND LEVEES					
MODERATE-SLOPE						SEVERE-NO WATER					
DWELLINGS WITHOUT BASEMENTS						EXCAVATED PONDS AQUIFER FED					
MODERATE-DEPTH TO ROCK, SLOPE						DEEP TO WATER					
DWELLINGS WITH BASEMENTS						DRAINAGE					
SEVERE-SLOPE						SLOPE, ERODES EASILY					
SMALL COMMERCIAL BUILDINGS						IRRIGATION					
MODERATE-SLOPE, FROST ACTION						SLOPE, ERODES EASILY					
LOCAL ROADS AND STREETS						TERRACES AND DIVERSIONS					
MODERATE-SLOPE						SLOPE, ERODES EASILY					
LAWNS, LANDSCAPING AND GOLF FAIRWAYS						GRASSED WATERWAYS					

RECREATIONAL DEVELOPMENT												
CAMP AREAS	MODERATE-SLOPE, DUSTY					PLAYGROUNDS		SEVERE-SLOPE				
PICNIC AREAS	MODERATE-SLOPE, DUSTY					PATHS AND TRAILS		SEVERE-ERODES EASILY				
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)												
	CAPA-BILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)									
	NI	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	
	4E	35	1.5									
<i>Severe limitations (e) erosion</i>												
WOODLAND SUITABILITY												
ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORTALITY	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY		TREES TO PLANT				
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK		170. PONDEROSA PINE				
<i>4 cubic yds / 1000 lbs / 1000 ft</i>												
WINDBREAKS												
SPECIES		IHT	SPECIES		IHT	SPECIES		IHT	SPECIES		IHT	
NONE												
WILDLIFE HABITAT SUITABILITY												
POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:						
GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWOOD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPEN WETLAND	WOODLAND	WETLAND	RANGELAND	
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	-	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)												
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)										
IDAHO FESCUE	FE10	45										
BLUEBUNCH WHEATGRASS	AGSP	10										
SANDBERG BLUEGRASS	POSE	5										
NARROWLEAF BALSAMROOT	BASA3	2										
ANTELOPE BITTERBRUSH	PUTR2	10										
OREGON WHITE OAK	QUGA4	5										
PONDEROSA PINE	PIPO	5										
POTENTIAL PRODUCTION (LBS./AC. DRY WT):												
FAVORABLE YEARS		950										
NORMAL YEARS		800										
UNFAVORABLE YEARS		450										

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES											
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLAS- TICITY				
					4 10 40 200		INDEX				
0-7 IL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5				
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5				
28-44 IL, SCL		ML	A-4	0	95-100 95-100 90-95 55-75	30-35	5-10				
44 LUWB											
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL K I T	EROSION WIND FACTORS EROD. MATTER GROUP (PCT)	CORROSIVITY STEEL CONCRETE		
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43			
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43			
44											
FLOODING											
HIGH WATER TABLE				CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	DEPTH (IN)	ACTION
NONE			>6.0					10-50	HARD		MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY, SLOPE			ROADFILL	FAIR-AREA RECLAIM, THIN LAYER, SLOPE		
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE			POND RESERVOIR AREA	SEVERE-SLOPE		
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER		
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			DRAINAGE	DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			GRASSED WATERWAYS	SLOPE, ERODES EASILY		

RECREATIONAL DEVELOPMENT													
CAMP AREAS	SEVERE-SLOPE					PLAYGROUNDS				SEVERE-SLOPE			
PICNIC AREAS	SEVERE-SLOPE					PATHS AND TRAILS				SEVERE-ERODES EASILY			
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)													
	CAPA-BILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)										
	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR
	4E	35	1.5										
WOODLAND SUITABILITY													
ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY					TREES TO PLANT		
	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT.Y.	WINDTH. HAZARD	PLANT COMPET.	COMMON TREES					ISITE INDEX	TREES TO PLANT	
4A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK					70	PONDEROSA PINE	
WINDBREAKS													
	SPECIES	INT		SPECIES	INT		SPECIES	INT		SPECIES	INT		
	NONE												
WILDLIFE HABITAT SUITABILITY													
	POTENTIAL FOR HABITAT ELEMENTS					POTENTIAL AS HABITAT FOR:							
	GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD	WOODLD	WETLAND	RANGELD	
	POOR	FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)													
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)											
IDAHO FESCUE	FEID	45											
SANDBERG BLUEGRASS	POSE	5											
BLUEBUNCH WHEATGRASS	AGSP	10											
NARROWLEAF BALSAMROOT	BASA3	2											
ANTELOPE BITTERBRUSH	PUTR2	10											
OREGON WHITE OAK	OUGA4	5											
PONDEROSA PINE	PIPO	5											
POTENTIAL PRODUCTION (LBS./AC. DRY WT):													
FAVORABLE YEARS		950											
NORMAL YEARS		800											
UNFAVORABLE YEARS		450											
FOOTNOTES													

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

RECEIVED 9-25-92  
FROM ODF

Ponderosa Pine Site Classes and Site Index Table  
Compared with Cubic Foot Site Classes

	Site Index												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Site Index →													
Potential Yield Cubic Feet Per Acre Gross Cubic Foot	20	20-49			50-84		85-119		120-164		165-224		225+
Cubic Foot Site Class	7	6			5		4		3		2		1

Red Fir - Noble Fir - Pacific Silver Fir Site Index and  
Cubic Foot Site Class Table (Forest Survey)

	Site Index				
	20	30	40	50	60
Potential Yield Cubic Feet/Acre	50-84	85-119	120-164	165-224	
Cubic Foot Site Class	5	4	3	2	

Sitka Spruce Site Index and Cubic Foot  
Site Class Table (Forest Survey)

	Site Index														
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
Potential Yield Cubic Feet/Acre	20-49	50-84		85-119		120-164		165-224			225+				
Cubic Foot Site Class	6	5		4		3		2			1				



**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.



## BACKGROUND INFORMATION

### PROPERTY OWNERS:

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### PUBLIC FACILITIES AND SERVICES:

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLISA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLISA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLISA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLISA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."

1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm

uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

1.3. The following provisions apply and are addressed in the following sections.

1.4. Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

1.5. Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

1.6. The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_\_\_\_)

#### **1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.

6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception



is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built

and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most

appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

“1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - “TPR”). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.



3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## 1.9 Procedures for a Plan Amendment.

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 'Forest Lands.’”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 feet north/south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.



The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other commercial agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot

sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## **2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.**

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### **2.3.1 OAR 660-004-0028(1) provides:**

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### **2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:**

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### **2.3.3 (b) “the characteristics of the adjacent lands;”**

### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the

parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911; Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the

area. The subject property has never produced merchantable timber or been logged commercially.

**2.3.4 (c)** The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;



(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice.” Webster’s New World Dictionary, 2nd College Edition, 1980. Capable means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (unabridged ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject

parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of “forest products” can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.”

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons

explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

**2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be

irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current

designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

2.3.9.6 (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

2.3.9.7 “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.



**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3** OAR 660-004-0040(6) and (7) provide:

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

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**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

“Application for a zone change may be initiated as follows:

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C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);”

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process

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<sup>1</sup> Missing text in published version of Section 9.010.



there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject

property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

#### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

#### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

#### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

#### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

#### Goal 12 -Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

#### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

#### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property,

which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

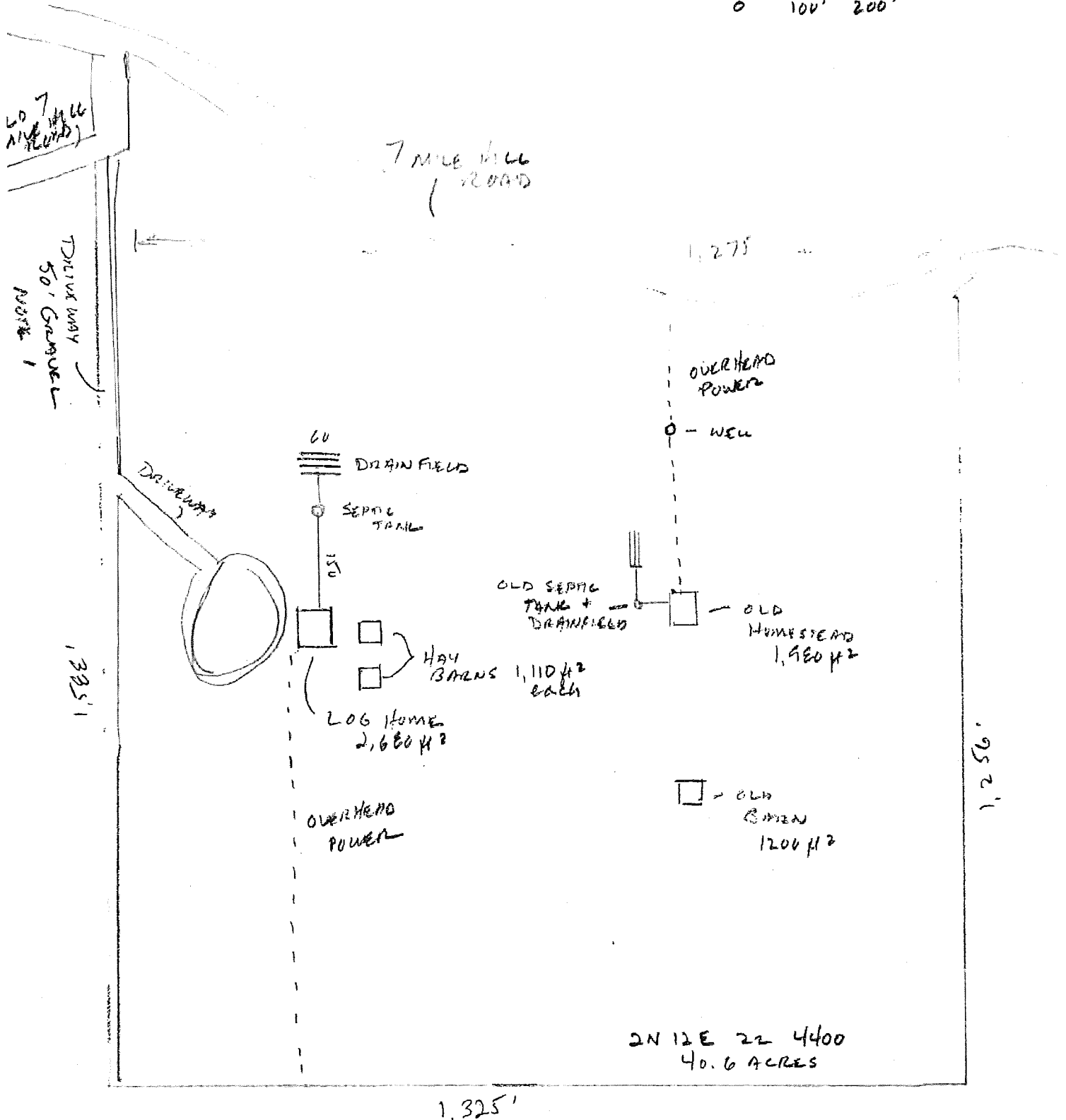
## CONCLUSION

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.



AN

SCALE: 20





STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.785)

RECEIVED

WASC  
003105

24/2E-22cb

APR 20 1987

(1) OWNER:

Name Richard J. Murray Well Number: \_\_\_\_\_  
Address 2175 Ridge Rd WATER RESOURCES DEPT  
City The Dalles, State Oregon Zip 97058 SALEM, OREGON

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other \_\_\_\_\_

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other \_\_\_\_\_

BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 3/20 ft.  
Explosives used ☐ Yes ☒ No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount
meter	From	To	Material	From	To	sacks or pounds
12	0	24	Bentonite	0	24	700#

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other \_\_\_\_\_ Rodded

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:

☐ Perforations Method \_\_\_\_\_  
☐ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing ☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done? ☐ Yes By whom NO  
Did any strata contain water not suitable for intended use? ☒ Too little  
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:

County Wasco Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Seven Mile Rd

(10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

From	To	Estimated Flow Rate	SWL
230	270	5	
334	350	2 1/2 50	150

(12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number 606  
Signed \_\_\_\_\_ Date 4/17/87

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 4/17/87

WHITE COPIES - WATER RESOURCES DEPARTMENT

YELLOW COPY - CONSTRUCTOR

PINK COPY - CUSTOMER

9809C 10/86

Planning Commission Agenda Packet

March 16, 2022  
December 7, 2021

PCC 1 284

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Please type or print)

(Do not write above this line)

WV4500

State Well No. 2N-12E-22

State Permit No. ....

003111

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

New Well ☐ Deepening ☐ Reconditioning ☒ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

Rotary	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Jetted	<input type="checkbox"/>
Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

**CASING INSTALLED:** Threaded ☐ Welded ☒

8" Diam. from 0 ft. to 43 ft. Gage 250

6" Diam. from 0 ft. to 110 ft. Gage 250

" Diam. from ft. to ft. Gage

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name .....

Type ..... Model No. ....

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller  
Yield: 60 gal./min. with 100 ft. drawdown after 2 hrs.  
" " "  
" " "  
" " "  
Ballor test gal./min. with ft. drawdown after hrs.  
Artesian flow g.p.m.

Well seal—Material used Cement  
Well sealed from land surface to 42 ft.  
Diameter of well bore to bottom of seal 12 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite Yellowstone  
Number of pounds of bentonite per 100 gallons  
of water 65 lbs./100 gals  
Was a drive shoe used? ☒ Yes ☐ No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water? ☐ Yes ☒ No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed? ☐ Yes ☒ No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

County	Wasco	Driller's well number
NW ¼ SW ¼ Section	22 T. 2N R. 12 E	E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road

Depth at which water was first found 25 ft.  
 Static level 33 ft. below land surface. Date 7-23-74  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

Cleaned out \_\_\_\_\_  
Depth drilled \_\_\_\_\_ ft. Depth of completed well 320 ft.

**Formation:** Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

[illegible]

Work started	7-16	1974	Completed	7-22	1974
Date well drilling machine moved off of well				7-23	1974

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] William Clayton Date Oct. 30 1975  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 129

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt 1, Box 61-A, The Dalles, Ore.

[Signed] Gilbert Clayton  
(Water Well Contractor)  
Contractor's License No. 569 Date Oct. 30, 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

SP\*45656-119

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

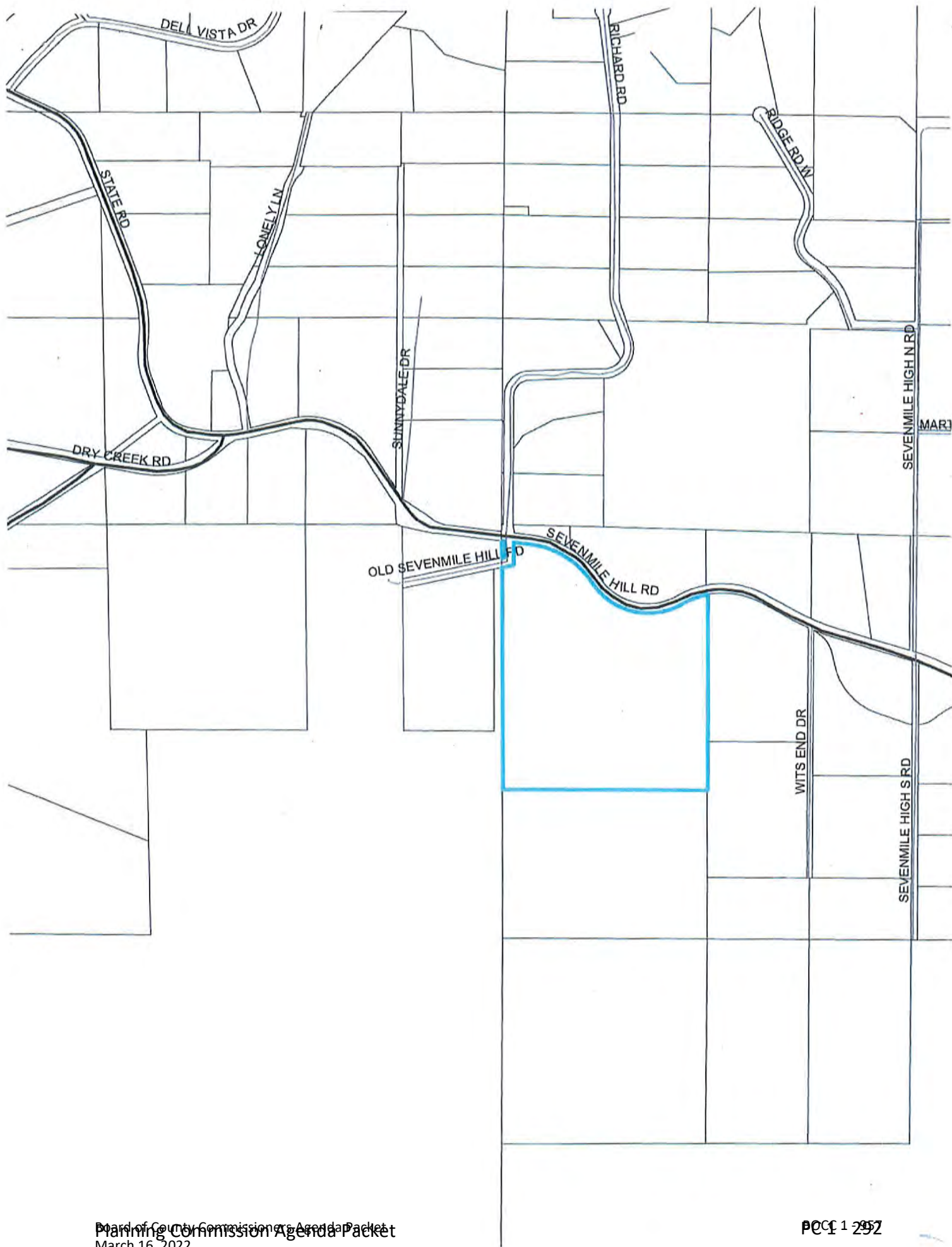
STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Please type or print)

State Permit No.

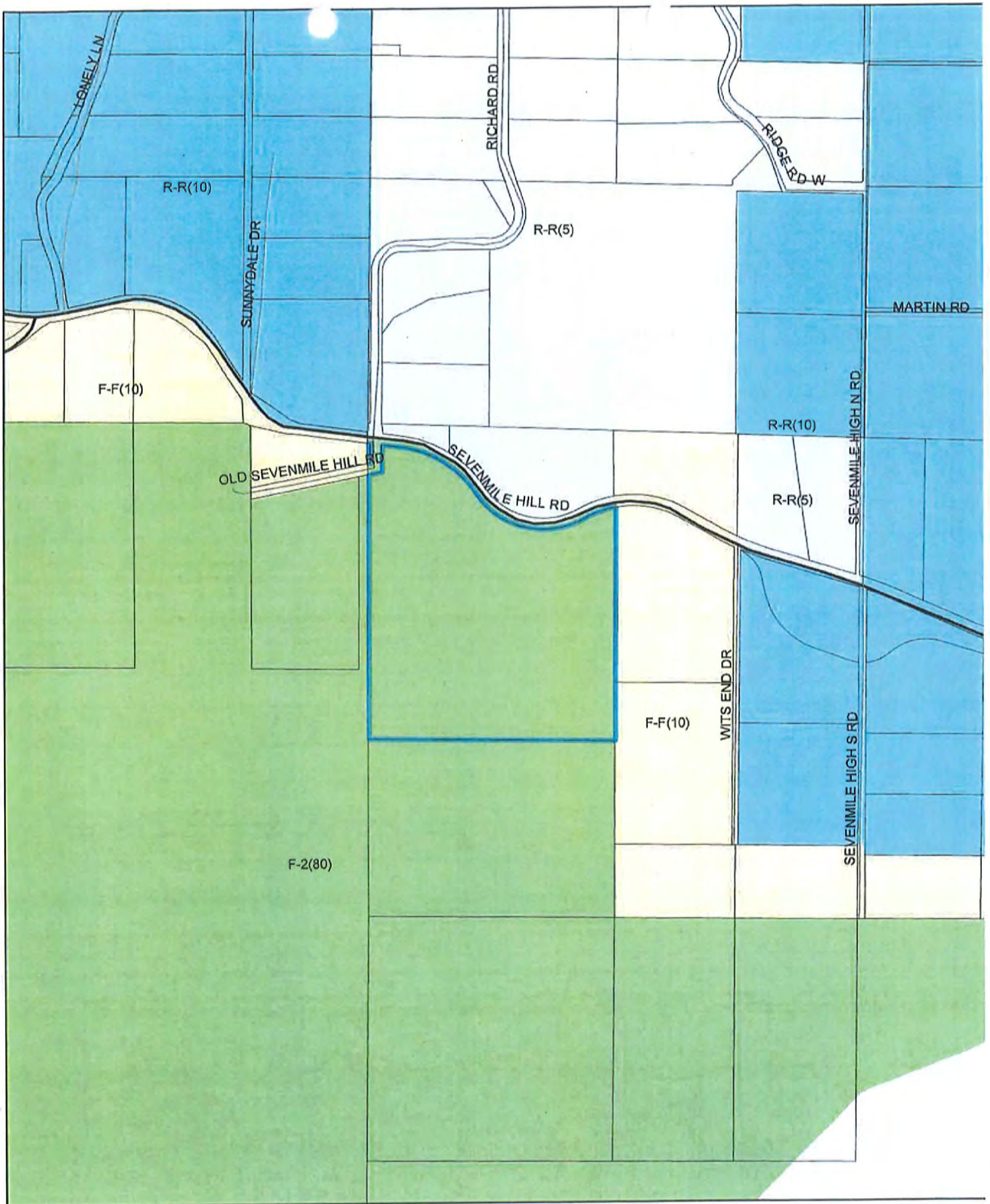
(Do not write above this line) SALEM, OREGON

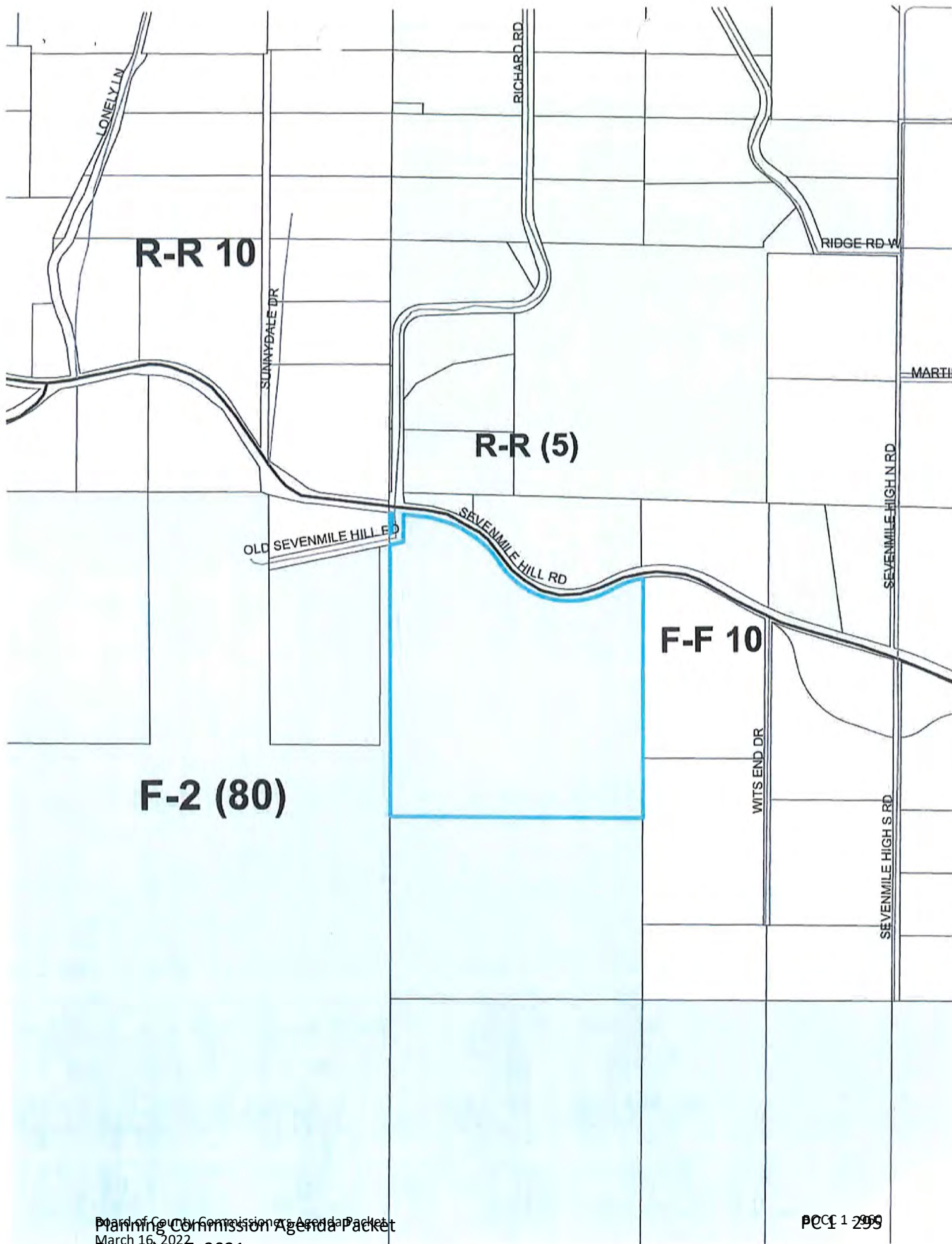




















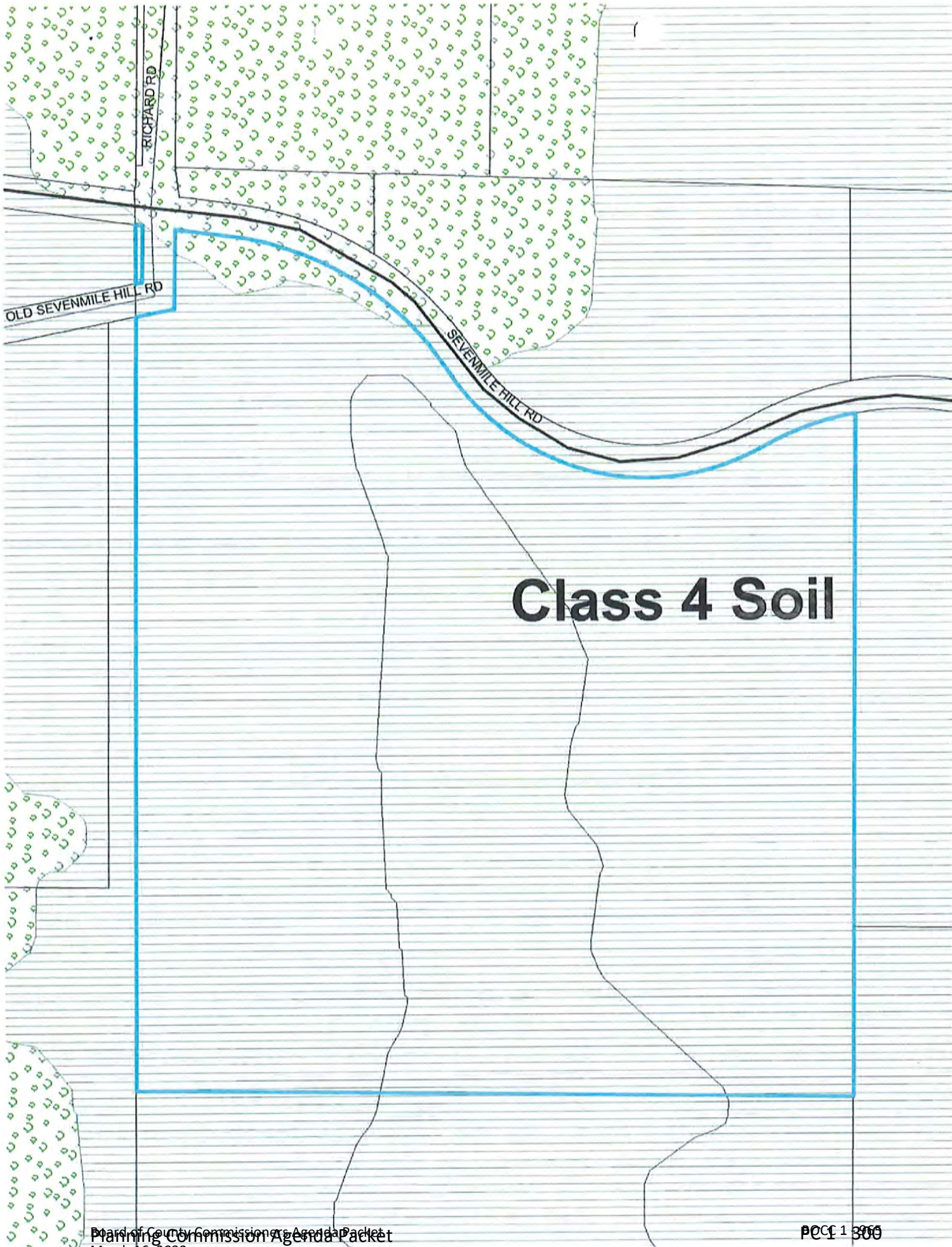




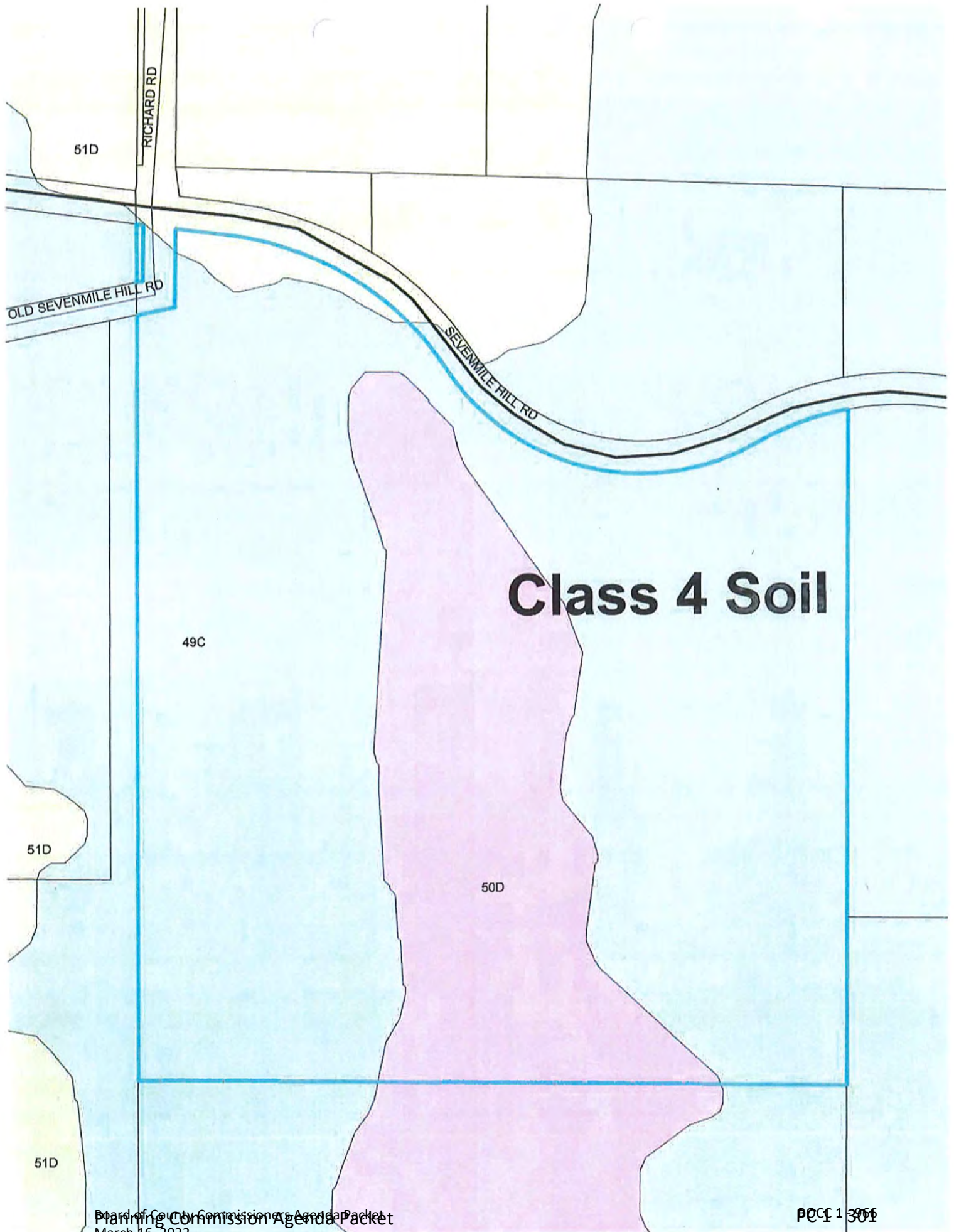




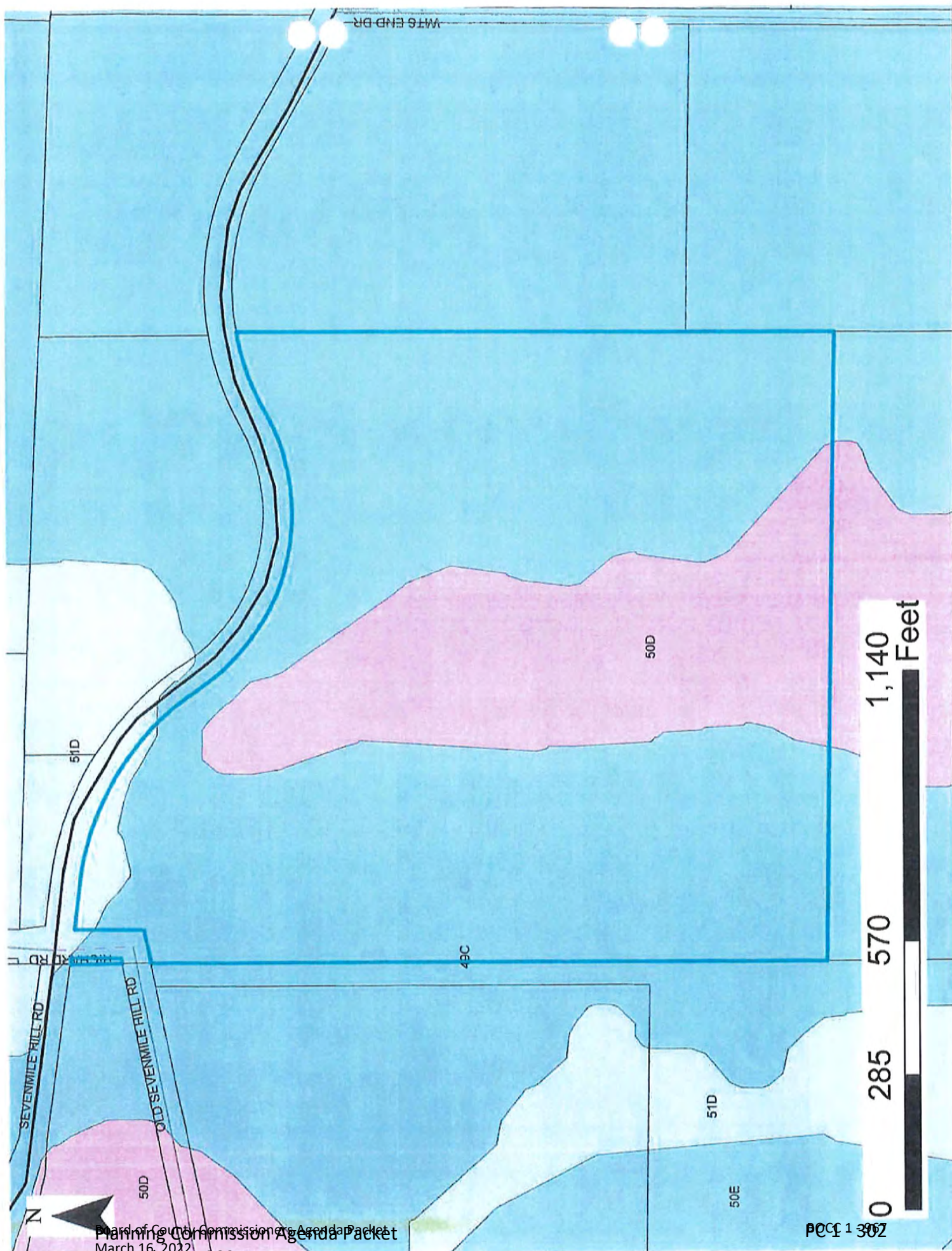












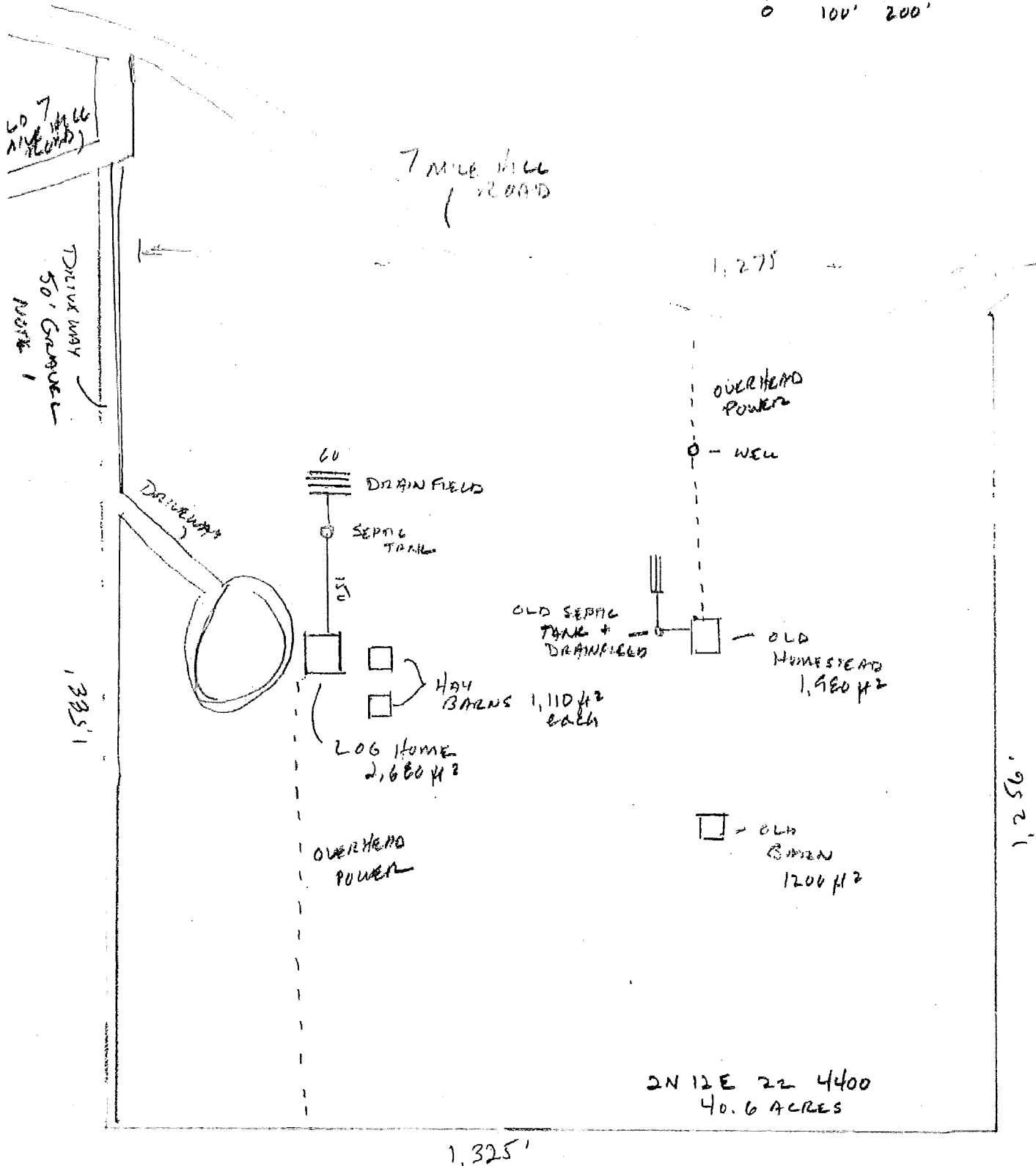


# WISON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'



## ATTACHMENT D – EXHIBIT 4

“Remand Letter”

# PHILLIPS REYNIER SUMERFIELD & CLINE, LLP

DEBORAH M. PHILLIPS  
RONALD H. REYNIER  
WILLIAM H. SUMERFIELD  
JULIE L. CLINE

ATTORNEYS AT LAW  
P. O. BOX 758  
718 STATE STREET  
HOOD RIVER, OREGON 97031

(541) 386-4264  
FAX: (541) 386-2557  
E-MAIL: [bill@phillipsreynier.com](mailto:bill@phillipsreynier.com)

Licensed in Oregon & Washington

July 9, 2021

Kelly Howsley-Glover, Interim Director  
Wasco County Planning Department  
2705 E. Second Street  
The Dalles, OR 97058

**Hand Delivered**

RE: **PLAQJR-15-09-0002**  
**921-18-000086-PLNG**  
**LUBA No. 2019-065**

David Wilson zone change, comprehensive plan amendment, and goal exception applications – remand hearing

Greetings,

I represent the applicant, David Wilson, in the above matters. By decision dated January 14, 2020, LUBA remanded the above zone change approval. Mr. Wilson is prepared to proceed with the remand hearing, and submits the following new evidence for consideration. Applicant also anticipates submitting written argument prior to the hearing, and appearing at the hearing to present the new evidence and make argument. All of the matters raised in this letter will be addressed in more detail in the written argument to be submitted prior to the hearing.

The remand hearing fee of \$350.00 is included with this letter.

## **Soils Assessment**

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.<sup>1</sup>

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. A complete copy of Mr.

<sup>1</sup> Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error.



Kitzrow's report and DLCD's review is included with this letter for inclusion in evidence and consideration on remand.

### **Aerial Photo of Subject Property and Adjoining Area**

Previous aerial photos submitted tended to focus tightly on the subject property and on the adjoining residential enclaves. There are lands west and south of the subject parcel which are zoned for resource use, and a portion of those lands are in commercial timber production. LUBA faulted the county for failing to adequately address those lands:

"The findings do not address at all the relationship of the subject property to the adjacent approximately 450 acres of F-2 zoned lands located to the west of the subject property that are in timber production and/or that possess soils suitable for forestry production, or the approximately 2,000 acres of resource land that are in forest use located immediately south of intervenor's 69-acre adjacent F-2 parcel to the south of the subject property, or the potential for resources use of the property in conjunction with the adjacent F-2 zoned properties." *LUBA decision, p. 12, lines 1-8.*

What the local decision-making bodies knew, and what LUBA failed to grasp, is that there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property and lands immediately adjacent to the south and west of the subject property. This aerial photo, taken with a much wider perspective, clearly shows the literal moonscape nature of the adjoining properties south of the subject property.

### **Physically Developed Map & Area Calculations**

On appeal, Appellants claimed, and LUBA accepted the claim, that only approximately 12 percent of the subject property was physically developed, while more than 87 percent of the property was undeveloped. LUBA cited the administrative rule discussing the necessary findings:

"Whether land has been physically developed with uses not allowed by an applicable goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception." OAR 660-004-0025(2).

While there is a comprehensive site plan in the record which formed the basis for the County's findings,<sup>2</sup> Applicant submits a more comprehensive map with this letter for additional clarity.

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<sup>2</sup> Record on Appeal at 215.



Wasco County Planning Department  
July 9, 2021  
Wilson Remand Hearing

In the previous hearings, Applicant testified as to his knowledge of applicable buffers, and argued that common sense required recognition of reasonable buffers around such development as power lines, structures, and septic drain fields. The county decision makers accepted that argument. LUBA was not impressed by this application of common sense:

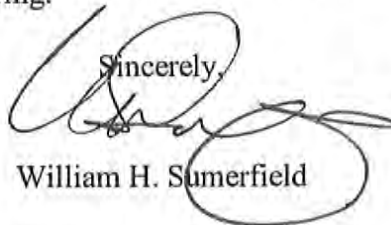
“Intervenor responds that managing the subject property for commercial forestry would require ‘extensive’ fire buffers along the eastern and northern borders that are adjacent to developed residential areas and around the existing dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points out that ‘two strings’ of overhead power lines are located on the property, and that forestry uses would require a buffer from those lines. *Id.* We understand intervenor to argue that such extensive buffers mean that the property is ‘physically developed to the extent it is no longer available’ for forestry uses.

\*\*\*\*\*

Further, we agree with petitioners that the county’s decision is not supported by substantial evidence in the record, where the evidence in the record is that the property has available at least 87 percent of its area for forestry. Intervenor does not attempt to quantify the amount of buffer that would be required to conduct forestry uses or quantify the amount by which that buffer would decrease the amount of property available for forestry uses to such an extent that the property ‘is no longer available for forestry uses.’ We conclude that the county’s findings in support of its approval of a physically developed exception are not supported by substantial evidence in the record.”

Applicant takes LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. Applicant has again discussed the powerline buffer with the power company (15’ from centerline), and has applied those in the attached calculations, in addition to a 50’ buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50’ buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Please add this letter and supporting materials to the record on remand. I look forward to working with you to schedule a hearing.

Sincerely,  
  
William H. Sumerfield

WHS/

Enclosures (*Soils Assessment, Aerial Photo, Development Map, Developed Area Calculations*)

## Power Lines

15' either side from center line

10,024 linear feet x 30' = 300,730 ft<sup>2</sup>

## Structures

50' each side from dimensions below

Log Home 80 x 100 = 36,000 ft<sup>2</sup>

Barn #1 24 x 35 = 16,740 ft<sup>2</sup>

Barn #2 30 x 30 = 16,900 ft<sup>2</sup>

Lean To 16 x 30 = 15,627 ft<sup>2</sup>

Old Homestead Home 55 x 55 = 24,025 ft<sup>2</sup>

Old Homestead Barn 25 x 55 = 16,875 ft<sup>2</sup>

**Total square footage developed area 426,887 ft<sup>2</sup>**

40 acres = 1,742,700 ft<sup>2</sup>

**426,887/1,740,700 = .2452 (24.52% of total area)**

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

50' buffer along 7 Mile Hill Road = 65,000 ft<sup>2</sup>

50' buffer along driveway easement = 79,300 ft<sup>2</sup>

**571,187/1,740,700 = .3281 (32.81% of total area)**

## ATTACHMENT D – EXHIBIT 5

Arthur Smith, Wasco County Public Works Director

Melanie Brown, Wasco County Chief Appraiser

Hilary Foote, Oregon Land Conservation and Development (DLCD) Farm Forest Specialist



Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## Fire Fuel Break for County Roads

2 messages

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: Arthur Smith <arthurs@co.wasco.or.us>

Mon, Nov 15, 2021 at 10:00 AM

Hi Arthur,

I hope you had a great weekend.

I'm hoping you can help. Do you have rules regarding fire fuel breaks along County Roads? We have a fire fuel break rule (10' from center line) for private access driveways, but nothing regarding public roads (or at least that I can find).

Thanks.

Respectfully,

Daniel

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058



### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

**Arthur Smith** <arthurs@co.wasco.or.us>  
To: Daniel Dougherty <daniel@co.wasco.or.us>

Mon, Nov 15, 2021 at 10:19 AM

Daniel,

We do not have a fire break rule. The county is obligated to prevent obstruction of a publicly dedicated road, but there is no language about fire protection - people can't block a road, it must remain open for travel. However, the county is not obligated to care for or maintain public or private roads, just county roads.

Most county roads are only 22-24 feet in width, but have a 50-60 foot dedicated right-of-way which we manage. We try to keep a clear zone of 4-6 feet on each side of the county road. This is more for vehicular safety than fire protection. We

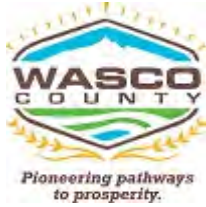
have the right to remove trees, bushes and other vegetation if we deem it is necessary for safety or if the tree represents a road hazard.

Hope this helps.

Arthur

[Quoted text hidden]

--



**Arthur Smith | Director**  
**PUBLIC WORKS**

[arthurs@co.wasco.or.us](mailto:arthurs@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)

541-506-2645 | Fax 541-506-2641

2705 East 2nd Street | The Dalles, OR 97058





Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

---

## Farm/Forest Deferral Question

---

**Melanie Brown** <melanieb@co.wasco.or.us>

Wed, Nov 24, 2021 at 10:11 AM

To: Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

Daniel,

The account you are requesting information about should be in the name of David W Wilson. His property is in applied for Farm Use. He has to support a qualifying income and it can't be a hobby farm. We send out Income Questionnaires every 3 years, which we will be sending them out next month for the 2022-23 tax year. He did meet the income requirement 3 years ago. According to what he does as a farming practice, he raises livestock and sells enough of them to qualify.

I hope this answers your question. Let me know if you have any other questions. Just thought I would let you know that I am working on a new Property Class list. This should be easier to figure out than the one I had previously sent to you.

Have a great Turkey Day!!

[Quoted text hidden]

--

**Melanie J. Brown**

Wasco County

Chief Appraiser

541-506-2514

[MelanieB@co.wasco.or.us](mailto:MelanieB@co.wasco.or.us)

Email is the best way to reach me! In an effort to prevent, slow, and stop the spread of COVID-19 to our citizens and staff, our office will be limiting business to phone, email and online service. Please keep in mind that response time may vary. Thank you for your patience during this time.



Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## Inquiry: Soil Assessment Completeness Review

5 messages

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: hilary.foote@state.or.us

Tue, Oct 26, 2021 at 9:05 AM

Good morning,

I hope this email finds you well.

My name is Daniel, a planner with Wasco County. I'm currently reviewing a land use request for a zone/map change for forest lands. The original request was approved, appealed to LUBA, and remanded back to the county in January 2020. The applicant has requested a remand hearing and has provided the following information (see attached Pdf):

- (1) Soil Assessment Completeness Review; and
- (2) Soil Survey Report & Legal Liability Release Form

Considering that I was not the original reviewing planner, and both the underlying request and soil survey are rare (at least in Wasco County), I wanted to reach out and make sure that the Soil Assessment Completeness Review Letter is all that DLCD provides. From what I've read, I believe that DLCD's role is to ensure the Soil Assessment's report is complete and consistent, and that the local jurisdiction gets to make its own determination as to the survey's accuracy and acceptability.

I appreciate your time and assistance.

Respectfully,

Daniel

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058



### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

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*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*



07132021\_Remand\_Request\_Soil\_Data\_921-18-000086-PLNG.pdf  
19529K

**FOOTE Hilary \* DLCD** <Hilary.FOOTE@dlcd.oregon.gov>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Tue, Oct 26, 2021 at 9:36 AM

Hi Daniel,

Your understanding is correct. We do not review for technical accuracy – only completeness. I note that the report indicates the property is zoned EFU, not Forest however. Is this a changed from EFU to Forest?

I'm attaching the document that is referenced in OAR 660-006-0005 for addressing data sources for determining forest productivity.

**Hilary Foote**



Farm/Forest Specialist | Community Services Division  
Oregon Department of Land Conservation and Development  
635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540  
Cell: 503-881-9249 [hilary.foote@dlcd.oregon.gov](mailto:hilary.foote@dlcd.oregon.gov) | [www.oregon.gov/LCD](http://www.oregon.gov/LCD)

**From:** Daniel Dougherty <danield@co.wasco.or.us>  
**Sent:** Tuesday, October 26, 2021 9:05 AM  
**To:** FOOTE Hilary \* DLCD <Hilary.FOOTE@dlcd.oregon.gov>  
**Subject:** Inquiry: Soil Assessment Completeness Review

Good morning,

I hope this email finds you well.

My name is Daniel, a planner with Wasco County. I'm currently reviewing a land use request for a zone/map change for forest lands. The original request was approved, appealed to LUBA, and remanded back to the county in January 2020. The applicant has requested a remand hearing and has provided the following information (see attached Pdf):

- (1) Soil Assessment Completeness Review; and
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that DLCD provides. From what I've read, I believe that DLCD's role is to ensure the Soil Assessment's report is complete and consistent, and that the local jurisdiction gets to make its own determination as to the survey's accuracy and acceptability.

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Respectfully,

Daniel

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**Daniel Dougherty | Senior Planner**

**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

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**LandUsePlanningNotes3FINAL.pdf**

197K

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: FOOTE Hilary \* DLCD <Hilary.FOOTE@dlcd.oregon.gov>

Tue, Oct 26, 2021 at 9:44 AM

Hi Hilary,

Board of County Commissioners Agenda Packet

December 7, 2021

PCC 1 399

Thank you for the assistance. The subject parcel is currently zoned F-2 (80) Forest. The request is to take the parcel out of Forest and place it within our non-resource Forest-Farm F-F(10) zone.

Respectfully,

Daniel

[Quoted text hidden]

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

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**FOOTE Hilary \* DLCD** <Hilary.FOOTE@dlcd.oregon.gov>  
To: Daniel Dougherty <daniel@co.wasco.or.us>

Tue, Oct 26, 2021 at 10:05 AM

For nonresource determination, OAR 660-006-0010 and the PDF I attached would apply to evidence addressing a forest land determination and OAR 660-033-0030 and the provided soils report would be evidence addressing an agricultural land determination then.

[Quoted text hidden]

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: FOOTE Hilary \* DLCD <Hilary.FOOTE@dlcd.oregon.gov>

Tue, Oct 26, 2021 at 10:19 AM

Excellent. Thank you so much.

Respectfully,

Daniel

[Quoted text hidden]

--



**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>



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## ATTACHMENT D – EXHIBIT 6

“Partition Plat 2017-003560”

# PARTITION PLAT

WASCO COUNTY  
SURVEYOR'S OFFICE

Survey No. 19-062  
Filed 9/8/2017  
By RE

RECORDING INFORMATION

Wasco County Official Records 2017-003560  
PLAT-PART  
Crt=1 Stn=1 WASCO COUNTY 09/08/2017 01:46 PM  
This is a no fee document NO FEE

00083910201700035600020023

I, Lisa Gamble, County Clerk for Wasco County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.

Document Number 2017-003560  
Plat Number 2017-0010  
Slide Number D152A

DECLARATION:

WE, DAVID AND JOLENE WILSON, THE OWNERS OF THE LAND SHOWN HEREIN, HEREBY DECLARE THAT THIS DIVISION OF LAND IS A LEGAL PLAT PARTITIONED IN ACCORDANCE WITH THE PROVISIONS OF ORS CHAPTER 92 AND HAS BEEN MADE WITH OUR FREE CONSENT AND IN ACCORDANCE WITH OUR DESIRES AND BY THIS PLAT CREATE THE PRIVATE EASEMENT SHOWN HEREON FOR THE STATED PURPOSE.

David Wilson 9/7/17  
David Wilson Date  
Jolene Wilson 9/7/17  
Jolene Wilson Date

ACKNOWLEDGEMENT:

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE 1<sup>st</sup> DAY OF SEPTEMBER, 2017 BY DAVID AND JOLENE WILSON

BENJAMIN B. BESEDA  
Notary signature  
BENJAMIN B. BESEDA  
NOTARY PUBLIC - OREGON  
COMMISSION NO. 951036  
MY COMMISSION EXPIRES MAY 30, 2020

I HEREBY CERTIFY THIS PARTITION WAS EXAMINED AND APPROVED AS OF THIS 8<sup>th</sup> DAY OF SEPTEMBER, 2017

Brian  
WASCO COUNTY SURVEYOR

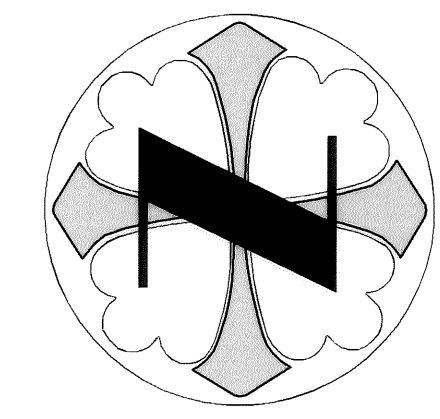
I HEREBY CERTIFY THIS PARTITION WAS EXAMINED AND APPROVED AS OF THIS 8<sup>th</sup> DAY OF SEPTEMBER, 2017

Jim Hahn FOR AB  
PLANNING DIRECTOR  
PLAPAR-17-05-0002

I HEREBY CERTIFY THIS PARTITION WAS EXAMINED AND APPROVED AS OF THIS 8<sup>th</sup> DAY OF SEPTEMBER, 2017

Jill Ames  
WASCO COUNTY ASSESSOR  
Jill Ames  
WASCO COUNTY TAX COLLECTOR

SHEET 1 OF 2



0' 100' 200' 300' 600'  
SCALE IN FEET

## OWNERS:

DAVID W. & JOLENE WILSON  
7100 SEVENMILE HILL ROAD  
THE DALLES, OREGON 97058

TAX LOTS 02N-12E-22 4100  
(ACCT. #14901, 13446) AND 4400  
(ACCT. #884, 1197) AND 02N-12E 2800  
(ACCT. #804) IN THE WEST 1/2 OF THE  
SW1/4, SECTION 22 AND IN THE  
NW1/4 OF THE NW1/4 SECTION 27,  
TOWNSHIP 2 N., RANGE 12 E., W.M.  
WASCO COUNTY, OREGON  
SEPTEMBER 7, 2017

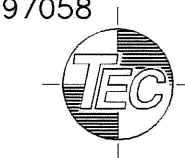
## LEGEND:

- o CALCULATED CORNERS, NOT SET.
- REF.# SURVEY REFERENCE NUMBER
- FND. FOUND
- CALC. CALCULATED
- ( ) RECORD SURVEY OR DEED CALL
- MON. MONUMENT
- C.S.# COUNTY SURVEY NUMBER
- (E) EXISTING
- ACCT ACCOUNT NUMBER
- BK/Pg BOOK/PAGE
- R/W RIGHT OF WAY
- L.C. LAND CORNER NUMBER

TAX LOT	EXISTING PROPERTY SIZE	PROPOSED PROPERTY SIZE
2N 12E 4400	40.61 AC.	40.1 AC.±
2N 12E 22 4100	29.16 AC.	69.14 AC.±
2N 12E 0 800	40.16 AC.	0

## ENGINEER / SURVEYOR:

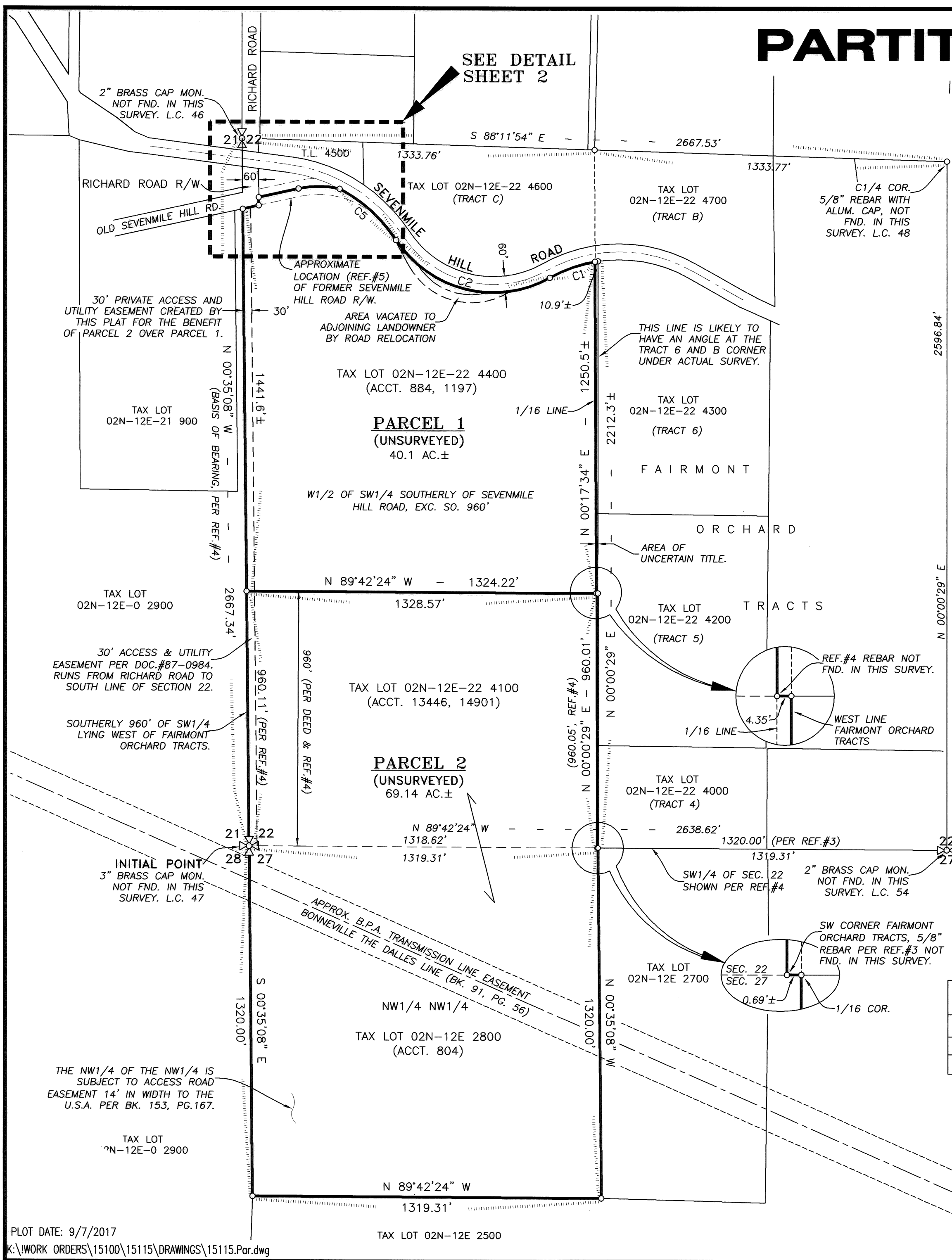
TENNESON ENGINEERING CORP.  
3775 CRATES WAY  
The Dalles, Oregon. 97058  
Ph. 541-296-9177  
FAX 541-296-6657



09/01/17  
REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 13, 1999  
BENJAMIN B. BESEDA  
50800

EXPIRES: 12/31/2017



PLOT DATE: 9/7/2017  
K:\WORK ORDERS\15100\15115\DRAWINGS\15115.Par.dwg

## LEGEND:

- CALCULATED CORNERS, NOT SET.
- REF.# SURVEY REFERENCE NUMBER
- FND. FOUND
- CALC. CALCULATED
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- ACCT ACCOUNT NUMBER
- BK/Pg BOOK/PAGE
- R/W RIGHT OF WAY
- L.C. LAND CORNER NUMBER

# PARTITION PLAT

TAX LOTS 02N-12E-22 4100 (ACCT. #14901, 13446) & 4400  
(ACCT. #884, 1197) AND 02N-12E 2800 (ACCT. #804)  
IN THE WEST 1/2 OF THE SW1/4, SECTION 22  
AND IN THE NW1/4 OF THE NW1/4 SECTION 27,  
TOWNSHIP 2 N., RANGE 12 E., W.M.  
WASCO COUNTY, OREGON  
SEPTEMBER 7, 2017

## WASCO COUNTY SURVEYOR'S OFFICE

Survey No. 19-062  
Filed 9/8/2017  
By BL

## RECORDING INFORMATION

Wasco County Official Records 2017-003560  
PLAT-PART  
Cntr=1 Stn=1 WASCO COUNTY 09/08/2017 01:46 PM  
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Document Number 2017-003560

Plat Number 2017-0010

Slide Number D152A

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2N 12E 4400	40.61 AC.	40.1 AC.±
2N 12E 22 4100	29.16 AC.	69.14 AC.±
2N 12E 0 800	40.16 AC.	0

## NOTES:

- BASIS OF BEARING: BEARINGS BASED ON COUNTY SURVEY #8-147 (REFERENCE #4) BETWEEN THE SOUTHWEST CORNER AND WEST 1/4 CORNER OF SECTION 22.
- NO FIELD SURVEY WORK WAS COMPLETED FOR THIS PARTITION.
- ZONING: F-2(80) IN WASCO COUNTY. *Forest DB.*  
COMPREHENSIVE PLAN DESIGNATION: *EXCLUSIVE FARM USE* IN WASCO COUNTY; *ALSO EPD-8 (LOW ELEVATION WINTER RANGE)*
- PARCEL 1 CONTAINS AN EXISTING APPROVED ON-SITE SEWAGE DISPOSAL SYSTEM. PARCEL 2 HAS BEEN EVALUATED AND APPROVED FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM. THE APPROVAL IS ON FILE WITH THE NORTH CENTRAL PUBLIC HEALTH DISTRICT.
- SEPTIC EVALUATIONS HAVE BEEN PREVIOUSLY COMPLETED FOR EACH SINGLE FAMILY DWELLING AND ARE ON FILE WITH THE NORTH CENTRAL PUBLIC HEALTH DISTRICT.
- THE SUBJECT PROPERTY DEED DESCRIPTION ORIGINATED PRIOR TO THE SEVENMILE HILL ROAD RELOCATION IN 1989 SO THEREFORE REFERS TO THE ORIGINAL ROAD LOCATION. WE FIND NO RECORD OF CONVEYANCE OF THIS AREA TO THE SUBJECT PROPERTY.
- EASEMENTS OF RECORD SHOWN OR NOTED PER AMERITITLE STATUS OF RECORD TITLE REPORT COMPLETED UNDER TITLE NUMBER 187102, DATED AUGUST 17, 2017.
- THE WEST 1/2 OF THE SW1/4 OF SECTION 22 LYING SOUTHERLY OF SEVENMILE HILL ROAD IS SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP. PER DOCUMENT #87-1847. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- SECTION 22 SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP. PER DOCUMENT #90-1977. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- THE SOUTHERLY 960 FEET OF THE SW1/4 OF SECTION 22 LYING WESTERLY OF FAIRMONT ORCHARDS AND THE NW1/4 OF THE NW1/4 OF SECTION 27 SUBJECT TO AN EASEMENT TO WASCO ELECTRIC COOP PER DOC. #96-3346. EXISTING POWER LINES ON THE SUBJECT PROPERTY WERE NOT MAPPED.
- THE ORIGIN AND LOCATION OF THE RICHARD ROAD RIGHT OF WAY IN THE NW1/4 OF SECTION 22 IS UNCLEAR. IT IS SHOWN 60 FEET WIDE WITH A 1 FOOT OFFSET EAST FROM THE SECTION LINE AS SHOWN ON THE PLAT OF FLYBY NIGHT SUBDIVISION.

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	TANGENT	CHORD BEARING	CHORD LENGTH
C1	20°41'46"	533.88'	192.84'	97.48'	S 71°02'00" W	191.80'
C2	85°53'54"	439.26'	658.54'	408.89'	S 76°21'56" E	598.57'
C3	49°06'44"	575.37'	493.19'	262.89'	N 57°58'21" W	478.23'
C4	25°03'06"	358.17'	156.61'	79.57'	N 89°43'27" W	155.36'
C5	28°59'25"	575.37'	291.12'	148.75'	N 47°54'42" W	288.03'
C6	20°07'19"	575.37'	202.07'	102.08'	N 72°28'04" W	201.03'

## SURVEYOR'S CERTIFICATE:

I, BENJAMIN B. BESEDA, REGISTERED LAND SURVEYOR #50800 IN THE STATE OF OREGON, BEING FIRST DULY SWORN, DEPOSE AND SAY THAT I HAVE CORRECTLY EXECUTED, ACCORDING TO ORS CHAPTER 92 AND THE WASCO COUNTY LAND USE DEVELOPMENT ORDINANCE, A PARTITION PLAT LYING IN THE SOUTHWEST 1/4 OF SECTION 22 AND THE NORTHWEST 1/4 OF SECTION 27, TOWNSHIP 2 NORTH, RANGE 12 EAST, WILLAMETTE MERIDIAN, WASCO COUNTY, OREGON. THE INITIAL POINT FOR SAID PARTITION IS THE SOUTHWEST CORNER OF SAID SECTION 22. THE PLATTED PROPERTY IS DESCRIBED AS FOLLOWS:

### SECTION 22

THE SOUTHERLY 960 FEET OF THE SOUTHWEST 1/4 OF SAID SECTION 22 LYING WEST OF THE WEST LINE OF THE FAIRMONT ORCHARD TRACTS.

THE WEST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 22 LYING SOUTHERLY OF SEVENMILE HILL ROAD, EXCEPTING THEREFROM THE SOUTH 960 FEET THEREOF.

### SECTION 27

THE NORTHWEST 1/4 OF THE NORTHWEST 1/4.

CONTAINS 109.75 ACRES, MORE OR LESS.

## ENGINEER / SURVEYOR:

TENNESON ENGINEERING CORP.  
3775 CRATES WAY  
The Dalles, Oregon. 97058  
Ph. 541-296-9177  
FAX 541-296-6657



09/07/17  
REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 13, 1999  
BENJAMIN B. BESEDA  
50800

EXPIRES: 12/31/2017

SHEET 2 OF 2

W.O. #15115par

19-062

PG 1-3225

## ATTACHMENT D – EXHIBIT 7

*Dooley et al v. Wasco County*, LUBA Opinion No. 2019-065



BEFORE THE LAND USE BOARD OF APPEALS  
OF THE STATE OF OREGON

SHEILA DOOLEY and JILL BARKER,  
*Petitioners,*

vs.

WASCO COUNTY,  
*Respondent,*

and

DAVID WILSON,  
*Intervenor-Respondent.*

LUBA No. 2019-065

FINAL OPINION  
AND ORDER

Appeal from Wasco County.

Mike J. Sargetakis, Portland, filed the petition for review and a reply brief, and argued on behalf of petitioners. With him on the brief was Oxbow Law Group.

Meredith J. Barnes, The Dalles, filed a response brief and argued on behalf of respondent. With her on the brief was Bradley V. Timmons and Timmons Law PC.

William H. Sumerfield, Hood River, filed a response brief and argued on behalf of intervenor-respondent.

RYAN, Board Member; ZAMUDIO, Board Chair; RUDD, Board Member, participated in the decision.

REMANDED

01/14/2020

1           You are entitled to judicial review of this Order. Judicial review is  
2   governed by the provisions of ORS 197.850.

**NATURE OF THE DECISION**

Petitioners appeal a decision by the board of county commissioners approving physically developed and irrevocably committed exceptions to Statewide Planning Goal 4 (Forest Lands), together with a comprehensive plan map amendment from Forest to Forest-Farm and a zone map amendment from Forest (F-2) (80) to Forest Farm (F-F) (10).

**MOTION TO INTERVENE**

David Wilson, the applicant below (intervenor) moves to intervene on the side of the respondent. No party opposes the motion and it is allowed.

**MOTION TO AMEND PETITION FOR REVIEW**

OAR 661-010-0030(4)(d) requires that each assignment of error state the standard of review. In its response brief, the county objected to petitioners' failure to comply with OAR 661-010-0030(4)(d) in their first, third and fourth assignments of error. Petitioners then moved to amend their petition pursuant to OAR 661-010-0030(6) to include sections stating the standard of review for those assignments of error.

We conclude that petitioners' failure to specifically state the standard of review in their first, third and fourth assignments of error is a technical violation that did not prejudice the substantial rights of any other participant in this appeal. OAR 661-010-0005. Accordingly, an amended petition for review is unnecessary and petitioners' motion is denied.

1   **FACTS**

2           The subject property is approximately 40 acres and was created pursuant  
3   to a partition approved in 2017. The property slopes from approximately six  
4   percent on the north to approximately 10 percent on the south. Record 20. The  
5   property includes a single-family dwelling and an accessory structure on the  
6   western half of the property, both of which are served by a driveway running  
7   along the western property line; a second dwelling that is no longer used as a  
8   dwelling that was served by a driveway running through the center of the  
9   property; a pump house, a barn and two wells. Record 18. The property contains  
10   two soil types, 49C and 50D, which are both Class IV soils in 4A, subclass A.  
11   The site index for both soil types is 70, which has a 20 to 49 cubic feet per acre  
12   per year potential yield for Ponderosa Pine. Record 19, 1331. The property  
13   includes primarily Oregon White Oak trees and Ponderosa Pine, as well as a few  
14   Douglas fir trees. Record 20. The remaining unforested portion of the property is  
15   grass. An aerial image indicates several acres planted in crops on the western half  
16   of the property. Record 20.

17           The subject property is adjacent to Seven Mile Hill Road.<sup>1</sup> To the north of  
18   Seven Mile Hill Road and to the east of the subject property are lots of  
19   approximately five acres in size and zoned Rural-Residential (R-R) (5), R-R (10)

---

1   A vacant 0.7-acre property owned by the county and zoned F-2 separates  
part of the subject property from Seven Mile Hill Road. Record 24.

1 and F-F (10) that are part of larger subdivisions that largely pre-date zoning.<sup>2</sup> To  
2 the south of the subject property is a 69-acre parcel zoned Forest F-2 (80) (F-2)  
3 that is owned by intervenor and that includes a single family dwelling and  
4 accessory structures. A portion of that 69-acre parcel is currently in farm use.  
5 Record 20. To the south of that 69-acre parcel for approximately five miles is that  
6 is zoned F-2 and managed for forestry or grazing. Record 25.

7 To the west of the subject property lies a split-zoned 16.3-acre property  
8 with 5 acres zoned F-F (10), and the remaining approximately 11 acres zoned F-  
9 2, and a 439-acre parcel zoned F-2 and managed for commercial forestry. All of  
10 the parcels that are immediately adjacent to west, east and south of the subject  
11 property possess similar soil types and slopes as the subject property.

12 Intervenor applied for an exception to Statewide Planning Goal 4 (Forest  
13 Lands) and a concurrent comprehensive plan amendment from Forest to Forest-  
14 Farm and a zone map amendment from F-2 to F-F (10). The F-2 zone is a forest  
15 resource zone. The F-F (10) zone is a non-resource zone. Wasco County Land  
16 Use and Development Ordinance 3.221. The board of county commissioners  
17 approved the application, and this appeal followed.

---

<sup>2</sup> Two subdivisions were platted in 1911 and 1912. One subdivision was  
platted in 1979. Record 24.



1 **FIRST, SECOND AND THIRD ASSIGNMENTS OF ERROR**

2 Because the subject property is designated “Forest,” approval of the  
3 comprehensive plan amendment and zone change required the board of  
4 commissioners to approve an exception to Goal 4 under Goal 2 and OAR chapter  
5 660, division 4. The board of commissioners approved both an irrevocably  
6 committed exception and a physically developed exception. Petitioners’ first,  
7 second, and third assignments of error contain largely overlapping and repetitive  
8 arguments that challenge the county’s irrevocably committed exception, and for  
9 that reason we address those assignments of error together.

10 **A. Introduction**

11 An irrevocably committed exception may be approved where “[t]he land  
12 subject to the exception is irrevocably committed as described by Land  
13 Conservation and Development Commission rule to uses not allowed by the  
14 applicable goal because existing adjacent uses and other relevant factors make  
15 uses allowed by the applicable goal impracticable[.]” ORS 197.732(2)(b); OAR  
16 660-004-0028(1). Under OAR 660-004-0028(2), whether land is irrevocably  
17 committed “depends on the relationship between the exception area and the lands  
18 adjacent to it,” considering the characteristics of the exception area, adjacent  
19 lands, the relationship between the two, and other relevant factors.<sup>3</sup> OAR 660-

---

<sup>3</sup> OAR 660-004-0028(2) provides:

1 004-0028(6) requires that the local government’s findings consider a miscellany  
2 of factors, including existing adjacent uses; existing public facilities; parcel size  
3 and ownership patterns in the area; neighborhood and regional characteristics;  
4 natural or man-made features separating the exception area from adjacent  
5 resource land; and other relevant factors, in order to reach its ultimate conclusion  
6 that the property is or is not irrevocably committed.<sup>4</sup> The local government need

---

“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- “(a) The characteristics of the exception area;
- “(b) The characteristics of the adjacent lands;
- “(c) The relationship between the exception area and the lands adjacent to it; and
- “(d) The other relevant factors set forth in OAR 660-004-0028(6).”

<sup>4</sup> OAR 660-004-0028(6) provides:

- “(6) Findings of fact for a committed exception shall address the following factors:
  - “(a) Existing adjacent uses;
  - “(b) Existing public facilities and services (water and sewer lines, etc.);
  - “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

---

“(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the goals were made at the time of partitioning or subdivision. Past land divisions made without application of the goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors makes unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created and uses approved pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for the subject parcels or land adjoining those parcels.

“(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are

1 not demonstrate that every use allowed by the applicable goal is “impossible,”  
2 but must demonstrate that, as relevant here, “[p]ropagation or harvesting of a  
3 forest product” and “[f]orest operations or forest practices as specified in OAR  
4 660-006-0025(2)(a)” are impracticable. OAR 660-004-0028(3)(b)-(c).  
5 Committed exceptions “must be based on facts illustrating how past development  
6 has cast a mold for future uses.” *1000 Friends of Oregon v. LCDC (Curry Co.)*,  
7 301 Or 447, 501, 724 P2d 268 (1986) (quoting *Halvorson v. Lincoln Co.*, 14 Or  
8 LUBA 26, 31 (1985)).

9 ORS 197.732(6)(b) provides that LUBA “shall determine whether the  
10 local government’s findings and reasons demonstrate” that the standards of an

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developed, clustered in a large group or clustered  
around a road designed to serve these parcels.  
Small parcels in separate ownerships are not  
likely to be irrevocably committed if they stand  
alone amidst larger farm or forest operations, or  
are buffered from such operations;

“(d) Neighborhood and regional characteristics;

“(e) Natural or man-made features or other impediments  
separating the exception area from adjacent resource  
land. Such features or impediments include but are not  
limited to roads, watercourses, utility lines, easements,  
or rights-of-way that effectively impede practicable  
resource use of all or part of the exception area;

“(f) Physical development according to OAR 660-004-  
0025; and

“(g) Other relevant factors.”

1 irrevocably committed exception “have or have not been met[.]” Contrary to the  
2 county’s argument in its response brief, we owe no deference to the local  
3 governing body’s decision or any interpretation of the relevant statutes and rules.  
4 *Kenagy v. Benton County*, 115 Or App 131, 838 P2d 1076, *rev den*, 315 Or 271  
5 (1992). Our usual tripartite approach for reviewing decisions adopting  
6 irrevocably committed exceptions is to (1) resolve any contentions that the  
7 findings fail to address issues relevant under OAR 660-004-0028 or rely on  
8 factors that are not properly considered under OAR 660-004-0028, (2) consider  
9 any arguments that particular findings are not supported by substantial evidence  
10 in the record, and (3) determine whether the findings that are relevant and  
11 supported by substantial evidence are sufficient to demonstrate compliance with  
12 the standards of ORS 197.732(2)(b) that uses allowed by the goal are  
13 impracticable. *1000 Friends of Oregon v. Columbia County*, 27 Or LUBA 474,  
14 476 (1994).

15 **B. Characteristics of and Uses on Adjacent Lands (OAR 660-004-**  
16 **0028(2), (6)(a))**

17 Petitioners argue that the county’s findings addressing OAR 660-004-  
18 0028(2)(b) and (c) inadequately describe the characteristics of adjacent lands and  
19 the relationship of the subject property to adjacent lands by focusing too much  
20 attention on the adjacent lands to the east and north of Seven Mile Hill Road that  
21 are developed with residences, with only a cursory discussion of the existing  
22 forest zoning and timber production occurring on the properties to the south and



1 the west of the subject property. Petitioners argue that the findings fail to  
2 adequately address the existing forest uses on resource lands adjacent to the  
3 property, and fail to adequately describe “[p]arcel size and ownership patterns of  
4 the exception area and adjacent lands \* \* \* [and] how the existing development  
5 pattern came about” as required by OAR 660-004-0028(6)(c)(A).

6 We agree with petitioners. While the findings appear adequate to describe  
7 some of the characteristics of lands adjacent to the subject property by identifying  
8 existing uses and zoning, as required by OAR 660-004-0028(2)(b), those findings  
9 also spend considerable ink discussing subdivided property located almost a mile  
10 away from the subject property (the “Fletcher Tract”), for reasons that are not  
11 apparent. Record 25-26. We agree with petitioners that the findings the county  
12 adopted are not adequate to describe the relationship of the subject property to  
13 adjacent lands as required by OAR 660-004-0028(2)(c). First, in describing the  
14 relationship of the subject property to adjacent lands, the findings conclude that  
15 because the subject 40-acre property is the only parcel zoned F-2 that fronts on  
16 Seven Mile Hill Road “[t]his creates a unique situation where the subject parcel  
17 is enclosed on three of its sides by residentially-zoned properties, most of which  
18 are used for residential purposes. If the subject parcel was used for forestry  
19 operation it could be potentially disruptive to this residential community.”<sup>5</sup>

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<sup>5</sup> In a different finding, the county characterizes the subject property as being  
“enclosed on three of its sides by existing residential development.” Record 28.  
That statement is more accurate than the quoted statement that the subject

1 Record 26. The findings do not address at all the relationship of the subject  
2 property to the adjacent approximately 450 acres of F-2 zoned lands located to  
3 the west of the subject property that are in timber production and/or that possess  
4 soils suitable for forestry production, or the approximately 2,000 acres of  
5 resource land that are in forest use located immediately south of intervenor's 69-  
6 acre adjacent F-2 parcel to the south of the subject property, or the potential for  
7 resources use of the property in conjunction with the adjacent F-2 zoned  
8 properties.

9 Second, the mere existence of residential uses near a property proposed for  
10 an irrevocably committed exception does not demonstrate that such property is  
11 necessarily committed to nonresource use. *Prentice v. LCDC*, 71 Or App 394,  
12 403-04, 692 P2d 642 (1984). The findings explain that most of the residential  
13 subdivisions adjacent to and nearby the subject property pre-dated planning and  
14 zoning laws, but do not explain why the existence of those pre-existing residential  
15 uses means that the subject property is irrevocably committed to nonresource use.

16 **C. Impracticability of Forest Uses (OAR 660-004-0028(3))**

17 In their third assignment of error, petitioners argue that the county's  
18 findings are inadequate to explain why the uses listed in OAR 660-004-0028(3)  
19 are impracticable. OAR 660-004-0028(3) provides in relevant part that

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property is enclosed on three of its sides by "residentially zoned properties,"  
which the record demonstrates is not accurate, because, although they contain  
residences, the properties to the west and south of the subject property are zoned  
F-2, a Goal 4 resource zone. Record 26.

1 “For exceptions to Goals 3 or 4, local governments are required to  
2 demonstrate that only the following uses or activities are  
3 impracticable:

4 “(a) Farm use as defined in ORS 215.203;

5 “(b) Propagation or harvesting of a forest product as specified in  
6 OAR 660-033-0120; and

7 “(c) Forest operations or forest practices as specified in OAR 660-  
8 006-0025(2)(a).”<sup>6</sup>

9 The county found that

10 “the current level of residential development has increased to the  
11 point that *commercial resource use* has become impracticable. The  
12 exception area is surrounded on three sides by existing residential  
13 development, with the potential for additional residential  
14 development in the future. Conflicts caused by the proximity of  
15 residential neighbors on three sides require added expense related to  
16 fire protection, fencing and general control of the area, and prevent  
17 the use of spraying to control insects and vegetation that competes  
18 with commercial tree species. Further conflicts with residences arise  
19 because of the noise associated with commercial operations and the  
20 safety risks of logging near residential property.

21 “The steps that would need to be taken to efficiently and effectively  
22 manage timber production in the area makes such uses  
23 impracticable.” Record 28 (emphasis added).

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<sup>6</sup> Forest operations or forest practices specified in OAR 660-006-0025(2)(a)  
are:

“Forest operations or forest practices including, but not limited to,  
reforestation of forest land, road construction and maintenance,  
harvesting of a forest tree species, application of chemicals, and  
disposal of slash[.]”

1 The county's findings emphasize the potential conflicts that resource use of the  
2 subject property would produce with adjacent and nearby existing residential  
3 uses from fire protection requirements, fencing and spraying. First, petitioners  
4 argue that commercial viability is not the measure of practicability. Petition for  
5 Review 25. Second, in their second assignment of error, petitioners argue that the  
6 county's findings are not supported by substantial evidence where the undisputed  
7 evidence shows the subject property contains merchantable tree species in its  
8 southern portion and contains soil types that are capable of supporting Ponderosa  
9 Pines (20-49 cubic feet per year). Record 19; Record 1331. Petitioners argue that  
10 given the undisputed evidence that the soil types on the property support  
11 Ponderosa Pines, the county's findings are inadequate to explain why the  
12 remaining open portion of the subject property could not be planted and uses for  
13 forestry purposes.

14 We agree with petitioners. The correct standard is not whether commercial  
15 forestry operations are practicable on the subject property, and the county must  
16 consider forest operations that are smaller in scale and generate less revenue than  
17 commercial forestry operations. *Friends of Yamhill County v. Yamhill County*, 38  
18 Or LUBA 62, 75 (2000). Further, as the staff report explains, the state and county  
19 recognize parcels as small as two acres as eligible for forest tax deferral. Record  
20 1345.

21 Moreover, the county's findings, quoted above, focus on alleged conflicts  
22 with nearby residential uses from conducting commercial forestry on the

1 property, but do not consider whether forest operations that are smaller in scale  
2 would create similar conflicts that render forest use of the property impracticable.  
3 We also agree with petitioners that given the soil types on the property, the  
4 county's findings do not establish that forest use of the property is impracticable  
5 or explain why trees could not be planted on the property. Finally, we agree with  
6 petitioners that the county's finding that conflicts with residential uses resulting  
7 from spraying are not a basis to find that resource use of the subject property is  
8 impracticable. *Prentice*, 71 Or App at 403 (conflicts resulting from odors, noise,  
9 spraying and dust are a consequence of rural life and are not sufficient in  
10 themselves to justify an irrevocably committed exception).

11 The first, second and third assignments of error are sustained.

#### 12 **FOURTH ASSIGNMENT OF ERROR**

13 The board of county commissioners approved a physically developed  
14 exception and in the alternative, an irrevocably committed exception. In the  
15 fourth assignment of error, petitioners challenge the county's conclusion that a  
16 physically developed exception was justified.

17 Under OAR 660-004-0025(1), in order to approve a physically developed  
18 exception, the local government must establish that "the land subject to the  
19 exception is physically developed *to the extent that it is no longer available for*  
20 *uses allowed by the applicable goal.*" OAR 660-004-0025(1) (emphasis added).  
21 OAR 660-004-0025(2) provides guidance for local governments in determining



1 whether land has been physically developed with uses other than those allowed  
2 by a goal:

3 “Whether land has been physically developed with uses not allowed  
4 by an applicable goal, will depend on the situation at the site of the  
5 exception. The exact nature and extent of the areas found to be  
6 physically developed shall be clearly set forth in the justification for  
7 the exception. The specific area(s) must be shown on a map or  
8 otherwise described and keyed to the appropriate findings of fact.  
9 The findings of fact shall identify the extent and location of the  
10 existing physical development on the land and can include  
11 information on structures, roads, sewer and water facilities, and  
12 utility facilities. Uses allowed by the applicable goal(s) to which an  
13 exception is being taken shall not be used to justify a physically  
14 developed exception.” OAR 660-004-0025(2).

15 The county relied on the two dwellings, accessory structures, well, and driveways  
16 to conclude that the property meets the requirements for adoption of a “physically  
17 developed” exception to Goal 4:

18 “The development pattern that exists on this property makes forestry  
19 uses impractical. These include the current home and outbuildings  
20 located halfway up the property on the western side after an  
21 approximately 1000 [foot] driveway, the old farmhouse in the center  
22 after a 400 [foot] driveway and the old barn another 240 [feet]  
23 further south, within 450 [feet] of the rear property line. The latter  
24 two more than half bisects the property contributing to the  
25 physically developed nature of the subject parcel. The property is  
26 also serviced by two wells, and a pump house located in the north  
27 central portion of the parcel, approximately 190 feet south of the  
28 road. Due to these physical developments, and the impracticality of  
29 conducting forestry uses around them, a physically developed  
30 exception would apply.” Record 20.

1 In the fourth assignment of error, petitioners argue that the county's  
2 findings in support of a physically developed exception to Goal 4 are inadequate  
3 and that the county improperly construed OAR 660-004-0025 when it concluded  
4 that development of approximately 12 percent of the property means that it is  
5 "physically developed to the extent that it is no longer available for uses allowed  
6 by the applicable goal." Petition for Review 29. Petitioners also assert that the  
7 county's findings are not supported by evidence in the whole record, and that the  
8 evidence in the record supports a determination that the property is available for  
9 uses allowed by Goal 4, including the growing of Ponderosa Pines. Petitioners  
10 point to evidence that all of the development on the property combined totals  
11 approximately 12 percent of the property, while more than 87 percent of the  
12 property is undeveloped. Petitioners also point out that the soil types on the  
13 property are capable of supporting Ponderosa Pine at a volume of 57.2 cubic feet  
14 per acre per year. Record 711, 1331. Therefore, petitioners argue, the county  
15 erred in concluding that a physically developed exception was justified. Finally,  
16 petitioners argue that the county erred in relying on the two driveways existing  
17 on the property because "[u]ses allowed by the applicable goal(s) to which an  
18 exception is being taken shall not be used to justify a physically developed  
19 exception," and roads are allowed under Goal 4 as accessory to forest uses. OAR  
20 660-004-0025(2).

21 Intervenor responds that managing the subject property for commercial  
22 forestry would require "extensive" fire buffers along the eastern and northern

1 borders that are adjacent to developed residential areas and around the existing  
2 dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points  
3 out that “two strings” of overhead power lines are located on the property, and  
4 that forestry uses would require a buffer from those lines. *Id.* We understand  
5 intervenor to argue that such extensive buffers mean that the property is  
6 “physically developed to the extent it is no longer available” for forestry uses.

7 The standard for approving a physically developed exception is  
8 demanding. *Sandgren v. Clackamas County*, 29 Or LUBA 454, 457 (1995). We  
9 agree with petitioners that the county’s findings are inadequate to explain why  
10 the property is developed to such an extent that it is no longer available for  
11 forestry uses. The findings conclude, with reference to the existing development  
12 on the property, that “forestry uses [are] impractical.” Record 20. Impracticality  
13 is relevant to an irrevocably committed exception. However, impracticality is not  
14 the standard for a physically developed exception. Instead, the county is required  
15 to determine that the property is “physically developed *to the extent that it is no*  
16 *longer available*” for forestry uses. ORS 197.732(2)(a) (emphasis added).<sup>7</sup> A

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<sup>7</sup> ORS 197.732 provides, in part:

“(2) A local government may adopt an exception to a goal if:

“(a) The land subject to the exception is physically developed to  
the extent that it is no longer available for uses allowed by the  
applicable goal;

1 conclusion that forestry uses are “impractical” due to approximately 12 percent  
2 of the property containing structures or other development is not responsive to  
3 the standard. Finally, we agree with petitioners that the county’s findings are  
4 inadequate where they fail to explain why the two driveways on the property  
5 should be considered as physically developed, when roads are uses allowed by  
6 Goal 4.

7 Further, we agree with petitioners that the county’s decision is not  
8 supported by substantial evidence in the record, where the evidence in the record  
9 is that the property has available at least 87 percent of its area for forestry.  
10 Intervenor does not attempt to quantify the amount of buffer that would be  
11 required to conduct forestry uses or quantify the amount by which that buffer  
12 would decrease the amount of property available for forestry uses to such an  
13 extent that the property “is no longer available for forestry uses.” We conclude  
14 that the county’s findings in support of its approval of a physically developed  
15 exception are not supported by substantial evidence in the record.

16 The fourth assignment of error is sustained.

## 17 **DISPOSITION**

18 ORS 197.732(6)(b) provides that LUBA:

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“(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable[.]”

1 “shall determine whether the local government’s findings and  
2 reasons demonstrate that the [exception standards of OAR 660-004-  
3 0028] have or have not been met.”

4 We conclude that the findings do not demonstrate that the property is physically  
5 developed to such an extent that it is no longer available for resource use, and  
6 that the county’s findings regarding the physically developed exception are not  
7 supported by substantial evidence in the record. We also conclude that the  
8 findings do not demonstrate that the property is irrevocably committed to non-  
9 resource uses. Because we conclude that the findings to support a conclusion that  
10 the property is irrevocably committed to non-resource use are inadequate to  
11 satisfy the relevant criteria, we do not address petitioners’ substantial evidence  
12 arguments under those criteria. *DLCD v. Columbia County*, 15 Or LUBA 302,  
13 305 (1987).

14 Petitioners argue that we should reverse, rather than remand the county’s  
15 decision. OAR 661-010-0071(1)(c) provides that this Board shall reverse a land  
16 use decision when “[t]he decision violates a provision of applicable law and is  
17 prohibited as a matter of law.” In addition, OAR 661-010-0071(2)(a) provides  
18 that this Board shall remand a land use decision for further proceedings when  
19 “[t]he findings are insufficient to support the decision[.]”

20 If the county had approved only a physically developed exception, we  
21 would likely agree with petitioners that reversal is the appropriate remedy  
22 because the evidence in the record demonstrates that approximately 90 percent  
23 of the property is undeveloped and available for forest uses. With regard to the



1 irrevocably committed exception, petitioners may be correct that, under the  
2 circumstances described in the application, and when the correct standards are  
3 applied by the county, it is extremely unlikely that intervenor will be able show  
4 the property is irrevocably committed to nonresource uses. However, we cannot  
5 say at this point that the county's decision is prohibited as a matter of law.

6 The county's decision is remanded.

## ATTACHMENT D – EXHIBIT 8

“Soil Assessment Submittal Form” and “Soil Assessment Release Form”



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD

## Soils Assessment Submittal Form



### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

### Property Information

Person who requested soils assessment: David Wilson  
 Mailing address: 7100 1 Mile Hill Rd The Dalles Or 97058  
 Email address: none Telephone number: 541-492-3230  
 Property owner (if different): \_\_\_\_\_  
 Property address (if different): 7000 1 Mile Hill Rd The Dalles Or 97058  
 County: Wasco Township: 2N Range: 12E Section: 22  
 Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13  
 Comprehensive Plan designation: \_\_\_\_\_ Zone: EEU  
 Proposed land use action: Plan Amendment Zone Change To RR10

The soils professional must submit an electronic copy of the soils assessment together with this form to Timothy Murphy, Farm and Forest Lands Specialist, at the above address. The person requesting the soils assessment or the property owner must submit a check for a non-refundable administrative fee of \$625 made out to the Department of Land Conservation and Development, to Timothy Murphy, at the same address.

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews or field checks will accompany the soils assessments.

The department and the Land Conservation and Development Commission will not be held liable for non-performance or information that is contained in soils assessments, or for negative reviews, field checks or audits of soils assessments. For the protection of the department and commission, we ask that you read and sign the following authorization and disclaimer:

*I hereby expressly give my consent, should I be notified by the department that the submitted soils assessment for my property is selected for a review and field check, to authorize timely*



access to my property by a DLCD-contracted soils professional to perform a field check to corroborate the information provided in the submitted soils assessment. I understand that failure to authorize access to the property may result in a negative review.

I hereby waive my right to pursue a claim for relief or cause of action alleging injury from the content of soils assessments or from any negative reviews, field checks or audits conducted by the department and any and all soils professionals used by the department under OAR 660-033-0030(5) and (9). I hold these entities harmless and release them from liability for any injury or damage that may occur in conjunction with the submitted soils assessment.

In exchange for the department's review of this submittal under the soils assessment program, I expressly agree to forever waive and give up all claims, suits, actions, proceedings, losses, damages, liabilities, awards and costs of every kind and description, including any and all federal and state claims, reasonable attorney's fees, and expenses at trial (collectively "claims") which I have or may have a right to bring against any agency, department, the state, or their agents, officials or employees arising out of or related to my participation and performance in the soil assessment program, including but not limited to claims for mistake or negligence of the department, the state of Oregon, and their officers, employees and agents. I further agree that the provisions of this Liability Waiver and Release from Federal and State Claims shall be effective and binding upon my heirs, executors, administrators, successors, assigns, beneficiaries, or delegates and shall inure to the benefit of the department, the State of Oregon, and their officers, employees and agents.

David Wilson David Wilson  
Person who requested soils assessment

1/15/21  
Date

\_\_\_\_\_  
Property owner (if different)

\_\_\_\_\_  
Date

In addition to agreeing to the above, I hereby certify that the attached soils assessment that I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department.

[Signature]  
Soils professional

1/10/21  
Date

\* Must be from the posted list of qualified soils professionals at: <http://www.oregon.gov/LCD/pages/soilsassessment.aspx>



Soils Assessment Submittal Form 2 of 2





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soils Assessment Release Form

### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

Date of submittal of soils assessment to department: Jan 23, 2021

### Property Information

Person who requested soils assessment: David Wilson

Mailing address: 7100 7 Mile Hill Rd The Dalles Or 97058

Email address: none Telephone number: 541-490-3230

Property owner (if different):

Property address (if different): 7000 7 mile Hill Rd The Dalles Or 97058

County: Wasco Township: 2N Range: 12E Section: 22

Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13

Comprehensive Plan designation: \_\_\_\_\_ Zone: FFA

Proposed land use action: Plan Amendment zone change to RR10

If you would like the soils assessment for the subject property to be released to a County planning department for its consideration in a land use proceeding, please sign this form and send it to Timothy Murphy at the above address, or email to: [timothy.murphy@state.or.us](mailto:timothy.murphy@state.or.us).

I hereby request that the Department of Land Conservation and Development release the soils assessment submitted to the department on the above date regarding the above-described property to the Wasco County Planning Department, as well as any department notifications of deficiencies. I understand that any and all previous soils assessments applying to this property produced under this rule, as well as any department notifications of deficiencies in such soils assessments, will also be released to the local government.

David Wilson

Person who requested soils assessment

1/15/21  
Date

Property owner (if different)

Date



## ATTACHMENT D – EXHIBIT 9

“Soil Assessment Completeness Review”



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

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Phone: 503-373-0050

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## Soil Assessment Completeness Review

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030.

Hilary Foote  
DLCD Farm Forest Specialist  
March 29, 2001

The department will consider soil assessments under OAR 660-033-0030 to be complete if they meet the following standards:

(1) General information, to include:

- (a) Title of the report; Wildon – Order 1 Soil Survey
- (b) Person making request for soils assessment; David Wilson
- (c) Names of soil scientist/classifier conducting the field work and preparer of the report, along with their certification numbers; Gary Kitzrow, CPSC/CPSS #1741
- (d) Land use case file number (if available); n/a
- (e) County in which the assessment was conducted; Wasco
- (f) Location of the project site, including the township, range, section and tax lot numbers; Township 2N Range 12E Section 23 Taxlot 4400, Wasco County, Oregon
- (g) Present zoning designation; EFU
- (h) Current land use; unknown
- (i) Parcel acreage: 40.13 ; evaluated: 40.13 ,and
- (j) A description of the purpose of the assessment. Zone Change

(2) Previous Mapping or Background: The soil scientist/classifier shall provide a copy of the applicable and most current National Cooperative Soil Survey map(s) provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey, with the area of investigation outlined on the map(s). The scale of the map(s) shall be identified and a list of the map units under investigation shall be listed. The applicable

interpretations and minor components (inclusions) for the map units for which the investigation is being made shall also be provided. NRCS mapped soils include: Wamic loam, 5 to 12 percent north slopes (capability class 4e), Wamic loam, 12 to 20 percent slopes (capability class 4e) and Wamic-Skyline complex, 2 to 20 percent slopes (capability class 4e (Wamic components) and 7s (skyline components)). See pages 8-9.

(3) Methods Used by Soil Scientist/Classifier: The soil scientist/classifier shall describe the methodologies used for the preparation of the report and shall include the following:

- (a) The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted
- (b) The date(s) of the field investigation; December 18-19, 2020
- (c) The methods used for observations (backhoe, auger, shovel, etc.) and methods used for documentation (for slope, color, pH, etc.); Backhoe, field texturing, munsell chart comparison, soil pH, field assessment, etc as described on page 1.
- (d) The number and location of borings either shown on an aerial photograph base map of the parcel or provided in a table with latitude and longitude coordinates. In conducting Order 1 soil surveys, the scale of the base maps used for the survey needs to be large enough to enable the identification of polygons of soil map units as consociation map units. Soil map units identified as a complex, association, or undifferentiated group should be avoided as this defeats the purpose of an Order 1 survey. If, however, the soils are so intermingled that they cannot be mapped at a reasonable scale so as to identify consociation map unit polygons, then there should be sufficient sampling and documentation of the complex to demonstrate this soil component distribution. A percentage of each member of the complex will be used in determining area of extent and the reported percentages will be based on this sampling and its documentation, including soil profile descriptions, boring locations and, where useful, photographs. 23 locations. Coordinates listed on page 1 and mapped on page 10
- (e) Geomorphic and vegetation correlations supporting the interpretation of land capability classes of soils that differ from those in the official soil survey information; and Described on page 2.
- (f) A notation of any limitations encountered during the field investigation, such as soil depth, drainage, slope or inaccessibility. No limitations noted (page 2).

(4) Results, Findings, and Decisions: The soils report shall describe how the level of order of survey used in this investigation differs from that used by NRCS in the original soil survey. The soils report shall also include:

- (a) An overview of the geology or geologic setting, describing sources of parent material, bedrock and related factors; Described on page 2
- (b) A description of the landforms and topography, confirming the relationship of landforms to soil mapping units; Described on pages 2 and 3
- (c) A description of on-site and adjacent hydrology, including surface and subsurface features, intermittent versus perennial, floodplain and floodways and other related information; Described on page 3.
- (d) A description of the revised soil mapping units with their range of characteristics, explaining how and why they differ from NRCS soil mapping. The soils report shall include a summary of soil variability incorporating significance of preceding weather (above or below average), where known and crops and natural vegetation present; and Described on page 3
- (e) A tabulation of all previous and revised soil mapping units complete with their acreages and land capability classification. Pages 3, 8, 9 and 13

(5) Summary or Conclusion: The soils report shall contain a section reiterating the purpose of the investigation, explaining the significance of the revised soil mapping and describing any other significant issues related to the report's purpose. Page 3

(6) References: This section may list any manuals or publications utilized or referenced by the report. Page 3

(7) Attachments: Other informational materials provided as attachments, such as maps, figures or appendices shall include the following and shall be printed on 8 ½ x 11" wherever possible:

- (a) Vicinity map at a scale of 1:48,000 or smaller showing the project location; Map included on page 11
- (b) The NRCS soils map generated from Web Soil Survey at a scale of 1:20,000 or larger outlining the project site; Map included on page 7
- (c) Site condition map (aerial photo) at a scale of 1:5,000 or larger outlining the project site and showing the location of site investigations (borings) and other relevant features; Map included on page 10
- (d) Topography map at a scale of 1:24,000 or larger outlining the project site; Map included on page 11
- (e) Assessor's map at a scale of 1:5,000 or larger outlining the project site; Map included on page 12
- (f) Revised soils map of the project site at a scale of 1:5,000 or larger; Map included on page 13

## **ATTACHMENT D – EXHIBIT 10**

Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS)  
(License # 1741), Principal Soil Taxonomist.





Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## "Wilson - Order 1 Soil Survey" Inquiry

3 messages

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: kitzrowga@gmail.com

Fri, Nov 19, 2021 at 6:00 AM

Mr. Kitzrow,

My name is Daniel Dougherty, Senior Planner with the Wasco County Planning Department. I've been assigned to review your Order 1 soil survey for Mr. David Wilson regarding a particular land use application he has pending before our Planning Commission. It's been extremely interesting learning about soil classification, order types, soil complexes, and series; however, I've hit a wall regarding analysis of your survey, and I'm hoping you can help me if you have time.

As you provided in your survey, Mr. Wilson's property (Location: 2N 12E 22 4400) contains Skyline, Wamic, Bodell and Infrastructure mapping units. I have to make findings regarding the woodland suitability (tree types & cubic ft. per acre) of each particular soil mapping unit found on his property. To do this, I'm using the USDA-STS Soil Interpretation Records (1983) "Green Sheets". The Green Sheets provide specific data regarding the 1982 USDA "Soil Survey of Wasco County, Oregon, Northern Part".

The problem I'm running into is that two of the three soil mapping units you discovered aren't explicitly found in the USDA Order 3 survey or Green Sheets. Those soil mapping units being 51D Skyline (monotaxa) and 51C Skyline (monotaxa). The Green Sheets & USDA Survey do provide for a 51D Wamic-Skyline Complex. I'm hoping you can clarify whether or not the 51D Wamic-Skyline Complex is in fact the 51D Skyline (monotaxa) and/or 51C Skyline (monotaxa). I've scoured the internet to try and find information on 51D & 51C units, but everything keeps pointing me back to 51D Wamic-Skyline Complex.

Any help you might provide is greatly appreciated.

Respectfully,

Daniel

--

**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561  
2705 E Second Street | The Dalles, OR 97058



### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

---

**Gary Kitzrow** <kitzrowga@gmail.com>  
To: daniel@co.wasco.or.us

Fri, Nov 26, 2021 at 12:09 PM

Skyline units on my report are MONOTAXA units meaning one soil per delineation. Wamic soils are NOT found within those mapping units except as an *inclusion*. Order I Soil Surveys (such as the current one) separates out soil "Complexes" into their component parts. Order I Soil Surveys are Site Specific Soil Surveys with a high degree of confidence in the final delineations correlated. I have mapped over 1 million acres of soils in the USA and in 2 foreign countries. I use the same USDA-protocols in all jurisdictions I have published Soil Survey Reports in (8) states. The goal of Order I Soil Surveys is to make every soil mapping unit a monotaxa element.

The green sheets DO NOT tabulate the Forestry site index tables because Skyline is a *Non-Commercial Forest Soil*. As a former USDA-NRCS Soil Scientist here in Oregon and as a degreed forester as well, when employed as a USDA scientist, we left the "Green Pages" blank when there was no commercial timber producing potential OR no trees within the correct age-class or dominance-class to measure and assign a valid site index or mensuration estimate (cu-ft/ac/yr). Skyline has never been cited as a commercial forest soil and predictably, no proper trees are available to measure as well. Since this soil (Skyline) is the dominant soil on this subject parcel, a preponderance of the legal lot of record is not a commercial timber site. This follows suit for agriculture as well which is demonstrated in the Capability Class assignment.

I hope this helps,

Gary A. Kitzrow, Master of Science  
Principal Soil Classifier/Soil Scientist  
Degreed forester  
GSEA

[Quoted text hidden]

---

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: Gary Kitzrow <kitzrowga@gmail.com>

Fri, Nov 26, 2021 at 9:45 PM

Good evening,

Thank you for the additional information and clarification.

I hope you had a great Thanksgiving.

Respectfully,

Daniel

[Quoted text hidden]

## ATTACHMENT D – EXHIBIT 11

“Wilson – Order 1 Soil Survey”

Wilson- Order 1 Soil Survey Report

RE: OAR 660-033-0030

1). General Information

- a). Order 1 Soil Survey Report—Wilson Property, Oregon
- b). David Wilson
- c). Gary A. Kitzrow, M.S., CPSC/CPSS # 1741, Master of Science
- d). None
- e). Wasco
- f). RE: T2N R12E Sec. 23C TL# 4400
- g). EFU
- h). Zone change
- i). 40.13 Ac./40.13 acres
- j). complete a site-specific soil survey for the above parcel to determine if a preponderance of the property is comprised of generally unsuited soils. The goal is to secure a Plan Amendment Zone Change.

2). Enclosed

- a). Scale of enclosed USDA-NRCS Soil maps: 1:3170;—USDA Soil Legend: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs.
- a). We completed a total of 23 descriptions for the 40.13-acre study site.
- b). December 18-19, 2020
- c). A Backhoe was used to excavate the study area Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing.
- d). Enclosed is a map showing all description locations.
  - 1). 45.63857' N -121.31456' W
  - 2). 45.63825' N -121.31395' W
  - 3). 45.63832' N -121.31380' W
  - 4). 45.63857' N -121.31344' W
  - 5). 45.63876' N -121.31392' W
  - 6). 45.63891' N -121.31370' W
  - 7). 45.64031' N -121.31458' W
  - 8). 45.63857' N -121.31456' W
  - 9). 45.64071' N -121.31207' W
  - 10). 45.64030' N -121.31235' W
  - 11). 45.64063' N -121.31125' W
  - 12). 45.64030' N -121.31113' W
  - 13). 45.64003' N -121.31100' W
  - 14). 45.63979' N -121.31075' W
  - 15). 45.63871' N -121.31071' W
  - 16). 45.63897' N -121.31229' W
  - 17). 45.63804' N -121.31140' W
  - 18). 45.63827' N -121.31133' W
  - 19). 45.63889' N -121.30940' W
  - 20). 45.63926' N -121.30998' W
  - 21). 45.63980' N -121.30980' W
  - 22). 45.64031' N -121.30998' W
  - 23). 45.63926' N -121.30991' W

Pg. 2 T2N R12E Sec. 23C TL# 4400

e). There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related.

Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present.

(f). No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

#### (4) Results, Findings and Decisions:

- (a) The bedrock geology for this land base is basalt mixed with areas in the southwest portion of the property exhibiting a paralithic contact with and without a duripan which all occur at less than 20". Little direct hard rock is noted in this area transitioning from definable soil. Soil development is generally a function of the presence or absence of ejected ash moving into or out from the subject study area. The basalt itself yields very immature, shallow soils when soils erode *from* the site hence the Class 7 (Bodell and Skyline). Conversely, where soil accumulates via erosion (central area and central northern areas), soils deepen up, Soil Capability Class gets better and Wamic soils become dominant. The Wamic soils are more of a function of accretion NOT soil removal but basalt is a common thread underlying all areas on this parcel. Lithic verses paralithic geologic contacts are important on this subject property. Where paralithic contacts are present (SW ¼ and some SE ¼ ) of the ownership, soils shallow-up and the bedrock becomes a more dominant portion of the land capability.
- (b) The landforms present on this study site include planar to planar concave, non-colluvial lava plains and basins with local microsities. In the bottomland area (mid northern property) some mixed alluvium and terrace remnants may be present but are truncated and ill-defined. The soils we found strongly correlate to these landforms. Rolling convex



Pg. 3 T2N R12E Sec. 23C TL# 4400

areas in the northwest ¼ (north of the developed infrastructure areas) are classified as indistinct uplands showing suited Wamic soils throughout. Contiguous areas due south exhibit ancient infrastructure dating back to the 1980s. The eastern 1/3 of the survey area shows harder bedrock and much rock in the soil profile as a function of the more sharply overt convex slopes some of which face west and northwest. These eastern areas show landforms which are much more dissected and abbreviated as compared with area in the western 1/3. The soils reflect these contrasting landforms. Much of the eastern 1/3 of the ownership exhibits harsh-growing conditions.

- (c) No natural drainageways are confirmed within the parcel. The nearest drainageway is about 2 miles southeast and 4 miles due east.
- (d) Our Order I Soil Survey confirms Skyline, Wamic, Bodell and Infrastructure are the only soil mapping units confirmed on the subject property. Presence or absence of a paralithic geologic contact combined with landscape position principally govern the soil series and mapping units present. The subject property is complex and diverse. Shallow Bodell and Skyline soils are consistently present but are spread out throughout the ownership. Wamic soils are found where ash has eroded from surrounding low hillslopes.
- (e) Previous USDA Survey: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs. GSEA: Final Order I Soil Survey Mapping units: See attached Soil Map.

(5) Summary and Conclusions:

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% ( 20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

References: Official Soil Series Descriptions USDA NRCS-Wasco County: Bodell, Wamic and Skyline Soil Series

Soil Survey Report, Soil Survey, Wasco County

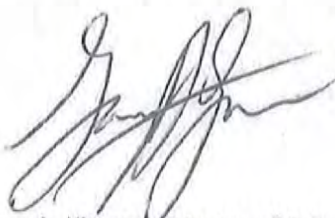
Soil Survey Manual, USDA

(6) Attachments:

- (a) Vicinity Map
- (b) NRCS Soil Map for property
- (c) Site Condition map
- (d) Topography map outlining the subject property
- (e) Assessor's map outlining the study parcel
- (f) Revised Order I Soil Map
- (g) Soil Profile descriptions: Wamic, Skyline and Bodell Soils
- (h) Representative Soil profile descriptions

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Please call with questions,



Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier, Certified Professional Soil Scientist #1741  
Principal Soil Taxonomist  
GROWING SOILS ENVIRONMENTAL ASSOCIATES





Wilson  
T2N R12E Sec. 23C TL# 4400

Vicinity Map







United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

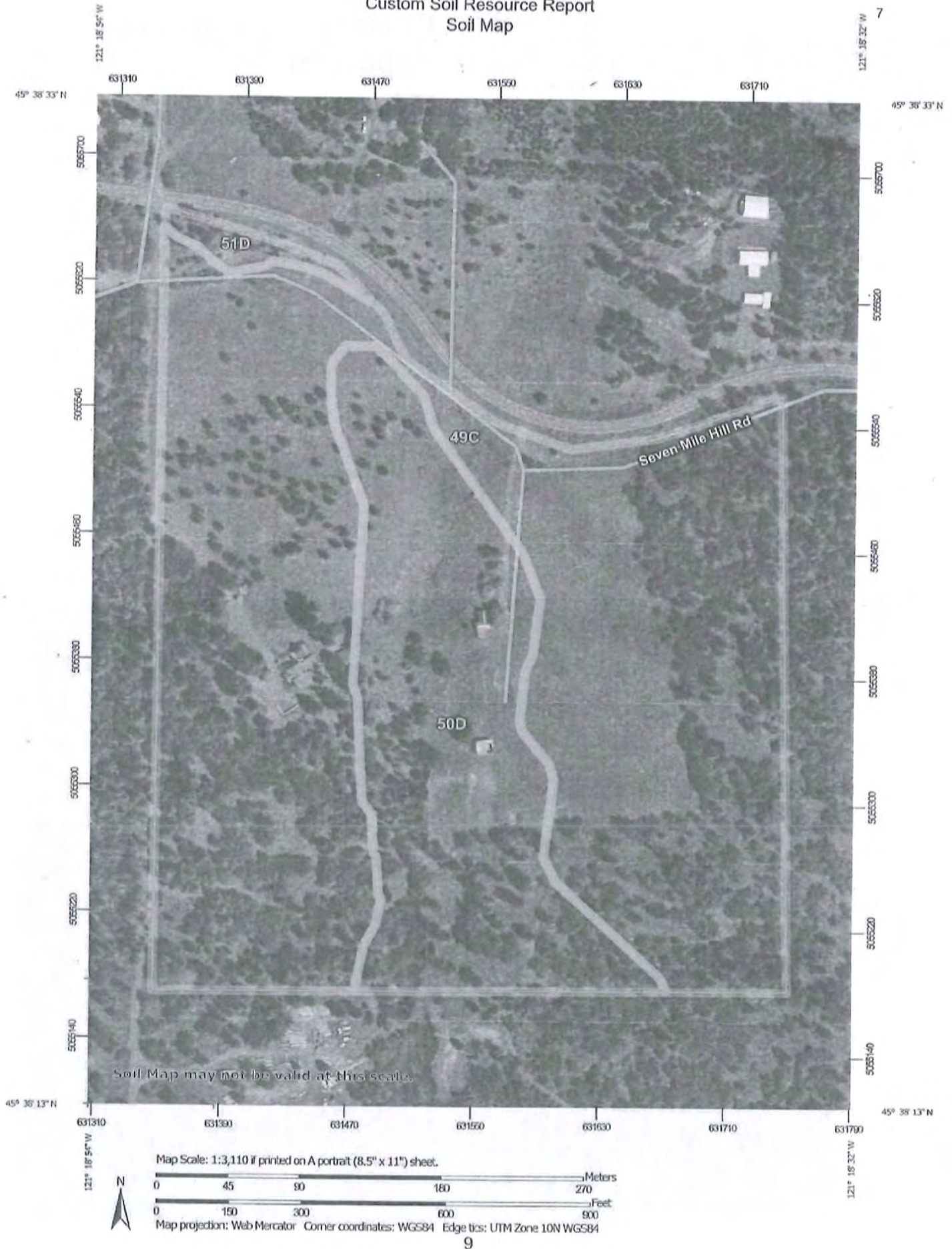
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

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# Custom Soil Resource Report for Wasco County, Oregon, Northern Part



# Custom Soil Resource Report Soil Map





## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49C	Wamic loam 5 to 12 percent north slopes	28.6	72.0%
50D	Wamic loam, 12 to 20 percent slopes	10.7	26.8%
51D	Wamic-Skyline complex, 2 to 20 percent slopes	0.5	1.3%
Totals for Area of Interest		39.8	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

- Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion.

### Report—Land Capability Classification

Land Capability Classification—Wasco County, Oregon, Northern Part				
Map unit symbol and name	Pct. of map unit	Component name	Land Capability Subclass	
			Nonirrigated	Irrigated
49C—Wamic loam 5 to 12 percent north slopes				
	90	Wamic, north	4e	—
50D—Wamic loam, 12 to 20 percent slopes				
	90	Wamic	4e	—
51D—Wamic-Skyline complex, 2 to 20 percent slopes				
	60	Wamic	4e	—
	20	Skyline	7s	—



Wilson

T2N R12E Sec. 23C TL# 4400

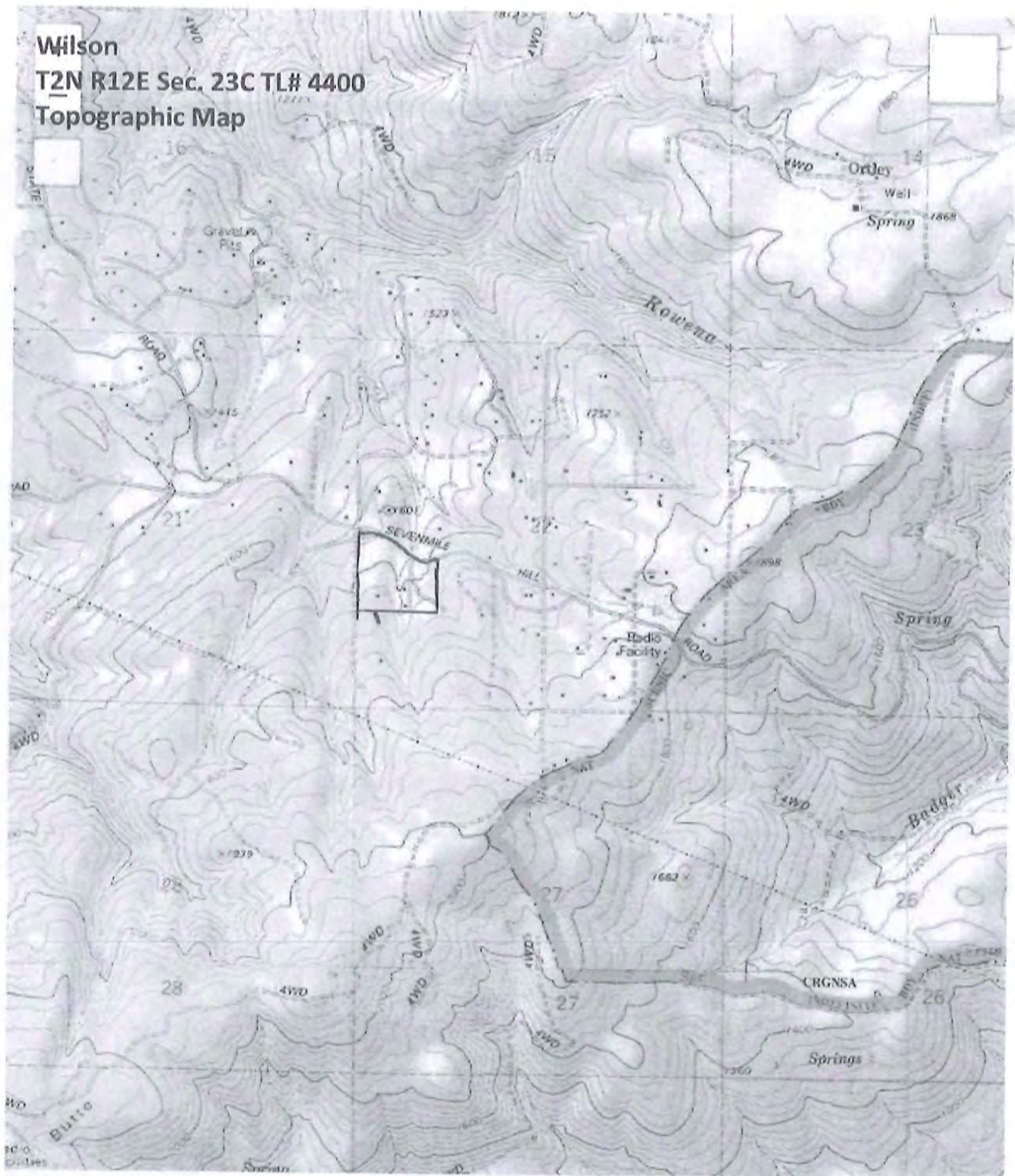
Site Control Map





## The Dalles Topo Map in Wasco County Oregon

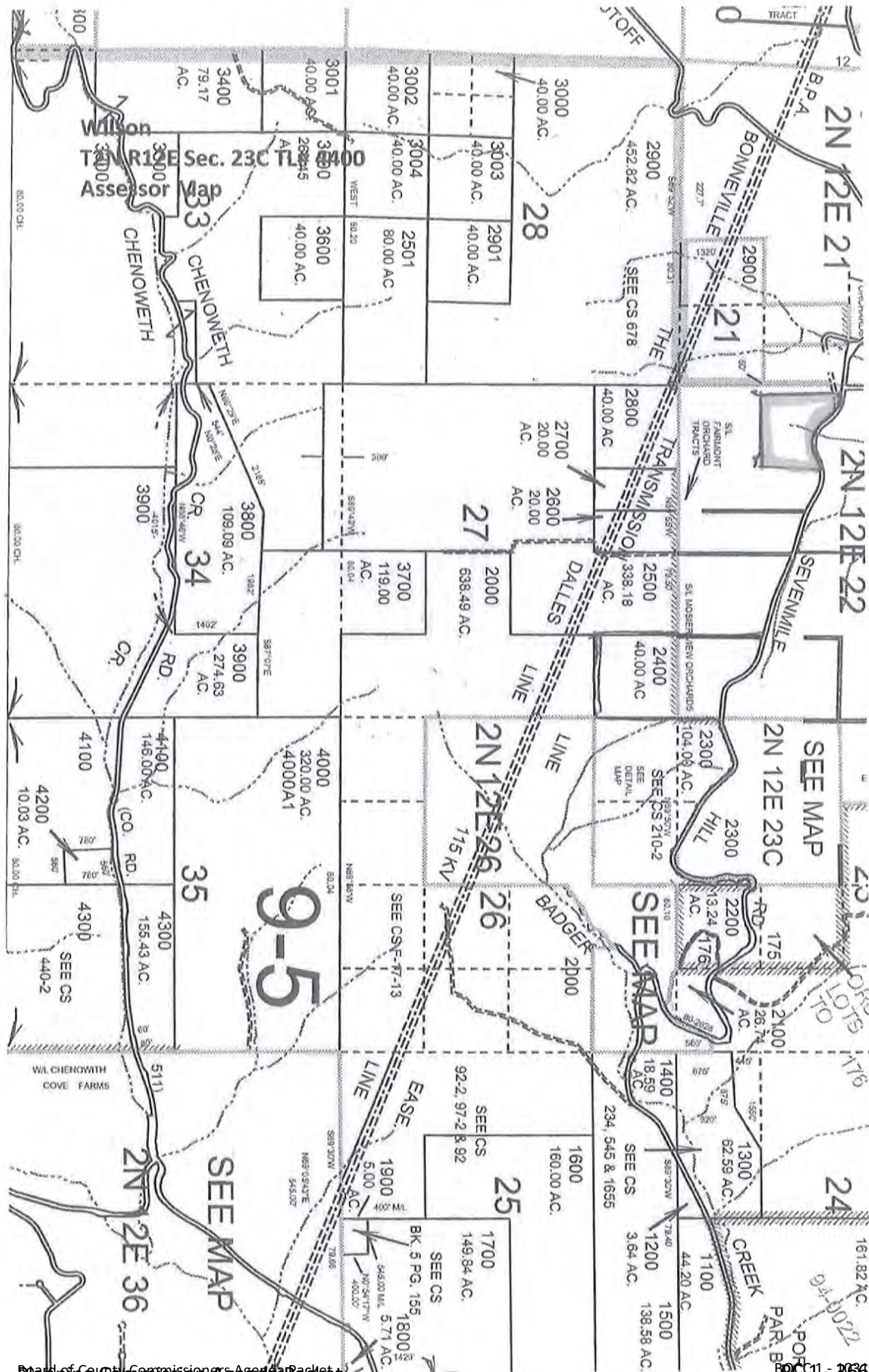
11


[Print this map](#)

Map provided by TopoZone.com



2012-3

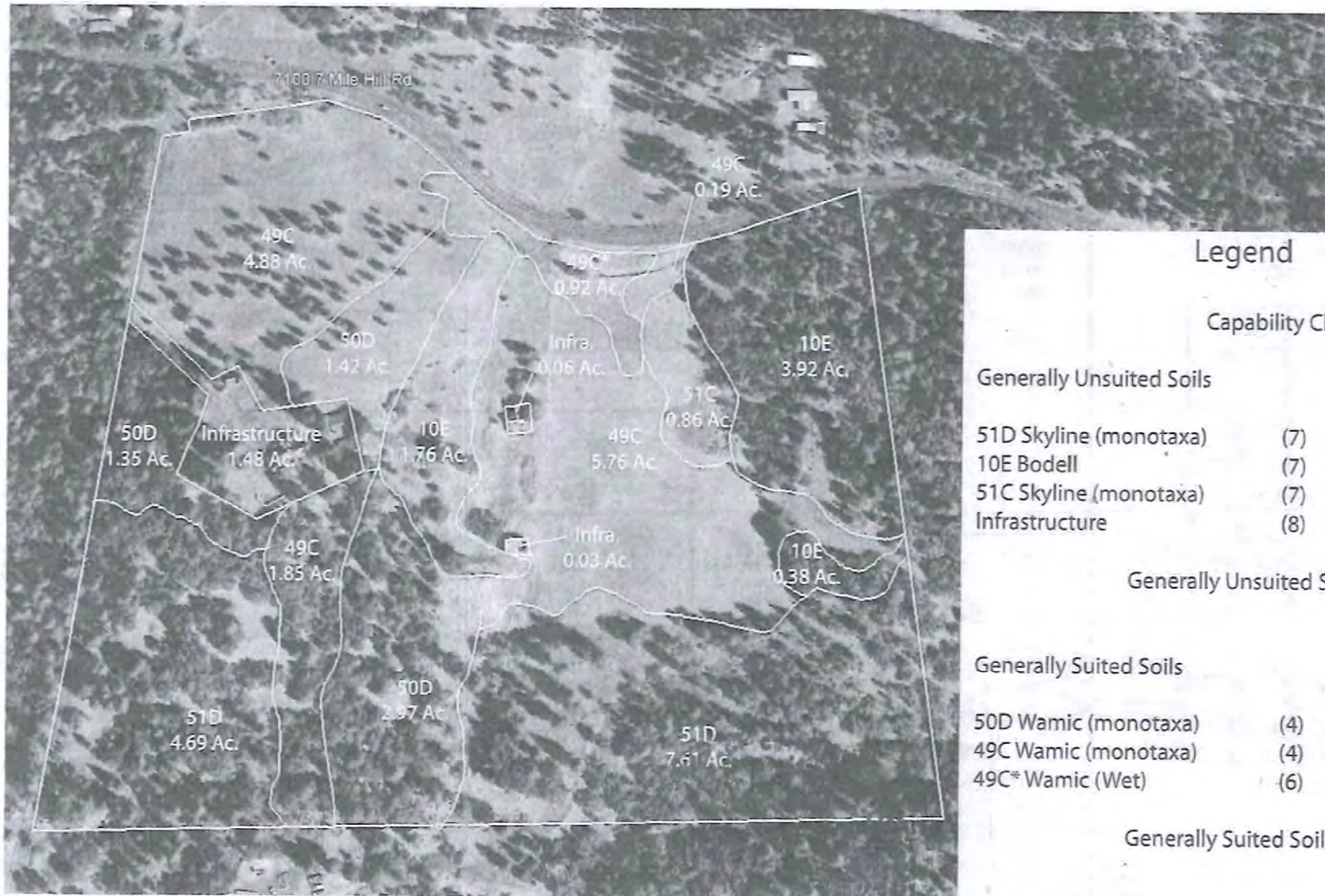




# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



### Legend

Capability Class    Acreage

#### Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsited Soils = 20.79 Acres

#### Generally Suited Soils

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Suited Soils = 19.34 Acres

Total Acres: 40.13 Acres  
Percentage of Generally Unsited Soils: 51.8%



# Growing Soils Environmental Associates

impermeable below 15" <sup>14</sup>  
 - 15" poor

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (1) Location SW extreme corner  
 GPS Coordinates see report  
 Slope 5 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees ~ HW

### BRIEF PROFILE DESCRIPTION

good roots to 15"  
 then abrupt stop

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR	+	L	14	10	cm 1-15	yes	1 1/2	fr	+	+	x= mod
---	-----	------	---	---	----	----	---------	-----	-------	----	---	---	--------

BA	6-12	10YR	+	L	10	10	cm 1	yes	2	fr	+	+	x= mod
----	------	------	---	---	----	----	------	-----	---	----	---	---	--------

CB	12-15	10YR	+	L	11	10	cm 1	yes	2	fr	+	+	x= mod
----	-------	------	---	---	----	----	------	-----	---	----	---	---	--------

2CR	15"												x= None
-----	-----	--	--	--	--	--	--	--	--	--	--	--	---------

consolidated Not cemented

unified description

Remarks

poor soil below 15"

Basalt

Diagnostic hor

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Loamy  
 Soil Drainage Class w Soil Erodibility Index + .29+ Series Skyline  
 Hydrologic Group D/K Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # 2 Location SW extreme corner Area  
 GPS Coordinates see report  
 Slope            Elevation            Landform uplands / hills / Plateau  
 Geology/Genesis ash over sediment  
 Vegetation HW trees, xerophyte

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-5	10YR 3/2	2	15%	15%	10	cm 12	yes	1 1/2 fi	0	0	x= med
AB	5-6	10YR 1/1	2	15%	15%	10	cm 1	yes	1" fi	0	0	x= med
BC	6-21	10YR 4/4	L	11	soft	10	yes	1" fi	0	0	0	x= med
2CR	21"+				fractured + saprolitic							

Sediments (Alkrent?)

Remarks

⊕ Abbreviated  
 ⊖ Andic

⊕ Cemented  
 ⊕ Indurated

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Abruptic xerochryd Family Loamy  
 Soil Drainage Class wd Soil Erodibility Index 2.7+ Series Skyline  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralitic contact  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (3) Location SW corner  
 GPS Coordinates see report  
 Slope 16 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation —

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-4	10YR <sup>3/2</sup>	+	L	1571	10	yes 1 1/2	fr	+	+	+	mod
AB <sub>2</sub>	4-8	10YR <sup>4/3</sup>	+	L	1m83	12	yes 1 1/4	fr	+	+	+	mod
BC	8-25	10YR <sup>4/4</sup>	+	L	11	10	yes 1 1/4	fr	+	+	+	mod slow
2CR	25"				highly weathered					1+ x=	+	+
					Saprolite					2+		

Remarks

⊕ highly erodible  
 ⊖ Diagnostic hor.  
 ⊕ soft frags in Control Section

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" (2)

Classification — Family Loamy  
 Soil Drainage Class wp Soil Erodibility Index 130+ Series SKyline  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # (16) Location Western mid limits  
 GPS Coordinates see report  
 Slope 7 Elevation ~ Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees - hws & upland shrubs

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2 10yr	<u>θ</u>	<u>L</u>	<u>16</u>	<u>9/10</u>	<u>yes</u>	<u>1 1/2</u>	<u>fr</u>	<u>θ</u>	<u>θ</u>	<u>θ</u>	<u>x=</u>
AB	6-18 10yr	<u>θ</u>	<u>L</u>	<u>1m</u>	<u>SBK</u>	<u>10</u>	<u>yes</u>	<u>2 1/4</u>	<u>fi</u>	<u>θ</u>	<u>θ</u>	<u>x=</u>
BW	8-24 10yr	<u>θ</u>	<u>L</u>	<u>1m</u>	<u>SBK</u>	<u>10</u>	<u>yes</u>	<u>2 1/4</u>	<u>fi</u>	<u>θ</u>	<u>θ</u>	<u>x=</u>
2CR	(24) 1/2	<u>X</u>	<u>Paralimic</u>	<u>contact</u>	<u>hardness</u>	<u>at 2.5-3</u>	<u>x=</u>					

Remarks

Borderline  
skyline / warm

Capability Class 7b Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification fine loamy, Andic Xerochrept Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 120 F Series SKyline / warm  
 Hydrologic Group UD Depth to Mottles θ Effective Rooting Depth <10"  
 Depth Current Water Table θ Est Depth Seasonal High Water Table θ  
 Runoff Potential mod due to shallow paralimic contact  
 Flooding Potential θ Wetland Conditions θ

freely drained



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 5 Location NW 1/4 near access Rd  
 GPS Coordinates see enclosed report  
 Slope 7 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual  
 Vegetation monocots

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	A	L	1+fr	<15	yes	1"	fr	0	0	mod
BW	6-17"	10YR 4/3	0	L	1m, f	<10	yes	1"	fr	0	0	mod
BW	17-24"	10YR 4/3	0	L	"	10	yes	1"	fr	0	0	mod
BC	24-29"	10YR 5/4	0	L	"	12	yes	1 1/2"	fr	0	0	mod
R	29"	basalt (fractured)										X
		⊕ Lithic										X

Remarks

-AP  
BT but close  
mineral medial properties  
no low BD

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index  Series Wamak  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table A Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

East facing slope  
somewhat protected

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
 Stop # 6 Location NW 1/4 - Above steep drop off  
 GPS Coordinates see enclosed report  
 Slope 10% Elevation → Landform upland / low rolling hill / Basin  
 Geology/Genesis residual / colluvium  
 Vegetation monocots, scattered trees (open grown)  
Hardwoods

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-8	10YR <sup>3/2</sup>	θ	L	1m	9	cm 1	yes	1"	fr	θ	θ x= mod
BW <sub>1</sub>	8-16	10YR <sup>4/3</sup>	θ	L	1.5m	5	cm 1	yes	1"	fr	θ	θ x= mod
BW <sub>2</sub>	16-31	10YR <sup>5/4</sup>	θ	L	"	15	yes	2"	(fr)	θ	θ x= mod	
BC	31-37	10YR <sup>7/4</sup>	θ	HL	"	10	yes	2"	(fr)	θ	θ x= mod	
R	37"	basalt										X

Remarks

-AP  
θ BT

HL = ~ 28-30" clay

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification mesic Xerochrepts Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index → Series Wamuk  
 Hydrologic Group A Depth to Mottles θ Effective Rooting Depth →  
 Depth Current Water Table θ Est Depth Seasonal High Water Table θ  
 Runoff Potential mod due to basalt rock  
 Flooding Potential θ Wetland Conditions θ



# Growing Soils Environmental Associates

20

1D slope" north of house (SOD)

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # 7 Location West central Edge  
 GPS Coordinates see report  
 Slope 7 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees - conifers + HW

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-6	10YR	A	L			cm			A	A	X= mol
AB	6-9	10YR	A	L			cm			A	A	X= mol
BW	9-30"	10YR	A	L			cm			A	A	X= mol
2CR	30"			Saprolitic							1+ X= A	
				Sediment							2+	
											X=	
											X=	

Remarks

Capability Class 7/b Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification

Soil Drainage Class wp Soil Erodibility Index 24-26 Series SKYline/wemy  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential A Wetland Conditions A

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

steep, dry  
East face slope

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzeron  
Stop # 8 Location Worm control portion  
GPS Coordinates see report  
Slope 14 Elevation --- Landform Low hillslopes  
Geology/Genesis resistant basalt  
Vegetation V ferns Hardwoods (xerophytes) - Mostly open  
Monocots Shrubs

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-3	10YR 3/3	D	CB 1m9r	cm L	25	yes	1/1	f <sub>r</sub>	0	0	x= mod
BC	3-11	10YR 4/3	D	CB 1c	cm L	30	yes	1/1	f <sub>i</sub>	0	0	x= mod
BC	11-18	10YR 5/4	D	CB (mass)	cm L	35	yes	2/1	f <sub>i</sub>	0	0	x= mod slow
R	18" +	Basalt / Geo. contact									0	x=
												x=
												x=

Remarks

→ A clay 2° To Din PM to basalt

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification --- Family Lo-skeletal  
Soil Drainage Class WD Soil Erodibility Index .27 Series Bodell  
Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to rocky, shallow soils  
Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/18/20 Preparer K. Tzrow  
 Stop # (9) Location mid property  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

1'6" surface Rock

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 2/2	D	CB	1/yr	25	cm 1/2	yes	1 1/2"	0	0	x= mod
BC	6-12	10YR 4/3	D	9/1	1/yr	30	cm 4	yes	f	0	0	x= mod
BC	12-18	10YR 4/4	D	CB	"	35	yes	f	f	0	0	x= mod slow
R	18"	Basalt / Geo. contact								0	0	x=
												x=
												x=

Remarks

next to old house

skip microsit

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-Sk/et2  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (10) Location mid south East Ave  
 GPS Coordinates see report  
 Slope 10 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees w/ Nat'l open area w/ forbes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR <sup>3/2</sup>	2.5	L	1C	cm	1	yes	1 1/2	(fr)	1.5	0 x=
Bw	* 6-14	10YR <sup>4/1</sup>	3.5	L	1C	cm	1	yes	1 1/2	fi	1.5	0 x=
Bw	14-30	10YR <sup>4/1</sup>	4.5	L	L	10	yes	1 1/2	fi	0	0	0 x=
2CR	30"										1+ x=	0
											2+	
												x=
												x=

Remarks

Wanna on steep  
10' slope

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2"

Classification fine loamy mixed mesic Family Loamy

Soil Drainage Class wp Soil Erodibility Index .24-2 Series Skylark

Hydrologic Group D Depth to Mottles 0 Effective Rooting Depth <10"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralithic contact

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

Clay content  $\bar{X} = 20-22\%$  Spring CD 7  
 SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # 11 Location SE corner of property  
 GPS Coordinates see report  
 Slope 11 Elevation --- Landform uplands / hills  
 Geology/Genesis ash over sedimentary Andesite basalt  
 Vegetation solid trees HW & a few conifers

284° Aspect

## BRIEF PROFILE DESCRIPTION

POOR SITE

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------	------------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-4	10YR	0	L	1+9/10	cm	1	yes	1 1/2" fr	0	0	X= mod
AB	4-6	7.5YR	0	L	1+10	cm	5	yes	1 1/2" fi	0	0	X= mod
BC	6-15	7.5YR	0	L	11	5	yes	1" fi	0	0	0	X= mod slow
2CX vs 2CR	15				distinct	CR	X	X			1+ X= 2+	0

CR Mohr 2 to 3

Duration 15"  
 No rooting Ability

Remarks

folded

Diagnostic

ARD = 19"

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification Entic Abruptic Durocherts Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index .24 Series SKyline  
 Hydrologic Group D/C Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential 0 Wetland Conditions 0

BRE 22"



# Growing Soils Environmental Associates

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Small Inclusion  
slope Area

Completed into

Transition between 49C & 50D

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 12 Location South Central Area - 100' N of S. 1st border  
 GPS Coordinates see enclosed report  
 Slope 16 Elevation — Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum only  
 Vegetation tree mixed monocots - 15% skeletal hardwood  
≡ No v few cmh

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------------	------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-6	10YR 3/3	0	L		<15	yes	1"	fr	0	0	x= mod
---	-----	----------	---	---	--	-----	-----	----	----	---	---	--------

BW <sub>1</sub>	6-9	10YR 3/3	0	L		5	yes	1"	fi	0	0	x= mod
-----------------	-----	----------	---	---	--	---	-----	----	----	---	---	--------

BW <sub>2</sub>	9-15	7.5YR 5/4	0	9L		15	yes	1"	fi	0	0	x= mod
-----------------	------	-----------	---	----	--	----	-----	----	----	---	---	--------

BC	15-20	7.5YR 5/4	0	9L		15	yes	2"	fi	0	0	x= mod
----	-------	-----------	---	----	--	----	-----	----	----	---	---	--------

20" basalt highly weathered, fractured x= xstn

R begins @ 50" & between 20 & 50" xstn perm to

Remarks

Borderline Wamic & SKyline

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification — Family Fi-Isamy

Soil Drainage Class WD Soil Erodibility Index — Series Wamic/Skyline

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth —

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

26

ARD=27" ~~mod~~ warm but a little shallow

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzeron  
 Stop # 13 Location SE Edge of hay field  
 GPS Coordinates see enclosed report  
 Slope 4-6 Elevation      Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual - basalt  
 Vegetation monocots

near steep "E" slope where there is a major soil change ??

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-5	10YR 3/2	+	L	1 fm	cm 6-2	yes	1"	fr	+	+	mod
BW <sub>1</sub>	5-14	10YR 4/3	+	L	1+ SBK	cm	yes	1"	fr	+	+	mod
BW <sub>2</sub>	14-20	10YR 5/4	+	9L	"	15	yes	1"	fr	+	+	mod
BC	20-28	7.5YR 5/6	+	19L	"	15	yes	1"	fr	+	+	mod
2CR	28-4	basalt - highly weathered - saprotitic										

Even distribution from top to bottom  
 good moderately deep soils  
 possibly mod in upper 1"

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification Vtrandi Xerochrepts Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth       
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rock  
 Flooding Potential + Wetland Conditions +

(+) parallel, there contact



# Growing Soils Environmental Associates

27

Model B0 dell

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 14 Location East Limits near opening  
 GPS Coordinates see report  
 Slope 6-8 Elevation ↓ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes, dissected

ARD = 22"

### BRIEF PROFILE DESCRIPTION

dissected  
landscape =  
Floral Diversity

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-4	10YR 3/2	D	stony Hg	cm 1	25	yes	2 1/4	fr	0	0	x= mod
BC	4-17	10YR 3/4	D	CB	1 m	30	yes	2 1/4		0	0	x= mod
BC	17-24	10YR 3/4	D	CB	11	35	yes	2 1/4		0	0	x= mod to slow
# CR/R	21"	Basalt / Geo. contact									0	x= X
		Fractured large										x=
		Lithic contact boulders										x=

Remarks

Opacalithic

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lithic, Abruptic Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25-30 Series Badel (10E)  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5 ft  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils, dissected  
 Flooding Potential 0 Wetland Conditions 0 landscape



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzrow  
 Stop # 15 Location NE 1/4 ~ 80' west of prop. limits  
 GPS Coordinates see report  
 Slope 15° Elevation ~ Landform low hillslopes (west face)  
 Geology/Genesis resistant basalt  
 Vegetation Denise Hardwoods, Xerophytes, no monocots  
Balsam root

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	2	VCB	1M9	25	yes	24	fr	0	0	x= mod
BC	6-14	10YR 4/3	0	CB	1C	30	yes		fr	0	0	x= mod
BC	14-20	10YR 4/4	0	stony	(DNA)	35	yes			0	0	x= mod slow
R	20"	Basalt / Geo. contact									0	x=
												x=
												x=

Remarks

ARD = 18"

Diagnostic horizon

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification LD-Skeletal Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25 Series Bode  
 Hydrologic Group A Depth to Mottles 4 Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

29

highly skeletal :: CC 7 V Wt

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 16 Location NE extreme corner  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR	D	VCB	L	25	yes	fr	fr	14	0	x= mod
BW	7-20	10YR	D	VCB	L	40	yes	fr	fr	14	0	x= mod
BC	20-25	10YR	D	VCB	L	35	yes	fr	fr	6	0	x= mod slow
R	25+										0	x=
												x=
												x=

Remarks

Strongly skeletal

ARD=25"

Overtly convex

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal, Andic Xerodryph Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 27 Series Bode  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth 45"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

49C

Job Name Wilson Date 12/19/10 Preparer K. T. Zou  
 Stop # 17 Location SE 1/4 open way field  
 GPS Coordinates See Report  
 Slope 5 Elevation  Landform upland  
 Geology/Genesis residual basalt  
 Vegetation no trees; dead grasses + mums

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	7.5YR 3/2	L	1M gr	5	cm	yes	1/2"	fr	wk	0	x= total
Bw	6-11	4/3	L	1C sbk	5	cm			fr	wk	0	x= mod
Bw	11-18	5/4	L	1M blk	5				fr	0	0	x= mod
BC	18-29		L	1C (blk)	5		2"	UG	0	0	0	x= mod
CR	29-4			saprolitic sediment								x=

Remarks

geologic contact close by medial??

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" x2"

Classification Andic Xerochrepts Family fi lo  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wamuk  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth 10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential Low due to soil depth  
 Flooding Potential 0 Wetland Conditions 0

hargh site

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzerow  
 Stop # 18 Location NE 1/4  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes microsite  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

Thin topsoil

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2	10YR	D	stony	L		25	yes	24	if	0	0
BC	2-11	10YR	D	stony	L		30	yes	24	f	0	0
BC	11-17	10YR	D	stony	L		35	yes	24	f	0	0
17YR												

Remarks

Perched Hott  
table due to  
hard Rock

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 12af Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 24" Est Depth Seasonal High Water Table 20"  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

49<sup>32</sup>

Suitel

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
 Stop # 19 Location Mud Property  
 GPS Coordinates see enclosed report  
 Slope 3 Elevation --- Landform upland / low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots only (slight depression nearby = localized relief)

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 2/2	0	L	1f, m	<15	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>	7-14	10YR 2/2	0	L	1m	SBK	yes	1"	fr	0	0	x= mod
BW <sub>2</sub>	14-21	7.5YR 5/4	0	L	1m, c	SBK	yes	1"	fr	0	0	x= mod
BW <sub>3</sub>	21-29	7.5YR 5/4	0	L	mass	(vs. SBK)	yes	1"	fr	0	0	x= mod
CR	29"	basalt	fractured						X			X
R	>45"					borderline saprolitic						x=

Remarks

ARD 225 to 30"  
 Good Modest Wamuc  
 No Argillite but good cambic

Capability Class 4/6 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification --- Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index --- Series Wamuc  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth ---  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzerow  
 Stop # 20 Location North end  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2		stony		25	yes	24	fr			x= mod 22
BC	7-11	10YR 4/3		CB		30	yes		fr			x= mod slow
BC	11-20	10YR 4/4		CB		35	yes		fr			x= mod slow
CR	20'4	Basalt / Geo. contact						indurated				
M. h. s. hard ~ 2.5-3												
can chip with tile spade												
<div style="font-size: 2em; font-family: cursive;">FDDR</div>												

Remarks \_\_\_\_\_

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Bode 1/5K/4  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential A Wetland Conditions A

**Wilson****T2N R12E Sec. 23C TL# 4400****Typifying Pedons****Wamic**

A 0-8" loam; 10YR 3/2; weakly smeary, low bulk density weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

Bw1 8-16" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

Bw2 16-26" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

BC 26-38" loam; 10YR 5/4; weak fine, coarse sub angular structure parting to blocky; firm; slightly sticky, non plastic; 5% cobbles; few fine roots; pH. 7.6

38"+ Paralithic contact, indurated but non-cemented basalt; non-calcareous

**Bodell**

A 0-5" stony loam, 10YR3/3, 20% gravels, 15% cobbles; friable, weak fine granular structure; few fibrous roots, non-sticky, non-plastic, clear wavy boundary pH=7.7

Bw 5-10" very cobbly loam, 10YR5/4, 10% gravels, 25% cobbles; friable consistence, weak fine, medium sub angular-blocky structure; no roots; slightly sticky, non- plastic, pH=7.9

BC 10-16" cobbly loam, 10YR5/4, 5% gravels, 25% cobbles; very firm consistence, weak medium subangular blocky structure; common interstitial and tubular pores; slightly-sticky, non- plastic, pH=7.9

16"+ hard, Massive Basalt; non-saprolitic, lithic

**Skyline**

A 0-3" loam; 10YR 3/2; non-smeary, weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

BC1 3-11" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

BC2 11-18" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

18"+ Paralithic contact, sedimentary origin



# Growing Soils Environmental Associates

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49C#

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
 Stop # 23 Location North central extreme  
 GPS Coordinates see enclosed report  
 Slope < 4 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-5	10YR 3/2	0	L	1f m	cm	L	yes	1 1/2	f	0	0 x= mod
BW	5-18	10YR 2/4	0	L	1C SBK	cm	yes	1 1/2	f	0	0 x= mod	
BW	18-30	10YR 5/6	0	L	1C SBK	cm	yes	1 1/2	f	0	0 x= mod	
B	30-35	10YR 3/1	0	L	1C BK	cm	yes	1 1/2	f	0	0 x= mod	
CR	35	basalt - Saprolitic (Mott = 3 or 2)										

Estimated  
 Remarks: Transient water table  
not SBK

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = > 2" < 2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic wet  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

49C\* = wet phase

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzrow  
 Stop # 22 Location North central extreme limits  
 GPS Coordinates see enclosed report  
 Slope <2 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots isolated Pac Wet forbs

\* DTM = 35"

### BRIEF PROFILE DESCRIPTION

Lowest elevation  
in parcel +  
lowest landscape

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2	0	L	1f m/c	cm	yes	1/4	f	0	0	x= mod
BW	7-14	10YR 3/3	0	L	1m c	cm	yes	2/4	f	0	0	x= mod
BW	14-30	10YR 5/4	0	HL	1c	cm	yes	2/4	f	0	0	x= mod slow
BC	30-35	10YR 1/1	0	HL	??	cm	yes	2/4	f	0	0	x= mod slow
CR	35"	basalt			fractured							x=
		about geo contact										x=

Remarks Browner than upslope Areas  
no rock

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class MWD Soil Erodibility Index 128+ Series Wanick Wet  
 Hydrologic Group A/A Depth to Mottles 10" Effective Rooting Depth <10"  
 Depth Current Water Table 50" Est Depth Seasonal High Water Table 40-50"  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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hydrology alteration in area  
2<sup>nd</sup> to 7 mile Hill Rd

Border de pression  
Area

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
Stop # 21 Location North Central extreme  
GPS Coordinates see enclosed report  
Slope 43 Elevation      Landform upland / Low rolling hill / Basin  
Geology/Genesis residuals + some colluvium  
Vegetation monocots, isolated Pac monocots

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A		10YR <sup>3/4</sup> 6	L	16m	cm	1"	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>		10YR <sup>3/4</sup> 6	L	16m	cm	2"	yes	2"	fr	0	0	x= mod
BW <sub>2</sub>		10YR <sup>4/4</sup> 6	L	"	"	2"	yes	2"	fr	0	0	x= mod
BC		10YR <sup>2/2</sup> (10)	L	"	"	5"	yes	1 3/4"	fr	0	0	x= mod
R	55"	basalt weathered										

Remarks

254-  
inter pore  
locations

Highly erodible

Wet warm  
Hot fall

Capability Class 4/6 Suitability = Gen. suited, Gen. unsuited WHC = >2" x 2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index 27-35 Series Warm

Hydrologic Group A Depth to Mottles 38" Effective Rooting Depth

Depth Current Water Table 50" Est Depth Seasonal High Water Table 50" or less

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0 to 1



## ATTACHMENT D – EXHIBIT 12

“Soil Survey of Wasco County, Oregon, Northern Part”

This is a scanned version of the text of the original Soil Survey report of Wasco County, Oregon, Northern Part, issued March 1982. Original tables and maps were deleted. There may be references in the text that refer to a table that is not in this document.

Updated tables were generated from the NRCS National Soil Information System (NASIS). The soil map data has been digitized and may include some updated information. These are available from <http://soildatamart.nrcs.usda.gov>.

Please contact the State Soil Scientist, Natural Resources Conservation Service (formerly Soil Conservation Service) for additional information.

## SOIL SURVEY OF WASCO COUNTY, OREGON, NORTHERN PART

By George L. Green

Fieldwork by George L. Green, Terry A. Dallin, and Dal F. Ames,  
Soil Conservation Service

United States Department of Agriculture, Soil Conservation  
Service, in cooperation with the Oregon Agricultural Experiment  
Station

**WASCO COUNTY, NORTHERN PART**, is east of the Cascade Mountains in the north-central part of Oregon (see facing page). It occupies 559,730 acres.

The survey area is used mainly for farming. Sale of beef, wheat, and fruit is the principal source of farm income. Wheat is the main cash crop.

### *How This Survey Was Made*

Soil scientists made this survey to learn what kinds of soil are in Wasco County, Northern Part; where they are located; and how they can be used. The soil scientists went into the county knowing they likely would find many soils they had already seen and perhaps some they had not. They observed the steepness, length, and shape of slopes; the size and speed of streams; the kinds of native plants or crops; the kinds of rock; and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material that has not been changed much by leaching or by the action of plant roots.

The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. The soil phase is the category of soil classification most used in a local survey.

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or geographic feature near the place where a soil of that series was first observed and mapped. Chenoweth and Dufur, for example, are the names of two soil series. All the soils in the United States having the same series name have essentially the same characteristics affecting their behavior in the undisturbed landscape.

Soils of one series can differ in texture of the surface layer and in slope, stoniness, or some other characteristic that affects use of the soils by man. On the basis of such differences, a soil series is divided into phases. The name of a soil phase indicates a feature that affects management. For example, Condon silt loam, 1 to 7 percent slopes, is one of several phases within the Condon series.

After a guide for classifying and naming the soils had been worked out, the soil scientists drew the boundaries of the individual soils on aerial photographs. These photographs show woodlands, buildings, field borders, trees, and other details that help in drawing boundaries accurately. The soil map at the back of this publication was prepared from aerial photographs.

A mapping unit consists of all those areas shown on a soil map that are identified by the same symbol. On most maps detailed enough to be useful in planning the management of farms and fields, a mapping unit is nearly equivalent to a soil phase. It is not exactly equivalent because it is not practical to show on such a map all the small, scattered bits of soil of some other kind that have been seen within an area that is dominantly of a recognized soil phase.

Some mapping units are made up of soils of different series or of different phases within one series. Two such kinds of mapping units are shown on the soil map of Wasco County, Northern Part: soil complexes and soil associations.

A soil complex consists of areas of two or more soils, so intermingled or so small they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas. Generally, the name of a soil complex consists of the names of the dominant soils, joined by a hyphen. Bakeoven-Condon complex, 2 to 20 percent slopes, is an example.

A soil association is made up of two or more soils that could be delineated individually but that are shown as one unit because, for the purpose of the soil survey, there is little value in separating them. If there are two or more dominant series represented in the soil

association, the name ordinarily consists of the dominant soils joined by a hyphen. Bindle-Bins association, steep, is an example.

In most areas surveyed there are places where the soil is so stony, so shallow, so severely eroded, or so variable that it has not been classified by soil series. These places are shown on the soil map and are described in the survey, but they are called miscellaneous areas and are given descriptive names. Riverwash is a miscellaneous area.

Some of the mapping units in this survey area are broadly defined. These are indicated in the Index to Mapping Units and in the Guide to Mapping Units by an asterisk following the name of the mapping unit. The composition of these units is more variable than that of other units in the survey area, but mapping has been controlled well enough that interpretations can be made for the expected uses of the soil.

While a soil survey is in progress, soil scientists take soil samples needed for laboratory measurements and for engineering tests. Laboratory data from the same kind of soil in other places are also assembled. Data on yields of crops under defined practices are assembled from farm records and from field or plot experiments on the same kind of soil. Yields under defined management are estimated for all the soils.

Soil scientists observe how soils behave when used as a growing place for native and cultivated plants, and as material for structures, foundations for structures, or covering for structures. They relate this behavior to properties of the soils. For example, they observe that filter fields for onsite disposal of sewage fail on a given kind of soil, and they relate this to the slow permeability of the soil or to its high water table. They see that streets, road pavements, and foundations for houses are cracked on a particular soil, and they relate this failure to the high shrink-swell potential of the soil material. Thus, they use observation and knowledge of soil properties, together with available research data, to predict limitations or suitability of soils for present and potential uses.

After data have been collected and tested for the key, or benchmark, soils in a survey area, the soil scientists set up trial groups of soils. They test these groups by further study and by consultation with farmers, agronomists, engineers, and others. They then adjust the groups according to the results of their studies and consultation. Thus, the groups that are finally evolved reflect up-to-date knowledge of the soils and their behavior under current methods of use and management.

### **General Soil Map**

The general soil map at the back of this survey shows, in color, the soil associations in Wasco County, Northern Part. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

A map showing soil associations is useful to people who want a general idea of the soils in an area, who want to compare different parts of an area, or who want to know the location of large tracts that are suitable for a certain kind of land use. Such a map is a useful general guide in managing a watershed, a wooded tract, or a wildlife area, or in planning engineering works, recreational facilities, and community developments. It is not a suitable map for planning the management of a farm or field or for selecting the exact location of a road, building, or similar structure because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect their management.

The soil associations in Wasco County, Northern Part, are discussed in the following pages.

The soil associations in this survey area have been grouped into five general kinds of landscapes for broad interpretative purposes. Each of the broad groups and their included soil associations are described in the following pages. The terms for texture used in the title for several of the associations apply to the texture of the surface layer. For example, in the title of association 1, the words, silt loam and loam refer to the texture of the surface layer of the major soils named in the association. Terms used to express the dominant slope and depth of soil in the titles of the five major groups and the ten associations are defined in the Glossary. All the major soils in this survey area are well drained.

### **Deep, Moderately Sloping to Steep Soils on Uplands and Terraces**

These soils are on uplands and old terraces in the northern part of the survey area along the Columbia River and its tributaries.

#### ***1. Cherryhill-Chenoweth association***

##### ***Deep, moderately sloping to steep silt loam and loam soils***

This association consists of moderately sloping to steep soils on the sides of canyons and dissected terraces along Three Mile, Five Mile, Mill, Chenoweth, and Mosier Creeks. These soils formed in old alluvium and in colluvium weathered from consolidated and semiconsolidated tuffaceous sandstone. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, Oregon white oak, and ponderosa pine. Slopes range from 1 to 50 percent but are dominantly 7 to 35 percent. Elevation ranges from 200 to 1,200 feet. The average annual precipitation ranges from 14 to 20 inches, and the average annual air temperature ranges from 51° to 54° F. The frost-free period is 140 to 210 days at 32° and 170 to 250 days at 28°.

This association makes up about 3 percent of the survey area. It is about 62 percent Cherryhill soils, 26 percent Chenoweth soils, and 12 percent Van Horn, Wind River, Hesslan, Skyline, Tygh, Endersby, and Cumulic Haplaquolls soils and Rock outcrop-Xeropsamments.

Cherryhill soils have a surface layer of very dark

grayish brown silt loam and a subsoil of dark brown and dark yellowish brown silt loam, sandy clay loam, and loam. Effective rooting depth is 40 to 60 inches.

Chenoweth soils have a surface layer of very dark brown and very dark grayish brown loam and a subsoil of dark brown loam. Effective rooting depth is 60 inches or more.

This association is used for irrigated and dryfarmed fruit orchards that are mostly sweet cherries (fig. 1), for wildlife habitat, and for water supply. The wildlife is mainly upland birds and deer.

Runoff is mainly from the steep soils where vegetative cover is in poor condition or has been removed by cultivation. Sediment from runoff is moderate. Maintaining maximum cover in orchards and using conservation practices on dryfarmed cropland minimize the hazard of erosion.

### **Shallow to Deep, Nearly Level to Steep Soils on Uplands**

These soils are in the eastern part of the survey area in the Columbia District, Tygh Ridge, and Juniper Flat area.

They are well drained soils that formed mostly in loess, volcanic ash, and residuum weathered from basalt. Slopes range from 0 to 50 percent. Elevation ranges from 300 to 3,600 feet. The average annual precipitation ranges from 10 to 16 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 170 days at 32° and 150 to 210 days at 28°.



**Figure 1: Irrigated sweet cherries with permanent cover crop on Chenoweth loam, 1 to 7 percent slopes.**

The four soil associations in this group make up about 46 percent of the survey area.

### **2. Walla Walla-Dufur association**

*Deep, nearly level to steep silt loam soils*

This association consists of broad areas of soils that formed in loess on ridgetops and along major drainageways. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 300 to 2,000 feet. The average annual precipitation ranges from 12 to 14 inches, and the average annual air temperature ranges from 48° to 52° F. The frost-free period is 120 to 170 days at 32° and 150 to 210 days at 28°.

This association makes up about 13 percent of the survey area. It is about 58 percent Walla Walla soils, 24 percent Dufur soils, and 18 percent Duart, Anderly, Wato, Endersby, Hermiston, Pedigo, Licksillet, Nansene, and Wrentham soils and Riverwash.

Walla Walla soils have a surface layer of very dark brown silt loam and a subsoil of dark brown and brown silt loam. Effective rooting depth is 40 to 60 inches or more.

Dufur soils have a surface layer of very dark brown silt loam; a subsoil of dark brown, dark grayish brown, and dark yellowish brown silt loam; and a substratum of yellowish brown, moderately calcareous cobbly fine sandy loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for dryfarmed grain and pasture, wildlife habitat, and water supply. Farms are large, and water supplies for livestock are limited. The wildlife is mainly deer and upland birds.

Runoff is mainly from the moderately steep and steep soils, particularly in range where the grass is in poor condition and on summer fallow areas where vegetative protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using conservation practices on dryfarmed cropland minimize the hazard of erosion.

### **3. Condon-Cantala Bakeoven association**

*Shallow to deep, nearly level to steep silt loam and very cobbly loam soils*

The soils in this association formed in loess, volcanic ash, and residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,600 to 3,600 feet. The average annual precipitation ranges from 10 to 13 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

This association makes up about 19 percent of the survey area. It is about 44 percent Condon soils, 24 percent Cantala soils, 23 percent Bakeoven soils, and 9 percent Licksillet, Wrentham, and Hermiston soils.

Condon soils are moderately deep and nearly level to steep. They have a surface layer of very dark brown silt loam and a subsoil of dark brown and very dark grayish brown silt loam. Effective rooting depth is 20 to 40 inches.

Cantala soils are deep and nearly level to steep. They have a surface layer of very dark brown and very dark grayish brown silt loam, a subsoil of dark brown silt loam, and a substratum of dark brown loam. Effective rooting depth is 40 to 60 inches or more.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

This association is used for dryfarmed grain, range, and pasture; for wildlife habitat; and for water supply. Condon and Cantala soils are used for dryfarmed small grain. Bakeoven soils are used for grazing, mostly by cattle. Water supplies for livestock are limited. Springs and ponds are the main sources of water. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils and the steep Condon and Cantala soils. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on dryfarmed cropland minimize the hazard of erosion.

#### **4. Watama-Bakeoven-Wapinitia association**

*Shallow to deep, nearly level to steep silt loam and very cobbly loam soils*

This association consists of broad areas of soils on upland plateaus. These soils formed in loess, volcanic ash, and in residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,800 to 3,400 feet. The average annual precipitation ranges from 13 to 16 inches, and the average annual air temperature ranges from 48° to 50° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 7 percent of the survey area. It is about 39 percent Watama soils, 30 percent Bakeoven soils, 24 percent Wapinitia soils, and 7 percent Wamic, Hesslan, Maupin, and Wapinitia variant soils.

Watama soils are moderately deep and nearly level to steep. They have a surface layer of very dark brown and very dark grayish brown silt loam and a subsoil of dark brown loam and brown clay loam. Effective rooting depth is 20 to 40 inches.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

Wapinitia soils are deep and nearly level to steep. They have a surface layer of very dark brown silt loam, a subsoil of very dark brown silt loam and dark brown silty clay loam, and a substratum of dark yellowish brown fine sandy loam and dark brown clay loam. Effective rooting depth is 40 to 60 inches.

This association is used for dryfarmed grain, range, and pasture; for irrigated grain, hay, and pasture; for wildlife habitat; and for water supply. Bakeoven soils

are used for grazing, mostly by cattle. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils. Sediment from runoff is low to moderate. Maintaining maximum cover on range and using soil- and water-conserving practices on cropland minimize the hazard of erosion.

#### **5. Maupin Bakeoven association**

*Shallow and moderately deep, nearly level to moderately steep loam and very cobbly loam soils*

This association consists of broad areas of soils on upland plateaus. These soils formed in loess, volcanic ash, and residuum weathered from basalt. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and juniper. Elevation ranges from 1,600 to 3,400 feet. The average annual precipitation ranges from 10 to 12 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 7 percent of the survey area. It is about 65 percent Maupin soils, 29 percent Bakeoven soils, and 6 percent Licksillet, Hesslan, Sherar, and Maupin variant soils and Rock outcrop-Rubble land complex.

Maupin soils are moderately deep and nearly level or gently sloping. They have a surface layer of very dark grayish brown loam and a subsoil of dark brown loam. Effective rooting depth is 20 to 40 inches.

Bakeoven soils are shallow and nearly level to moderately steep. They have a surface layer of dark brown very cobbly loam and a subsoil of dark brown very cobbly loam and very cobbly clay loam. Effective rooting depth is 5 to 12 inches.

This association is used for dryfarmed grain, range, and pasture; for irrigated grain, hay, and pasture; for wildlife habitat; and for water supply. Bakeoven soils are used for grazing, mostly by cattle. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Bakeoven soils. Sediment from runoff is low to moderate. Maintaining maximum cover on range and using soil- and water-conserving practices on cropland minimize the hazard of soil erosion.

#### **Shallow and Moderately Deep, Moderately Steep to Very Steep Soils on Uplands**

These soils are on uplands in the eastern part of the survey area along the Deschutes River, Fifteenmile Creek, and their tributaries.

#### **6. Licksillet-Wrentham association**

*Shallow and moderately deep, moderately steep to very steep silt loam, very stony loam, and extremely stony loam soils*

This association consists of soils on the sides of canyons along Fifteenmile Creek and the Columbia and Deschutes Rivers and soils on ridgetops (fig. 2). These





**Figure 2: Typical area of the Licksillet-Wrentham association. The south-facing soil is Licksillet extremely stony loam, 40 to 70 percent slopes (mostly in right background), and the north-facing soil is Wrentham-Rock outcrop complex, 35 to 70 percent slopes (mostly in left background in areas of shadow). Bakeoven-Condon complex, 2 to 20 percent slopes, is on ridgetops.**

soils formed in loess and in colluvium weathered from basalt. The vegetation is bunchgrasses, forbs, and shrubs. Slopes range from 15 to 70 percent. The average annual precipitation ranges from 10 to 13 inches, and the average annual air temperature ranges from 45° to 52° F. The frost-free period is 100 to 150 days at 32° and 150 to 210 days at 28°.

This association makes up about 18 percent of the survey area. It is about 59 percent Licksillet soils, 17 percent Wrentham soils, and 24 percent Bakeoven, Anderly, Condon, Maupin, Watama, Warden, Nansene, Sherar, and Sinamox soils and Rock outcrop-Rubble land complex and Riverwash.

Licksillet soils have a surface layer of very dark grayish brown extremely stony loam and a subsoil of dark brown very stony heavy loam and dark yellowish brown have gravelly heavy loam. Effective rooting depth is 12 to 20 inches.

Wrentham soils have a surface layer of very dark brown silt loam and a subsoil of dark brown very cobbly silty clay loam and silt loam. Effective rooting depth is 20 to 40 inches.

This association is used for range, wildlife habitat, and water supply. Ranches are large, and water supplies for livestock are limited. Springs and ponds are the main sources of water. The wildlife is mainly deer and upland birds.

Runoff is mainly from the shallow Licksillet soils, particularly in areas of range where the grass is in poor condition. Sediment from runoff is low to moderate. Maintaining maximum cover on range minimizes the hazard of erosion.

#### **Moderately Deep and Deep, Nearly Level to Very Steep Soils on Uplands of Tygh Valley**

This group of soils is in the southeastern part of the survey area. The major soils are on uplands bordering White River and Tygh Creek in the Tygh Valley area.

#### **7. Sherar-Sinamox association**

*Moderately deep and deep, nearly level to very steep cobbly loam and silt loam soils*

This association consists of soils on upland plateaus. These soils formed in loess and gravelly colluvium. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. Elevation ranges from 1,500 to 2,500 feet. The average annual precipitation ranges from 10 to 12 inches, and the average annual air temperature is 48° to 52° F. The frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

This association makes up about 2 percent of the

survey area. It is about 46 percent Sherar soils, 26 percent Sinamox soils, and 28 percent Licksillet, Bakeoven, Maupin, Pedigo, Quincy, and Tygh soils and Riverwash.

Sherar soils have a surface layer of very dark grayish brown cobbly loam and a subsoil of dark brown clay and gravelly clay. Effective rooting depth is 20 to 40 inches.

Sinamox soils have a surface layer of black and very dark grayish brown silt loam, a subsoil of dark brown silt loam, and a substratum of dark yellowish brown silty clay and brown gravelly clay loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for dryfarmed grain and pasture, irrigated hay and pasture, wildlife habitat, and water supply. The wildlife is mainly deer and upland birds.

Runoff is mainly from the steep and very steep soils, particularly in areas of range where the grass is in poor condition and in areas of summer fallow where vegetation protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on armed cropland minimize the hazard of erosion.

### **Shallow to Deep, Nearly Level to Very Steep Soils on Foot Slopes of the Cascade Mountains**

This group of soils is in the western part of the survey area. They are loam, stony loam, gravelly loam, and very cobbly loam soils that formed in loess, volcanic ash, and in colluvium weathered from andesite and sandstone sediment. Slopes range from 1 to 70 percent. Elevation ranges from 500 to 3,600 feet. The average annual precipitation ranges from 14 to 30 inches, and the average annual air temperature ranges from 42° to 50° F. The frost-free period is 50 to 150 days at 32° and 90 to 200 days at 28°.

The three associations in this group make up about 31 percent of the survey area.

#### **8. Hesslan-Skyline-Frailey association**

*Shallow to deep, nearly level to very steep stony loam, very cobbly loam, and loam soils*

This association consists of soils on the sides of canyons along Fivemile, Fifteen Mile, and Mill Creeks and their tributaries and soils on ridgetops, side slopes, and bottom lands along streams. These soils formed in loess, in volcanic ash, and in colluvium weathered from sediment and sandstone. Vegetation is bunchgrasses, forbs, shrubs, Oregon white oak, ponderosa pine, and Douglas-fir. Elevation ranges from 500 to 3,500 feet. The average annual precipitation ranges from 14 to 30 inches, and the average annual air temperature ranges from 45° to 49° F. The frost-free period is 100 to 140 days at 32° and 120 to 160 days at 28°.

This association makes up about 9 percent of the survey area. It is about 45 percent Hesslan soils, 16 percent Skyline soils, 15 percent Frailey soils, and 24 percent Bald, Bodell, Ketchly, Wamic, and Tygh soils and Rock outcrop-Xeropsamments and Riverwash.

Hesslan soils have a surface layer of very dark grayish brown stony loam and a subsoil of dark brown loam and cobbly loam. Effective rooting depth is 20 to 40 inches.

Skyline soils have a surface layer of very dark grayish brown very cobbly loam and cobbly loam and a subsoil of dark brown gravelly loam. Effective rooting depth is 12 to 20 inches.

Frailey soils have a surface layer of very dark grayish brown loam, a subsoil of dark brown loam, and a substratum of brown loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for range, pasture, woodland, wildlife habitat, and water supply. The wildlife is mainly deer and upland birds.

Runoff is mainly from the very steep soils, particularly in areas of range where the grass is in poor condition and in logged-over areas where vegetative cover is sparse. Sediment from runoff is moderate or high. Maintaining maximum cover on range and using soil- and water-conserving practices on logged areas minimize the hazard of erosion.

#### **9. Wamic Hesslan association**

*Moderately deep and deep, nearly level to very steep loam and stony loam soils*

This association consists of soils that formed in loess, in volcanic ash, and in colluvium weathered from sandstone. In uncultivated areas, the vegetation is bunchgrass, forbs, shrubs, Oregon white oak, and ponderosa pine. Elevation ranges from 1,000 to 3,600 feet. The average annual precipitation ranges from 14 to 20 inches, and the average annual air temperature ranges from 46° to 50° F. The frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

This association makes up about 18 percent of the survey area. It is about 77 percent Wamic soils, 13 percent Hesslan soils, and 10 percent Bakeoven, Bald, Bodell, Frailey, Ketchly, Tygh, and Watama soils and Riverwash.

Wamic soils have a surface layer of very dark grayish brown loam, a subsoil of dark brown loam, and a substratum of dark brown heavy loam. Effective rooting depth is 40 to 60 inches or more.

Hesslan soils have a surface layer of very dark grayish brown stony loam and a subsoil of dark brown loam and cobbly loam. Effective rooting depth is 20 to 40 inches.

This association is used for dryfarmed grain and pasture; irrigated grain, hay, and pasture; wildlife habitat; and water supply. Farms are large, and water supplies for livestock are limited. The wildlife is mainly deer and upland birds.

Runoff is mainly from areas of range where the grass is in poor condition and from areas of summer fallow where vegetation protection is not provided. Sediment from runoff is moderate to high. Maintaining maximum cover on range and using soil- and water-conserving practices on armed cropland minimize the hazard of erosion.

## 10. Ketchly-Bins association

### *Deep, nearly level to very steep loam and gravelly loam soils*

This association consists of soils that formed in loess, in volcanic ash, and in colluvium weathered from andesite. Vegetation is shrubs, Douglas-fir, grand fir, and ponderosa pine. Elevation ranges from 1,100 to 3,600 feet. The average annual precipitation ranges from 25 to 30 inches, and the average annual air temperature ranges from 42° to 45° F. The frost-free period is 50 to 120 days at 32° and 90 to 140 days at 28°.

This association makes up about 4 percent of the survey area. It is about 57 percent Ketchly soils, 23 percent Bins soils, and 20 percent Bindle, Bald, Bodell, Wamic, Frailey, and Hesslan soils and Riverwash.

Ketchly soils have a surface layer of very dark grayish brown or dark brown loam and a subsoil of brown heavy loam. Effective rooting depth is 40 to 60 inches or more.

Bins soils have a surface layer of dark brown gravelly loam and a subsoil of dark brown loam and gravelly loam. Effective rooting depth is 40 to 60 inches or more.

This association is used for woodland, wildlife habitat, and water supply. The wildlife is mainly deer, elk, bear, and upland birds.

Runoff is mainly from the steep and very steep soils, particularly in recently logged areas. Sediment from runoff is low to moderate. Maintaining maximum cover on logging roads and skid trails and using soil- and water-conserving practices on logged areas minimize the hazard of erosion.

## Descriptions of the Soils

In this section the soil series and mapping units in Wasco County, Northern Part, are described. Each soil series is described in detail, and then each mapping unit in that series is briefly described. Unless it is noted otherwise, what is stated about the soil series holds true for the mapping units in that series. Thus, to get full information about any one mapping unit, it is necessary to read both the description of the mapping unit and the description of the soil series to which it belongs.

An important part of the description of each soil series is the soil profile, that is, the sequence of layers from the surface downward to rock or other underlying material. Each series contains two descriptions of this profile. The first is brief and in terms familiar to the layman. The second is much more detailed and is for those who need to make thorough and precise studies of soils. Color terms are for moist soil unless otherwise stated. The profile described in the series is representative of one of the mapping units in that series. If profile of a soil in a given mapping unit is different from the one described as representative of the series, these differences are stated in the description of the mapping unit or they are apparent in the name of the mapping unit, or both.

As mentioned in the section "How This Survey Was Made," not all mapping units are members of a soil series. Cumulic Haplaquolls, for example, do not belong to a soil series; nevertheless, they are listed in alphabetic order along with the soil series.

Preceding the name of each mapping unit is the symbol that identifies the mapping unit on the detailed soil map. Listed at the end of the description of each mapping unit are the capability unit and range site in which the mapping unit has been placed. The pages on which each capability unit, range site, woodland group and windbreak group are described can be found by referring to the "Guide to Mapping Units" at the back of this survey.

The acreage and proportionate extent of each mapping unit are shown in table 1. Many of the terms used in describing soils can be found in the Glossary at the end of this survey, and more detailed information about the terminology and methods of soil mapping can be obtained from the Soil Survey Manual (11).

## Anderly Series

The Anderly series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 3 to 35 percent. Elevation is 300 to 2,000 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 50° to 52° F, and the frost-free period is 150 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 14 inches thick. The upper 15 inches of the subsoil is dark brown silt loam, and the lower 8 inches is brown silt loam. Basalt bedrock is at a depth of about 37 inches. The profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Anderly silt loam, 12 to 20 percent slopes, 500 feet east of a road in the NW1/4NW1/4NE1/4 section 32, T. 1 N., R. 15 E.:

- Ap-0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots many very fine irregular pores; neutral; abrupt clear boundary.
- A1-7 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; slightly hard, friable slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear wavy boundary.
- B21-14 to 29 inches; dark brown (10YR 3/3) silt loam brown (10YR 5/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.
- B22-29 to 37 inches brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic struc-

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

ture; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; neutral; abrupt wavy boundary.

IIR-37 inches; basalt bedrock.

The A horizon is very dark grayish brown or very dark brown when moist. The B2 horizon is grayish brown, brown, or pale brown when dry and dark brown or brown when moist. There is no lime accumulation in most places. Few basalt fragments, 1/8 to 1/2 inch in diameter, are throughout the profile. Depth to bedrock is 20 to 40 inches.

**1C-Anderly silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 31, T. 1 N., R. 15 E. This soil is on broad ridgetops. Slopes average about 10 percent.

Included with this soil in mapping were areas of nearly level Anderly and Walla Walla soils that make up as much as 10 percent of the unit. Also included were Bakeoven and Licksillet soils that make up as much as 5 percent.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**1D-Anderly silt loam, 12 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 32, T. 1 N., R. 15 E. This soil is in long, narrow areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of

Walla Walla, Bakeoven, and Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-7 ; Rolling Hills range site.

**1E-Anderly silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4SE1/4 section 29, T. 1 N., R. 15 E. This soil is in long, narrow areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Bakeoven, and Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is high. Capability subclass VIe; Droughty South Exposure range site.

#### **Bakeoven Series**

The Bakeoven series consists of well drained soils formed on uplands in a thin layer of loess and the underlying residuum weathered from basalt. Slopes are 2 to 20 percent. Elevation is 1,600 to 3,600 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 110 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is dark

brown very cobbly loam about 3 inches thick. The subsoil is dark brown very cobbly loam and very cobbly clay loam about 6 inches thick. Basalt bedrock is at a depth of about 9 inches. The profile is neutral.

Permeability is moderately slow, and the available water capacity is .15 to .7 inches. Water-supplying capacity is less than 2.5 inches. Effective rooting depth is 4 to 1 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Bakeoven very cobbly loam, 2 to 20 percent slopes, 100 feet southeast of a road in the SE1/4SE1/4NE1/4 section 16, T. 3 S., R. 14 E.:

A1-0 to 3 inches; dark brown (7.5YR 3/2) very cobbly loam, brown (10YR 5/3) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 30 percent pebbles, 25 percent cobbles and 5 percent stones; neutral; abrupt smooth boundary.

B1-3 to 6 inches; dark brown (7.5YR 3/3) very cobbly loam, brown (7.5YR 4/4) dry; weak fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 30 percent pebbles, 30 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

B2-6 to 9 inches; dark brown (10YR 3/3) very cobbly clay loam, brown (7.5YR 4/4) dry; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common fine roots; common very fine tubular pores; 30 percent pebbles, 50 percent cobbles, and 10 percent stones; neutral; abrupt wavy boundary.

III-9 inches; basalt bedrock.

The A horizon is brown or grayish brown when dry and dark brown or very dark grayish brown when moist. It is very cobbly loam, very stony loam, or extremely stony loam. The B2 horizon is brown, dark brown, or yellowish brown when dry and dark brown or dark yellowish brown when moist. The B horizon is 50 to 90 percent rock fragments. Depth to bedrock is 4 to 12 inches.

**2D-Bakeoven very cobbly loam, 2 to 20 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 16, T. 3 S., R. 14 E. This soil is in long, narrow areas between Condon soils on ridgetops and Lickskillet soils on south-facing canyon slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Condon, Maupin, Wapinitia, Watama, and Lickskillet soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is moderate. Capability subclass VII; Scabland range site.

**3D-Bakeoven-Condon complex, 2 to 20 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 15, T. 3 S., R. 14 E. This complex is about 50 to 85 percent Bakeoven very cobbly loam; 2 to 20 percent slopes, and 10 to 35 percent a Condon silt loam that has 2 to 20 percent slopes. The Bakeoven soil has the profile described as representative of the series. It is on ridgetops or side slopes in areas of scabland between and around areas of the Condon soil. The Condon soil is generally on ridgetops or side slope, in circular or elongated mounds.

Included with this complex in mapping were areas of a Lickskillet very stony loam and shallow stony soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Condon soil in Rolling Hills range site.

**4C-Bakeoven-Maupin complex, 0 to 12 percent slopes.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 2, T. 5 S., R. 13 E. This complex is about 50 to 85 percent a Bakeoven very stony loam and 10 to 35 percent a Maupin loam (fig. 3). It is on upland plateaus. The Bakeoven soil is in areas of scabland between and around areas of the Maupin soil. The Maupin soil commonly is on circular or elongated mounds. The Bakeoven soil has a profile similar to the one described as representative of the Bakeoven series, but it is very stony.

Included with this complex in mapping were areas of Lickskillet soils that make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Maupin soil in Shrubby Rolling Hills range site.

**5C-Bakeoven-Watama complex, 0 to 12 percent slopes.** This complex is about 50 to 85 percent a Bakeoven very stony loam that has 2 to 12 percent slopes, and 10 to 35 percent a Watama silt loam that has 0 to 12 percent slopes. The Bakeoven soil is in areas of scabland between and around the Watama soil. The Watama soil is in circular mounds that have a convex surface. The soil near the center of the mound is deeper to bedrock than near the edges. Where the slope is more than 10 percent, the Watama soil commonly occurs as elongated mounds and the long axis is downslope. The mounds are 15 to 40 feet in diameter and about 25 feet apart. The Bakeoven soil has a profile similar to the one described as representative of the series, but it is very stony.

Included with this complex in mapping were areas of Lickskillet soils, shallow stony soils, and Rock outcrop. These soils make up as much as 15 percent of the unit.

Runoff is slow to medium, and the hazard of erosion is slight to moderate. Capability subclass VII; Bakeoven soil in Scabland range site; Watama soil in Shrubby Rolling Hills range site.

## Bald Series

The Bald series consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 5 to 75 percent. Elevation is 200 to 3,000 feet. The vegetation is oak, pine, fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32° and 140 to 180 days at 28°.





**Figure 3: Bakeoven very stony loam, 0 to 12 percent slopes, is in the foreground. Maupin loam, 0 to 12 percent slopes, is on the round mounds in the background.**

In a representative profile the surface layer is dark brown cobbly loam and dark reddish brown gravelly loam about 12 inches thick. The subsoil is dark reddish brown and reddish brown very gravelly loam about 25 inches thick. Basalt bedrock is at a depth of about 37 inches. The surface layer is neutral, and the subsoil is slightly acid.

Permeability is moderate, and the available water capacity is 2 to 5 inches. Water-supplying capacity is 12 to 25 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, timber production, wildlife habitat, and water supply.

Representative profile of Bald cobbly loam, 5 to 45 percent slopes, in the SE1/4SE1/4NE1/4 section 36, T. 2 N., .11 E.:

O1-1/2 inch to 0; oak leaves, pine twigs, and needles.

A1-0 to 5 inches; dark brown (7.5YR 3/2) cobbly loam, reddish brown (5YR 4/3) dry; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; 20 percent pebbles, 20 percent cobbles; neutral; clear smooth boundary.

A12-5 to 12 inches; dark reddish brown (5YR 3/3) gravelly loam, reddish brown (5YR 4/4) dry; moderate fine granular structure; slightly hard, friable, slightly

sticky and slightly plastic; many very fine roots; many very fine tubular pores; 30 percent pebbles, 15 percent cobbles; neutral; gradual wavy boundary.

B21-12 to 21 inches; dark reddish brown (5YR 3/4) very gravelly heavy loam, reddish brown (5YR 5/4) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 35 percent pebbles, 25 percent cobbles; slightly acid; gradual wavy boundary.

B22-21 to 37 inches; reddish brown (5YR 4/4) very gravelly heavy loam, yellowish red (5YR 5/6) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 40 percent pebbles, 30 percent cobbles; slightly acid; abrupt wavy boundary.

IIR-37 inches; basalt bedrock, partly fractured.

The A horizon has fine or medium granular structure and is 15 to 45 percent rock fragments. The B2 horizon is loam, heavy loam, or light clay loam and is more than 35 percent cobbles and pebbles. It has weak to moderate, fine to medium, subangular blocky structure. Depth to bedrock is 20 to 40 inches.

**6E-Bald cobbly loam, 5 to 45 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 36, T. 2 N., R. 11 E. This soil is in irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bodell and Wamic soils. These soils make up about 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to severe. Capability subclass VIs; Pine-Douglas Fir-Sedge range site; woodland group 4f.

#### **7F-Bald very cobbly loam, 45 to 75 percent slopes.**

A representative mapping unit is in the NW1/4NW1/4NW1/4 section 18, T. 2 N., R. 13 E. This soil is in long, narrow areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer is more than 50 percent rock fragments.

Included with this soil in mapping were areas of Bodell and Wamic soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIIs; Oak-Pine Steep South range site; woodland group 4f.

#### **Bald Variant**

The Bald variant consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 45 to 75 percent. Elevation is 200 to 2,500 feet. The vegetation is Douglas-fir, bigleaf maple, forbs, and shrubs. The average annual precipitation is 22 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32°.

In a representative profile the surface layer is very dark grayish brown cobbly loam about 5 inches thick. The subsoil is dark brown cobbly loam, gravelly loam, and very gravelly loam about 35 inches thick. The substratum is brown very gravelly loam about 22 inches thick. The surface layer is slightly acid, and the subsoil and substratum are neutral.

Permeability is moderate, and the available water capacity is 4 to 8 inches. Water-supplying capacity is 16 to 20 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for woodland, wildlife habitat, and water supply.

Representative profile of Bald variant cobbly loam, 45 to 75 percent slopes, in the NE1/4SE1/4SE1/4 section 34, T. 3 N., R. 8 E.

O1-2 inches to 0; pine needles, twigs, and leaves.

A1-0 to 5 inches; very dark grayish brown (10YR 3/2) cobbly loam; grayish brown (10YR 5/2) dry; moderate fine granular structure; slightly hard, friable, slight (y) sticky and slightly plastic; many very fine roots; many very fine irregular pores; 10 percent pebbles, 15 percent cobbles; slightly acid; gradual wavy boundary.

B1-5 to 12 inches; dark brown (10YR 3/3) cobbly loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many very fine tubular pores; 15 percent pebbles, 15 percent cobbles; neutral; gradual wavy boundary.

B21-12 to 23 inches; dark brown (7.5YR 3/3) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many medium fine and very fine roots; many very fine tubular pores;

30 percent pebbles, 10 percent cobbles; neutral; gradual wavy boundary.

B22-23 to 40 inches; dark brown (7.5YR 4/3) very gravelly loam, brown (10YR 6/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots many very fine tubular pores; 45 percent pebbles, 20 percent cobbles; neutral; gradual wavy boundary.

C1-40 to 62 inches; brown (7.5YR 4/4) very gravelly loam, light brown (10YR 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; common very fine tubular pores; 50 percent pebbles, 35 percent cobbles; neutral.

The A horizon is very dark grayish brown or dark reddish brown and is 25 to 50 percent rock fragments. The B horizon is dark brown or brown and is 50 to 80 percent rock fragments. It has weak or moderate structure. Depth to bedrock is 40 to 60 inches or more.

**8F-Bald variant cobbly loam, 45 to 75 percent slopes.** A representative mapping unit is in the NE1/4SE1/4SE1/4, section 34, T. 3 N., R. 8 E. This soil is in long areas and has north-facing slopes.

Included with this soil in mapping were areas of Bald, Bodell, and Bindle soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIIs; woodland group 2f.

#### **Bindle Series**

The Bindle series consists of well drained soils formed in loess, volcanic ash, and the underlying stony colluvium weathered from andesite on uplands. Slopes are 1 to 70 percent. Elevation is 2,500 to 3,500 feet. The vegetation is Douglas-fir, grand fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 50 to 100 days at 32° and 90 to 130 days at 28°.

In a representative profile the surface layer is dark brown gravelly loam about 6 inches thick. The upper 9 inches of the subsoil is dark brown gravelly loam, and the lower 7 inches is dark brown very gravelly heavy loam. Depth to highly fractured bedrock is 20 to 40 inches. The surface layer is neutral, and the subsoil and substratum are slightly acid to medium acid.

Permeability is moderate, and the available water capacity is 4 to 7 inches. Water-supplying capacity is 13 to 20 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for timber, wildlife habitat, and water supply.

Representative profile of Bindle gravelly loam in an area of Bindle-Bins association, steep, south of road in the NE1/4SW1/4 section 23, T. 1 N., R. 10 E.:

O1-1 1/2 inches to 0; fir twigs and needles.

A1-0 to 6 inches; dark brown (7.5YR 3/2) gravelly loam, brown (7.5YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few medium roots; many very fine irregular pores; 25 percent pebbles; slightly acid; clear smooth boundary.

B21-6 to 15 inches; dark brown (7.5YR 3/3) gravelly loam, brown (7.5YR 5/3) dry; moderate fine granular structure and moderate very fine subangular blocky

structure slightly hard, friable, slightly sticky and slightly plastic; many very fine and few medium roots; many very fine tubular pores; 25 percent pebbles, 10 percent cobbles; slightly acid; gradual wavy boundary.

B22-15 to 22 inches; dark brown (7.5YR 4/2) very gravelly heavy loam, brown (7.5YR 5/2) dry; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine tubular pores; 35 percent pebbles, 15 percent cobbles; medium acid; gradual wavy boundary.

IIC-22 to 60 inches; highly fractured bedrock with horizontal s acing between cracks less than 4 inches; fines are too few to fill some of the interstices larger than 1 millimeter; fines are dark brown (7.5YR 4/4) loam, brown (7.5YR 5/4) dry; slightly hard, friable, slightly sticky and slightly plastic; many fine roots in fractures; many very fine irregular pores; 30 percent stones; 40 percent cobbles, and 15 percent pebbles; medium acid.

The A horizon is reddish brown or brown when dry and dark brown or dark reddish brown when moist. It is 20 to 40 percent pebbles and as much as 10 percent stones. The B horizon is reddish brown or brown when dry and dark reddish brown or dark brown when moist. It is 20 to 40 percent pebbles, 5 to 20 percent cobbles, and as much as 10 percent stones. Depth to highly fractured bedrock is 20 to 40 inches.

**9E-Bindle-Bins association, steep.** A representative mapping unit is in the NW1/4NW1/4 section 22, T. 1 N., R. 11 E. This association is about 55 percent a Bindle gravelly loam that has 1 to 30 percent slopes and 30 percent a Bins gravelly loam that has 1 to 30 percent slopes. The Bindle soil is on narrow ridges and the upper part of slopes capped with rock. The Bins soil is in irregularly shaped areas on broad ridgetops not capped by rock. Both soils have the profile described as representative of their respective series.

Included with this association in mapping were areas of very stony shallow soil, ashy soils, an Rock outcrop that make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Bindle soil in capability subclass VI; woodland group 3f. Bins soil in capability subclass VIe; woodland group 2o.

**9F-Bindle-Bins association, very steep.** A representative mapping unit is in the NE1/4SW1/4 section 23, T. 1 N., R. 10 E. This association is about 45 percent a Bindle gravelly loam that has 30 to 70 percent slopes and 40 percent a Bins gravelly loam that has 30 to 70 percent slopes. The Bindle soil is on the top and convex part of slopes in areas capped by rock. The Bins soil is on the middle and lower parts of slopes not capped by rock. The Bins soil has a profile similar to the one described as representative of the Bins series, but it contains more rock fragments.

Included with this association in mapping were areas of shallow very stony soils, Bold variant soils, and Rock outcrop that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Bindle soil in capability subclass VII; woodland group 3f; Bins soil in capability subclass VIIe; woodland group 2r.

## Bins Series

The Bins series consists of well drained soils formed

in loess, volcanic ash, and the underlying stony, moderately fine textured colluvium weathered from andesite on uplands. Slopes are 1 to 70 percent. Elevation is 1,100 to 3,600 feet. The vegetation is Douglas-fir, grand fir, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 50 to 100 days at 32° and 90 to 130 days at 28°.

In a representative profile the surface layer is dark brown gravelly loam about 8 inches thick. The subsoil is dark brown loam and gravelly loam about 28 inches thick. The substratum is dark brown cobbly clay loam about 24 inches thick. Basalt bedrock is at a depth of about 40 to more than 60 inches.

Permeability is moderately slow, and the available water capacity is 7 to 12 inches. Water-supply capacity is 17 to 20 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for timber, wildlife habitat, and water supply.

Representative profile of a Bins gravelly loam in an area of Bindle-Bins association, steep, in the SE1/4SW1/4SE1/4 section 15, T. 1 N., R. 11 E.:

O1-1 inch to 0; fir twigs and needles.

A1-0 to 8 inches; dark brown (7.5YR 3/2) gravelly loam, brown (7.5YR 5/2) dry; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; many very fine irregular pores; 25 percent fine pebbles; slightly acid; clear smooth boundary.

B1-8 to 12 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 5/3) dry; weak medium granular structure; slight l hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles; slightly acid; gradual smooth boundary.

B21-12 to 25 inches; dark brown (7.5YR 4/3) gravelly loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; 15 percent pebbles, 10 percent cobbles; many very fine tubular pores; slightly acid; gradual wavy boundary.

B22-25 to 36 inches; dark brown (7.5YR 4/4) gravelly heavy loam, reddish brown (5YR 5/4) dry; weak medium subangular blocky structure; slightly hard, fable, slightly sticky and slightly plastic, common very fine roots; many very fine tubular pores; few thin clay films in pores; 20 percent pebbles, 5 percent cobbles; slightly acid; clear wavy boundary.

C-36 to 60 inches; dark brown (7.5YR 4/4) cobbly clay loam, reddish brown (5YR 5/4) dry; massive; slightly hard, friable, sticky and plastic; common very fine roots; common very fine and fine irregular pores; slightly acid.

The A horizon is dark reddish gray or brown when dry. It is 15 to 25 percent fine pebbles 1/8 to 1/2 inch in diameter and 0 to 15 percent cobbles and stones. The B horizon and C horizon are loam, heavy loam, or clay loam. They are 0 to 15 percent pebbles and 0 to 20 percent cobbles. Depth to bedrock is 40 to 60 inches or more. Bin soils are mapped only in association with Bindle soils in two mapping units. Refer to the Bindle series for a description of these mapping units.

## Bodell Series

The Bodell series consists of well drained soils formed in loess and volcanic ash and the underlying colluvium weathered from basalt on uplands. Slopes are 5 to 75 percent. Elevation is 200 to 2,500 feet. The

vegetation in bunchgrasses, forbs, shrubs, and scattered oak trees. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 48° to 51° F, and the frost-free period is 100 to 140 days at 32° and 140 to 180 days at 28°.

In a representative profile the surface layer is dark brown cobbly loam about 5 inches thick. The upper 8 inches of the subsoil is dark brown very cobbly loam, and the lower 5 inches is dark brown very cobbly clay loam. Basalt bedrock is at a depth of about 18 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 1 inch to 1 inches. Water-supplying capacity is 4 to 7 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Bodell cobbly loam, 5 to 45 percent slopes, 100 feet north of road in the NW1/4SW1/4SW1/4 section 33, T. 2 N., R. 12 E.:

- A1-0 to 5 inches; dark brown (7.5YR 3/2) cobbly loam, brown (7.5YR 4/3) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 15 percent pebbles, 20 percent cobbles; neutral; abrupt smooth boundary.
- B21-5 to 13 inches; dark brown (7.5YR 3/3) very cobbly loam, brown (7.5YR 4/3) dry; weak medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular and irregular pores; 20 percent pebbles, 40 percent cobbles; neutral; clear smooth boundary.
- B22-13 to 18 inches; dark brown (7.5YR 3/3) very cobbly clay loam, brown (7.5YR 3/3) dry; weak fine subangular blocky structure; hard, firm, sticky and plastic; plentiful very fine roots; many very fine irregular and tubular pores; 60 percent cobbles, 10 percent stones; neutral; abrupt smooth boundary.
- IIR-18 inches; basalt bedrock.

The A horizon is brown, grayish brown, or dark grayish brown when dry and dark brown or very dark grayish brown when moist. It is 20 to 40 percent pebbles and 0 to 10 percent cobbles. The B2 horizon is brown or dark yellowish brown when dry and dark brown or dark yellowish brown when moist. It is very cobbly loam to very cobbly clay loam and is 18 to 30 percent clay. It is 50 to 70 percent rock fragments, mainly cobbles. Depth to bedrock is 12 to 20 inches.

#### **10E-Bodell cobbly loam, 5 to 45 percent slopes.**

A representative mapping unit is in the NW1/4SW1/4SW1/4 section 33, T. 2 N., R. 12 E. This soil is in irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bald, Ketchly, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is slow to rapid, and the hazard of erosion is slight to severe. Capability subclass VIIc; South Exposure range site.

**11F-Bodell very cobbly loam, 45 to 75 percent slopes.** A representative mapping unit is in the NE1/4NW1/4 section 14, T. 1 N., R. 12 E. This soil is in long, narrow areas and has south-facing slopes. This soil has a profile similar to the one described as represen-

tative of the series, but the surface layer is more than 50 percent rock fragments.

Included with this soil in mapping were areas of Bald, Ketchly, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIc; Steep South range site.

#### **Cantala Series**

The Cantala series consists of well drained soils formed in loess that has an appreciable content of volcanic ash overlying stratified alluvium on uplands. Slopes are 1 to 35 percent. Elevation is 1,600 to 3,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown silt loam about 18 inches thick. The subsoil is dark brown silt loam about 36 inches thick. The substratum is dark brown loam about 8 inches thick. The surface layer and subsoil are neutral, and the substratum is mildly alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Cantala silt loam, 1 to 7 percent slopes, 65 feet west of the county road in SE1/4SE1/4SE1/4 section 5, T. 2 S., R. 15 E.:

- Ap-0 to 8 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.
- A12-8 to 13 inches; very dark brown (10YR 2/2) silt loam grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- A13-13 to 18 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- B21-18 to 35 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.
- B22-35 to 54 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.
- IIC-54 to 62 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; hard, friable, nonsticky and nonplastic; few very fine and fine roots; many very fine tubular pores; many noncalcareous nodules 1/4

to 1 inch in diameter; few mycelia lime below a depth of 60 inches; mildly alkaline.

IIIR-62 inches; basalt bedrock.

The B2 horizon is silt loam and is 18 to 24 percent clay. It is less than 15 percent rock fragments coarser textured than very fine sand. It has weak or moderate structure. The C horizon is stratified sand or silt in some places.

**12B-Cantala silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 5, T. 2 S., R. 15 E. This soil is on broad ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile describes representative of the series.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3; Rolling Hills range site.

**12C-Cantala silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4SW1/4 section 34, T. 1 S., R. 14 E. This soil is on broad ridgetops in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIle-1; Rolling Hills range site.

**12D-Cantala silt loam, 12 to 20 percent slopes.**

A representative mapping unit is in the NE1/4NE1/4NE1/4 section 10, T. 2 S., R. 15 E. This soil is in long, broad areas and has north-facing slopes.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIle-4; Droughty North Exposure range site.

**12E-Cantala silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the SE1/4NE1/4NW1/4 section 1, T. 2 S., R. 14 E. This soil is in long, irregularly shaped areas and has north-facing slopes.

Included with this soil in mapping were areas of Bakeoven, Condon, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-3 ; North Exposure range site.

**Chenoweth Series**

The Chenoweth series consists of well drained soils formed in old alluvium on uplands. Slopes are 1 to 35 percent. Elevation is 200 to 950 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 51° to 54° F, and the frost-free period is 150 to 210 days at 32° and 185 to 250 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown loam about 22 inches thick. The subsoil is dark brown loam about 24 inches thick. The upper 9 inches of the substratum is brown loam, and the lower part is brown very fine

sandy loam to a depth of 60 inches or more. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 7.5 to 9.0 inches. Water-supplying capacity is 10 to 12 inches. Effective rooting depth is 60 inches or more.

These soils are used mostly for fruit orchards and some range.

Representative profile of Chenoweth loam, 1 to 7 percent slopes, 1/2 mile south of The Dalles city limits on Glen Cooper farm in the NE1/4SE1/4SW1/4 section 10, T. 1 N., R. 13 E.:

Ap1-0 to 5 inches; very dark brown (10YR 2/2) loam, grayish brown (10YR 5/2) dry; weak medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine irregular pores; neutral; abrupt smooth boundary.

Ap2-5 to 11 inches; very dark brown (10YR 2/2) loam, grayish brown (10YR 5/2) dry; weak thick platy and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; neutral; clear smooth boundary.

A3-11 to 22 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few noncalcareous nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

B21-22 to 34 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; many noncalcareous very dark grayish brown (10YR 3/2) nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

B22-34 to 46 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few noncalcareous nodules as much as 1 inch in diameter; neutral; gradual smooth boundary.

CI-46 to 55 inches; brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many fine and a few medium tubular pores; neutral; gradual smooth boundary.

C2-55 to 88 inches; brown (10YR 4/3) very fine sandy loam, pale brown (10YR 6/3) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many medium tubular pores; neutral.

The A horizon is loam or very fine sandy loam. The B2 horizon is silt loam, loam, or very fine sandy loam. It is as much as 18 percent clay and more than 15 percent particles coarser textured than very fine sand. The C horizon is loam or very fine sandy loam. It has iron staining and lime accumulations in places.

**13B-Chenoweth loam, 1 to 7 percent slopes.** A representative mapping unit is in the NW1/4SE1/4SW1/4 section 10, T. 1 N., R. 13 E. This soil is on ridgetops in broad areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.



Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**13C-Chenoweth loam, 7 to 12 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 22, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**13D-Chenoweth loam, 12 to 20 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4 section 14, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**13E-Chenoweth loam, 20 to 35 percent slopes.** A representative mapping unit is in the NE1/4NE1/4SW1/4 section 14, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Cherryhill, Wind River, Van Horn, Frailey, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

### Cherryhill Series

The Cherryhill series consists of well drained soils formed in old alluvium and the underlying colluvium weathered from consolidated and semiconsolidated tuffaceous sandstone on uplands. Slopes are 1 to 50 percent. Elevation is 500 to 1,200 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 51° to 53° F, and the frost-free period is 140 to 180 days at 32° and 170 to 220 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 11 inches thick. The upper 10 inches of the subsoil is dark brown silt loam and loam, and the lower 20 inches is dark yellowish brown heavy loam and sandy clay loam. Soft sandstone bedrock is at a depth of about 41 inches. The surface layer is slightly acid to neutral, and the subsoil is neutral to medium acid.

Permeability is moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 10 inches. Effective rooting depth is 40 to 60 inches.

These soils are used mostly for fruit orchards and some range and wildlife habitat.

Representative profile of Cherryhill silt loam, 1 to 7 percent slopes, 2 1/2 miles south of The Dalles city limits, 1,000 feet from Skyline road, 100 feet northeast of dirt road in the center of the line between sections 16 and 17, T. 1 N., R. 13 E.

Ap-0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; many fine irregular pores; slightly acid; abrupt smooth boundary.

A12-6 to 11 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 3/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots many fine tubular pores; neutral; clear smooth boundary.

B11-11 to 17 inches dark brown (10YR 3/3) silt loam, brown (10YR 5/3) moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; few thin clay films in pores; few noncalcareous nodules 1/4 to 1 inch in diameter; neutral; clear smooth boundary.

B12-17 to 21 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine tubular pores; few thin clay films in pores; few coarse fragments; slightly acid; abrupt smooth boundary.

B21t-21 to 28 inches; dark yellowish brown (10YR 3/4) heavy loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few roots; many fine tubular pores; common thick clay films on peels and in pores; medium acid; clear smooth boundary.

B22t-28 to 41 inches; dark yellowish brown (10YR 3/4) sandy clay loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few roots; many fine tubular pores; many thick clay films on peels; medium acid; abrupt smooth boundary.

IIC-41 inches; weathered tuffaceous sandstone, cobbles, and rock fragments; few clay films on fractured surfaces.

The A horizon is grayish brown or brown dry and very dark grayish brown or dark brown when moist. It is silt loam or loam. The B horizon is brown, yellowish brown, or pale brown when dry. It is loam, sandy clay loam, or clay loam. Depth to ripplable bedrock is 40 to 60 inches.

### 14B-Cherryhill silt loam, 1 to 7 percent slopes.

A representative mapping unit is in the center of the line between sections 16 and 17, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

### 14C-Cherryhill silt loam, 7 to 12 percent slopes.

A representative mapping unit is in the NE1/4SW1/4NW1/4 section 16, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is mod-

erate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**14D-Cherryhill silt loam, 12 to 20 percent slopes.**

A representative mapping unit is in the SE1/4SW1/4SW1/4 section 16, T. 1 N., R. 13 E. This soil is in irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IVe-1; Pine-Oak-Fescue range site.

**14E-Cherryhill silt loam, 20 to 35 percent slopes.**

A representative mapping unit is in the SW1/4SE1/4NW1/4 section 21, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

**14F-Cherryhill silt loam, 35 to 50 percent north slopes.** A representative mapping unit is in the SW1/4NW1/4NE1/4 section 7, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has north-facing slopes. It has a profile similar to the one described as representative of the series, but it contains more rock fragments.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used for range and wildlife habitat. Capability subclass IVe; Pine-Douglas Fir-Sedge range site.

**15F-Cherryhill silt loam, 35 to 50 percent south slopes.** A representative mapping unit is in the NE1/4NW1/4NE1/4 section 7, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but it has a thinner, lighter colored surface layer and has more and larger rock fragments.

Included with this soil in mapping were areas of Chenoweth, Hesslan, Van Horn, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used for range and wildlife habitat. Capability subclass VIe; Oak South Exposure range site.

**16D-Cherryhill-Rock outcrop complex, 3 to 25 percent slopes.** A representative mapping unit is in the NW1/4NE1/4SE1/4 section 9, T. 1 N., R. 13 E. This complex is about 50 to 85 percent a Cherryhill silt loam that has 3 to 25 percent slopes and 10 to 35 percent Rock outcrop. The Cherryhill soil has convex and concave slopes and is in upland between and around Rock outcrop. It has a profile similar to the one described as representative of the series, but it contains more rock fragments. Rock outcrop has convex and concave slopes and is in irregularly shaped areas of the uplands.

Included with this complex in mapping were areas of a soil similar to this Cherryhill soil, but it is 20 to

40 inches deep to bedrock and it makes up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for hay, pasture, and fruit orchards. Capability subclass VIe; Cherryhill soil in Pine-Oak-Fescue range site. Rock outcrop not in a range site.

**Condon Series**

The Condon series consists of well drained soils formed in loess and small amounts of volcanic ash over basalt bedrock on uplands. Slopes are 1 to 25 percent. Elevation is 1,600 to 3,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 13 inches thick. The upper 4 inches of the subsoil is very dark grayish brown silt loam, and the lower 10 inches is dark brown silt loam. Basalt bedrock is at a depth of about 27 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 7 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Condon silt loam, 1 to 7 percent slopes, 180 feet south of road in the NE1/4NW1/4NW1/4 section 28, T. 1 S., R. 15 E.:

Ap-0 to 9 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-9 to 13 inches; very dark brown (10YR 2/2) silt loam; grayish brown (10YR 5/2) dry; weak medium prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

B21-13 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B22-17 to 22 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak medium prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy

B3-22 to 27 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 2 percent 2- to 5-millimeter and 1 percent 5-millimeter to 3-inch pebbles; neutral; abrupt wavy boundary.

IIR-27 inches; basalt bedrock.

The A horizon is grayish brown or dark grayish brown when dry and very dark brown or very dark grayish brown when moist. The B horizon is very dark grayish brown, dark grayish brown, or dark brown when moist. It is

silt loam and is 18 to 24 percent clay and is less than 15 percent coarser textured than very fine sand. Depth to bedrock is 20 to 40 inches.

**17B-Condon silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4, section 28, T. 1 S., R. 15 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-5; Rolling Hills range site.

**17C-Condon silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4NW1/4 section 28, T. 1 S., R. 15 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**17D-Condon silt loam, 12 to 25 percent slopes.**

A representative mapping unit is in the NW1/4SE1/4SW1/4 section 28, T. 1 S., R. 15 E. This soil is in long, broad areas.

Included with this soil in mapping were areas of Bakeoven, Cantala, Licksillet, and Wrentham soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Rolling Hills range site.

**18D-Condon-Bakeoven complex, 2 to 20 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SE1/4 section 25, T. 1 S., R. 15 E. This complex is about 50 to 85 percent a Condon silt loam and 10 to 35 percent a Bakeoven very cobbly loam. The London soil is on ridgetops or side slopes in circular or elongated mounds. The Bakeoven soil is on ridgetops or side slopes in areas of scabland between and around areas of the Condon soil.

Included with this complex in mapping were areas of Licksillet very stony loam and other shallow stony soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the erosion hazard is moderate. This complex is used for range, hay, pasture, and wildlife habitat. Capability subclass VIe; London soil in Rolling Hills range site; Bakeoven soil in Scabland range site.

## Cumulic Haplaquolls

**19A-Cumulic Haplaquolls, nearly level.** These soils are somewhat poorly drained or poorly drained silt loam, loam, sandy loam, clay loam, or clay. They formed in mixed alluvium along streams and on concave alluvial fans. The soils are in small, narrow, irregularly shaped areas along stream channels and in concave areas. Slopes are 0 to percent. Elevation is 100 to 1,000 feet. In uncultivated areas, the vegetation is sedges, bunchgrasses, shrubs, and forbs. The average

annual precipitation is 15 to 30 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 180 days at 32° and 180 to 210 days at 28°.

The surface layer, subsoil, and substratum are generally dark colored. Mottling is at a depth of 10 to 40 inches. Water-rounded pebbles or cobbles commonly form a thin stone line or layer in the lower part of the subsoil. The surface layer, subsoil, and substratum range from slightly acid to medium acid.

Permeability is moderate to slow, and the available water capacity and water-supplying capacity are variable. Effective rooting depth is 20 to 60 inches or more.

These soils are used for hay, pasture, and wildlife habitat.

Runoff is slow, and the hazard of erosion is slight. The soils are subject to overflow and in places are ponded during high precipitation. Capability unit IVw-1.

## Duart Series

The Duart series consists of well drained soils formed in a loess mantle that has an appreciable content of volcanic ash on uplands. Slopes are 1 to 55 percent. Elevation is 800 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 16 inches thick. The subsoil is brown silt loam about 17 inches thick. Semiconsolidated sandstone is at a depth of about 33 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 7 to 9 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Duart silt loam, 7 to 12 percent slopes, 190 feet north of road in the NW1/4NW1/4SW1/4 section 31, T. 1 N., R. 14 E.:

Ap-0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 3 percent rock fragments 2 millimeters to 1 inch in diameter; neutral; abrupt smooth boundary.

A12-8 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; percent rock fragments 2 millimeters to 1 inch in diameter; neutral; clear smooth boundary.

B21-16 to 26 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent non-

calcareous nodules 1/2 to 1 inch in diameter; neutral; clear smooth boundary.

B22-26 to 33 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak medium to fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; about 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/2 to 1 inch in diameter; neutral; clear wavy boundary.

IIC-33 to 39 inches; dark brown (10YR 3/3) semiconsolidated sandstone, pale brown (10YR 6/3) moist; extremely hard, extremely firm; no roots; few lime mycelia.

The A horizon is as much as 3 percent rock fragments 2 millimeters to 1 inch in size. The B horizon is dark brown or dark yellowish brown when moist. It is silt loam or loam. It is 16 to 18 percent clay, more than 15 percent particles coarser textured than very fine sand, and as much as 5 percent noncalcareous nodules 1/2 to 1 inch in diameter. Depth to ripplable semiconsolidated sandstone is 20 to 40 inches.

**20B-Duart silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 23, T. 1 N., R. 13 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-5; Rolling Hills range site.

**20C-Duart silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4NW1/4SW1/4 section 31, T. 1 N., R. 14 E. This soil is on ridgetops in long, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Rolling Hills range site.

**20D-Duart silt loam, 12 to 25 percent slopes.** A representative mapping unit is in the SW1/4SE1/4NE1/4 section 36, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Rolling Hills range site.

**20E-Duart silt loam, 25 to 40 percent slopes.** A representative mapping unit is in the SW1/4SE1/4NE1/4 section 24, T. 1 N., R. 13 E. This soil is in long, irregularly shaped areas and has south-facing slopes.

Included with this soil in mapping were areas of Walla Walla, Dufur, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty South Exposure range site.

**21E-Duart complex, 20 to 55 percent slopes.** A representative mapping unit is in the NW1/4NW1/4SE1/4 section 13, T. 1 S., R. 13 E. This complex is about 50 to 75 percent Duart silt loam, 25 to 40 percent slopes, and 20 to 35 percent shallow, very cobbly loam soils

that have slopes of 20 to 55 percent. The Duart soil is on upland slopes between the very cobbly loam soils. The very cobbly loam soils are on upland slopes in long, irregularly shaped areas extending up and down the slope between the Duart soils.

Included with this complex in mapping were areas of moderately deep cobbly loam soils that make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used mainly for range, pasture, and wildlife habitat. Capability subclass VIe; Droughty South Exposure range site.

## Dufur Series

The Dufur series consists of well drained soils formed in a loess mantle that has an appreciable content of volcanic ash over mixed alluvium and colluvium and sedimentary bedrock on uplands. Slopes are 1 to 40 percent. Elevation is 800 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 8 inches thick. The subsoil is very dark grayish brown, dark brown, and dark yellowish brown silt loam about 34 inches thick. The substratum is yellowish brown cobbly fine sandy loam about 19 inches thick. Semiconsolidated sedimentary bedrock is at a depth of about 61 inches. The surface layer is slightly acid, the subsoil is neutral to mildly alkaline and the substratum is moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Dufur silt loam, 1 to 7 percent slopes, 2 miles north of Dufur, 250 feet northeast of road on a broad ridgetop in the NW1/4SW1/4NW1/4 section 13, T. 1 S., R. 13 E.:

Apl-0 to 6 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

Ap2-6 to 8 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium platy structure; hard, firm, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; clear smooth boundary.

B1-8 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, able, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 3 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; clear wavy boundary.

B21-12 to 18 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 3 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; gradual smooth boundary.

B22-18 to 32 inches; dark brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; about 5 percent rock fragments 2 millimeters to 1 inch in diameter 5 to 10 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; mildly alkaline; gradual smooth boundary.

B3-32 to 42 inches; dark yellowish brown (10YR 4/4) silt loam, yellowish brown (10YR 5/4) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; common very fine tubular pores; 2 percent rock fragments 2 millimeters to 1 inch in diameter; 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter; mildly alkaline; clear smooth boundary.

IICca-42 to 61 inches; yellowish brown (10YR 4/4) cobbly fine sandy loam light yellowish brown (10YR 6/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; moderately calcareous; moderately alkaline; clear wavy boundary.

IIIC2-61 inches; semiconsolidated sedimentary bedrock.

The A horizon is very dark brown or very dark grayish brown when moist. It is silt loam or loam and is 0 to 5 percent rock fragments as much as 1 inch in diameter. The B horizon is silt loam or loam. It is 12 to 18 percent clay, 18 to 22 inches percent particles coarser textured than very fine sand, and 0 to 5 percent rock fragments as much as 1 inch in diameter. Secondary lime is at a depth of 30 to 43 inches. Depth to bedrock is 40 to more than 60 inches.

**22B-Dufur silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SW1/4NE1/4NE1/4 section 24, T. 1 S., R. 13 E. This soil is on ridgetops in long, broad areas. Slopes average about 5 percent. The soil has the profile described as representative of the series.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIE-3; Rolling Hills range site.

**22C-Dufur silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 13, T. 1 S., R. 13 E. This soil is on ridgetops in long, broad areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-1; Rolling Hills range site.

**22D-Dufur silt loam, 12 to 25 percent slopes.** A representative mapping unit is in the NW1/4NE1/4NE1/4 section 24, T. 1 S., R. 13 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Droughty North Exposure range site.

**22E-Dufur silt loam, 25 to 40 percent slopes.** A representative mapping unit is in the NE1/4NW1/4SW1/4 section 14, T. 1 S., R. 13 E. This soil is in long, irregularly shaped areas.

Included with this soil in mapping were areas of Walla Walla, Duart, Nansene, and Skyline soils. These soils make up about 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This soil is used mainly for range, hay, pasture, and wildlife habitat. Capability unit IVE-2; North Exposure range site.

## Dune Land

**23-Dune land.** A representative mapping unit is in the SW1/4SW1/4NE1/4 section 22, T. 2 N., R. 14 E. Dune land

consists of small areas where the wind has drifted sand into dunes. Slopes range from 5 to 25 percent. This miscellaneous area is in the extreme northern part of the survey area. Dunes advance in the direction of the prevailing westerly wind and bury adjacent soils.

Dune land is nearly devoid of vegetation and is not suitable for grazing. Improved perennial grasses or nursery-grown plants or clones of Volga wildrye, planted 20 inches apart in rows spaced 20 inches apart, stabilize the dunes. Capability subclass VIIIe; not placed in a range site.

## Endersby Series

The Endersby series consists of somewhat excessively drained soils formed in mixed alluvium, volcanic ash, and loess on bottom lands. Slopes are 0 to 3 percent. Elevation is 200 to 1,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 11 to 14 inches, the average annual air temperature is 49° to 53° F, and the frost-free period is 140 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The next layer is dark brown loam about 28 inches thick. Beneath this is dark brown fine sandy loam about 15 inches thick. Very gravelly sand is at a depth of about 53 inches. The material in the upper 24 inches is neutral, and is moderately alkaline in the lower 29 inches.

Permeability is moderately rapid, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 9 to 12 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Endersby loam, 150 feet south of Fifteen Mile Road in the SW1/4NE1/4SW1/4 section 25, T. 2 N., R. 14 E.:

Ap1-0 to 2 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak thin



platy structure; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

Ap2-2 to 10 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; neutral; abrupt wavy boundary.

AC-10 to 24 inches; dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic, few very fine roots; many very fine tubular pores; neutral; clear wavy bounds

C1-24 to 38 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; moderately alkaline; clear wavy boundary.

C2-38 to 53 inches dark brown (10YR 3/3) fine sandy loam, brown (10YR 5/3) dry; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; moderately alkaline; clear wavy boundary.

IIC3-53 to 60 inches; multicolored very gravelly sand; single grained; loose, nonsticky and nonplastic.

The A horizon is gray, grayish brown, dark gray, or dark grayish brown when dry and very dark gray, very dark grayish brown, or dark brown when moist. It is loam or fine sandy loam. It has weak fine angular or platy structure or is structureless. The AC horizon and C1 horizon are stratified in places with thin lenses ranging from silt to loamy sand. The content of pebbles in the upper 40 inches ranges from 0 to 15 percent. The content of rock fragments below a depth of 40 inches ranges from 50 to 80 percent.

**24-Endersby loam.** A representative mapping unit is in the SW1/4NE1/4SW1/4 section 25, T. 2 N., R. 14 E. This soil has slopes of 0 to 3 percent and is on alluvial bottoms in long, narrow areas.

Included with this soil in mapping were areas of Hermiston, Pedigo, and Tygh soils. These soils make up about 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIC-3, nonirrigated and I-1, irrigated; Semi-Moist Bottom range site.

### Frailey Series

The Frailey series consists of well drained soils formed in volcanic ash, loess, and colluvium weathered from semiconsolidated sedimentary materials on uplands. Slopes are 3 to 70 percent. Elevation is 1,000 to 3,500 feet. The vegetation is oak, ponderosa pine, Douglas-fir, bunchgrasses, forbs, and shrubs. The average annual precipitation is 16 to 30 inches, the average annual air temperature is 45° to 49° F, and the frost-free period is 100 to 140 days at 32° and 120 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 4 inches thick. The subsoil is dark brown loam about 46 inches thick. The substratum is brown loam about 15 inches thick. The soil material throughout the profile is slightly acid.

Permeability is moderate, and the available water capacity is 5 to 10 inches. Water-supplying capacity is 10 to 15 inches. Effective rooting depth is 40 to 6 inches or more.

These soils are used for timber, range, wildlife habitat, and water supply.

Representative profile of Frailey loam, 30 to 70 percent slopes, about 50 feet north of road in the NE1/4NE1/4SW1/4, section 22, T. 2 N., R. 11 E.:

O1-2 inches to 0; fir needles, twigs, and partly decomposed material.

A1-0 to 4 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; may very fine irregular pores; 15 percent fine pebbles; slightly acid; clear smooth boundary.

B21-4 to 10 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky and weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots many very fine tubular pores 1 percent fine pebbles; slightly acid; clear smooth boundary.

B22-10 to 33 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; 10 percent fine pebbles 5 percent cobbles; slightly acid; clear smooth boundary.

B23-33 to 50 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine tubular pores; 10 percent cobbles, 5 percent pebbles; few thin clay films in pores; slightly acid; clear smooth boundary.

C-50 to 65 inches; brown (10YR 4/3) loam, light brownish gray (10YR 6/2) dry; massive; hard, friable, slightly sticky and slightly plastic; few fine and medium roots; few very fine tubular pores; 10 percent cobbles, 5 percent pebbles; few thin clay films in pores; slightly acid. The A horizon is grayish brown or light brownish gray when dry and very dark grayish brown or dark brown when moist. The B horizon is loam. It is 5 to 20 percent rock fragments 2 millimeters to 3 inches in size and 0 to 15 percent cobbles. Depth to ripplable bedrock is 40 to 60 inches or more.

**25E-Frailey loam, 3 to 30 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 7, T. 2 S., R. 12 E. This soil is in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Hesslan, Ketchly, Skyline, and Wamic soils. These soils make up as much as 20 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability subclass VIe; Pine-Douglas-Fir Sedge range site; woodland group 30.

**25F-Frailey loam, 30 to 70 percent slopes.** A representative mapping unit is in the NE1/4NE1/4SW1/4 section 22, T. 2 N., R. 11 E. This soil is in long, narrow areas and has north-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Hesslan, Ketchly, Skyline, and Wamic soils. These soils make up as much as 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; woodland group 3r.

### Hermiston Series

The Hermiston series consists of well drained soils formed in alluvium derived from loess and volcanic ash on bottom lands. Slopes are 0 to 3 percent. Elevation is 800 to 2,600 feet. In uncultivated areas, the

vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 49° to 54° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown silt loam about 16 inches thick. The underlying material is very dark grayish brown and dark brown silt loam that extends to a depth of 60 inches or more. Depth to gravel and sand is 40 to 60 inches or more. The soil material throughout the profile is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 7.5 to 12.5 inches. Water-supplying capacity is 8 to 13 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for hay, pasture, small grain, range, and wildlife habitat.

Representative profile of a Hermiston silt loam in the SW1/4SE1/4NW1/4, section 32, T. 2 N., R. 15 E.:

Ap-0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; gradual wavy boundary.

A12-8 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; gradual wavy boundary.

AC-16 to 37 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak coarse prismatic structure; slightly hard, firm, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; moderately calcareous; moderately alkaline; gradual wavy boundary.

C1ca-37 to 48 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; moderately calcareous with mycelial lime; mildly alkaline; gradual wavy boundary.

C2-48 to 60 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; neutral; abrupt smooth boundary.

The A horizon is dark grayish brown or grayish brown when dry and very dark brown or very dark grayish brown when moist. It is silt loam or loam. The C horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is silt loam or loam and has stratified layers of sand and gravel.

**26-Hermiston silt loam.** A representative mapping unit is in the SW1/4SE1/4NW1/4 section 32, T. 2 N., R. 15 E. This soil has slopes of 0 to 3 percent. It is, adjacent to streams in long, narrow strips that average about 100 yards wide.

Included with this soil in mapping were areas of Tygh, Endersby, Pedigo, and noncalcareous silt loam soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3, nonirrigated and I-I, irrigated-, Semi-Moist Bottom range site.

## Hesslan Series

The Hesslan series consists of well drained soils formed in loess, volcanic ash, and colluvium weathered from sandstone on uplands. Slopes are 5 to 70 percent. Elevation is 500 to 3,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, shrubs, oak, and ponderosa pine. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 45° to 49° F, and the frost-free period is 110 to 140 days at 32° and 140 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown stony loam about 9 inches thick. The upper 9 inches of the subsoil is dark brown loam, and the lower 5 inches is dark brown cobbly loam. Semiconsolidated sandstone is at a depth of about 23 inches. The soil material throughout the profile is neutral.

Permeability is moderate, and the available water capacity is 3 to 8 inches. Water-supplying capacity is 5 to 7 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, timber, wildlife habitat, and water supply.

Representative profile of a Hesslan stony loam in an area of Skyline-Hesslan complex, 40 to 65 percent slopes, 500 feet north of the county road in the NW1/4SW1/4SE1/4 section 1, T. 1 S., R. 12 E.:

A11-0 to 3 inches; very dark grayish brown (10YR 3/2) stony loam, grayish brown (10YR 5/2) dry; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

A12-3 to inches; very dark grayish brown (10YR 3/2) stony loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

B1-9 to 18 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium sub angular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.

B2-18 to 23 inches; dark brown (10YR 4/3) cobbly loam, pale brown (10YR 6/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

IIC-23 to 30 inches; semiconsolidated sandstone; extremely hard.

The A horizon is grayish brown, dark grayish brown, or brown when dry and very dark grayish brown, very dark brown, or dark brown when moist. It is stony loam or cobbly loam. The content of rock fragments 2 millimeters to 10 inches in size ranges from 5 to 20 percent. The content of surface stones is 5 to 20 percent. The B horizon is grayish brown, brown, or pale brown when dry and very dark grayish brown or dark brown when moist. It is 5 to 30 percent rock fragments 2 millimeters to 10 inches in size. It has weak or moderate medium and fine subangular blocky structure. Depth to ripplable bedrock is 20 to 40 inches.

## 27F-Hesslan complex, 30 to 70 percent slopes.

A representative mapping unit is in the SW1/4NW1/4NW1/4 section 17, T. 1 S., R. 13 E. This complex is about 60 percent a Hesslan stony loam and 20 percent loam or cobbly loam soils that are 40 to 60 inches deep to bedrock. The Hesslan soil is on ridgetops and north-facing side slopes.

Included with this complex in mapping were areas of Wamic loam and Skyline very cobbly loam. These soils make up about 20 percent of the unit. Also included were outcroppings of sandstone.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for timber, range, wildlife habitat, and water supply. Capability subclass VIIc; Oak Steep North range site.

**28E-Hesslan-Skyline complex, 5 to 40 percent slopes.** A representative mapping unit is in the SW1/4SW1/4NW1/4 section 5, T. 1 S., R. 12 E. This complex is about 30 to 60 percent a Hesslan stony loam and 20 to 50 percent a Skyline very cobbly loam. The Hesslan soil has north-facing slopes, and the Skyline soil has south-facing slopes.

Included with this complex in mapping were areas of Frailey loam and Wamic loam. These soils make up about 20 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate. This complex is used for range, wildlife habitat, and water supply. Capability subclass VIIc; Oak Steep South range site.

### Ketchly Series

The Ketchly series consists of well drained soils formed in loess, volcanic ash, and colluvium weathered from andesite on uplands. Slopes are 3 to 65 percent. Elevation is 2,000 to 3,600 feet. The vegetation includes Douglas-fir, ponderosa pine, Oregon white oak, bunchgrasses, forbs, and shrubs. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 42° to 45° F, and the frost-free period is 70 to 120 days at 32° and 100 to 140 days at 28°.

In a representative profile the surface layer is very dark grayish brown or dark brown loam about 11 inches thick. The subsoil is brown heavy loam about 31 inches thick. The substratum is very cobbly clay loam about 3 inches thick. Andesite bedrock is at a depth of 45 inches.

Permeability is moderately slow, and the available water capacity is 6 to 11 inches. Water-supplying capacity is 10 to 15 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for timber, water supply, and wildlife habitat.

Representative profile of Ketchly loam, 3 to 30 percent slopes, 175 feet south of road in the NE1/4NE1/4NW1/4 section 2, T. 1 N., R. 11 E.:

O1-1 inch to 0; fir needles and twigs, grass, and deciduous leaves.

All-0 to 6 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; 15 percent pebbles 1/8 to 1/2 inch in diameter; neutral; gradual smooth boundary.

A12-6 to 11 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry, weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; many very fine tubular pores; 15 percent pebbles 1/4 to 1/2 inch in diameter; neutral; clear smooth boundary.

B1-11 to 18 inches; brown (7.5YR 4/4) heavy loam, pale brown (10YR 6/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many fine and medium roots; many very fine tubular pores; 15 percent pebbles; neutral; gradual smooth boundary.

B21t-18 to 24 inches; brown (7.5YR 4/4) heavy loam, pale brown (10YR 6/3) dry; weak coarse subangular blocky structure very hard, friable, slightly sticky and slightly plastic; many fine roots; many very fine tubular pores; common thin clay films in pores; neutral; gradual smooth boundary.

B22t-24 to 42 inches; brown (7.5YR 4/4) heavy loam, light yellowish brown (10YR 6/4) dry; weak coarse subangular blocky structure; extremely hard, firm, sticky and plastic; few to common fine and medium roots; many very fine tubular pores; common thin clay films on peds and in pores; slightly acid; gradual wavy boundary.

IIC-42 to 45 inches; very cobbly clay loam; massive; extremely hard, very firm, sticky and plastic; common very fine pores.

IIIR-45 inches; andesite bedrock.

The B2t horizon is loam, heavy loam, or light clay loam and is 5 to 30 percent rock fragments. Depth to bedrock is 40 to 60 inches or more.

**29E-Ketchly loam, 3 to 30 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 2, T. 1 N., R. 14 E. This soil is on broad ridgetops. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bins, Bindle, Frailey, Bald, and shallow stony loam soils. These soils make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is moderate. Capability subclass VIe; woodland group 2o.

**29F-Ketchly loam, 30 to 65 percent slopes.** A representative mapping unit is in the NW1/4NE1/4 section 10, T. 1 N., R. 11 E. This soil has long and narrow slopes.

Included with this soil in mapping were areas of Bins, Bindle, and Bald soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; woodland group 2r.

### Licksillet Series

The Licksillet series consists of well drained soils formed in shallow, stony colluvium consisting of a mixture of loess, rock fragments, and residuum weathered from the underlying basalt on uplands. Slopes are 15 to 70 percent. Elevation is 200 to 3,600 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 100 to 150 days at 32° and 150 to 210 days at 28°.

In a representative profile (fig. 4) the surface layer is very dark grayish brown extremely stony loam about



Figure 4: Profile of Lickskillet very stony loam, 15 to 40 percent slopes, which is underlain by bedrock at a depth of 12 inches.

4 inches thick. The upper 6 inches of the subsoil is dark brown very stony heavy loam, and the lower 6 inches is dark yellowish brown very gravelly heavy loam. Basalt bedrock is at a depth of about 16 inches. The surface layer is slightly acid, and the subsoil is neutral.

Permeability is moderate, and the available water capacity is 1 to 3 inches. Water-supplying capacity is 2 to 5 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range, wildlife habitat, and water supply.

Representative profile of Lickskillet extremely stony loam, 40 to 70 percent slopes, in the SE1/4NE1/4SW1/4, section 27, T. 2 S., R. 15 E.

A1--0 to 4 inches; very dark grayish brown (10YR 3/2) extremely stony loam, grayish brown (10YR 5/2) dry; weak thin platy structure parting to weak fine granular; slightly hard, friable, slight sticky and slightly plastic; many very fine roots; many very me irregular pores; 2 percent basalt pebbles; 10 percent cobbles and 25 percent stones; slightly acid; abrupt smooth boundary.

B1-4 to 10 inches; dark brown (10YR 3/3) very stony heavy loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many very fine roots; many very fine tubular pores; 30 percent basalt pebbles, 10 percent cobbles, and 20 percent stones; neutral; abrupt smooth boundary.

B2-10 to 16 inches; dark yellowish brown (10YR 3/4) very gravelly heavy loam, yellowish brown (10YR 5/4) dry; we medium prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; 40 percent basalt pebbles and 25 percent cobbles and stones; neutral; abrupt wavy boundary.

IIR-16 inches; basalt bedrock.

The A horizon is very dark brown, very dark grayish brown or dark brown when moist. It is loam, silt loam, or very fine sandy loam. In some places it is gravelly, very gravelly, cobbly, or very cobbly, and in others it is stony, very stony, or extremely stony. The B horizon is heavy silt loam, heavy loam, sandy clay loam, silty clay loam, or clay loam. In places clay films are in pores and some basalt fragments and extend into fractures in the bedrock. Depth to basalt bedrock is 12 to 20 inches.

**30E-Lickskillet very stony loam, 15 to 40 percent slopes.** A representative mapping unit is in the SE1/4NE1/4NE1/4 section 28, T. 2 S., R. 15 E. This soil is in broad, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer contains fewer stones.

Included with this soil in mapping were areas of Bakeoven, Condon, Walla Walla, and Wrentham soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VII; Droughty South Exposure range site.

**31F-Lickskillet extremely stony loam, 40 to 70 percent slopes.** A representative mapping unit is in the SE1/4NE1/4SW1/4 section 27, T. 2 S., R. 15 E. This soil is in long, broad, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven, Condon, Walla Walla, and Wrentham soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VII; Droughty Steep South range site.

## Maupin Series

The Maupin series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 12 percent. Elevation is 1,600 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The subsoil is dark brown loam about 15 inches thick. The upper 6 inches of the substratum is dark brown loam. An indurated hardpan is at a depth of about 31 inches.

The surface layer is neutral and the subsoil is neutral to mildly alkaline.

Permeability is moderate, and the available water capacity is 3 to 7 inches. Water-supplying capacity is 7.5 to 8.5 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, irrigated crops, range, and wildlife habitat.

Representative profile of Maupin loam, 0 to 5 percent slopes, 35 feet south of State Highway 216 in the NW1/4SW1/4SW1/4 section 2, T. 5 S., R. 13 E.:

- Ap1-0 to 6 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.
- Ap2-6 to 10 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- B2-10 to 20 inches dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak medium prismatic structure parting to moderate medium subangular blocky; hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; few nodules; neutral; abrupt wavy boundary.
- B3ca-20 to 25 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; few nodules; lime in mycelium form; weakly calcareous; mildly alkaline; clear wavy boundary.
- C1ca-25 to 31 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; hard, friable, slightly plastic; many very fine tubular pores; common nodules; 5 percent fragments 2 millimeters to 3 inches in size; lime in mycelium form; moderately calcareous; moderately alkaline; abrupt wavy boundary.
- Csicam-31 to 37 inches; dark brown (10YR 4/3) and pale brown (10YR 6/3) dry duripan; platy; very firm; indurated silica laminar capping nearly continuous; strongly calcareous.
- IIR-37 inches; fractured bedrock.

The A horizon is very dark grayish brown or dark brown when moist. The B horizon is brown or pale brown when dry. The C1 horizon is brown or pale brown when dry. The control section is 18 to 22 percent clay, is more than 15 percent material coarser textured than very fine sand, and is 2 to 5 percent fragments 2 millimeters to 3 inches in diameter. Depth to the hardpan is 20 to 40 inches, and depth to bedrock is 22 to 45 inches.

**32A-Maupin loam, 0 to 5 percent slopes.** A representative mapping unit is in the NW1/4SW1/4SW1/4 section 2, T. 5 S., R. 13 E. This soil is on ridgetops in long, broad, narrow areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bakeoven soils and Maupin variant soils that have 0 to 3 percent slopes. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit Ile-3, nonirrigated and Ile-2, irrigated; Shrubby Rolling Hills range site.

**32B-Maupin loam, 5 to 12 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NE1/4

section 18, T. 4 S., R. 14 E. This soil is on ridgetops in long, broad, narrow areas.

Included with this soil in mapping were areas of soils covered with 15 to 50 percent stones and boulders. These soils make up less than 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit Ile-5; Shrubby Rolling Hills range site.

### Maupin Variant

The Maupin variant consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 3 percent. Elevation is 1,600 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 10 inches thick. The subsoil is dark brown and brown loam about 25 inches thick. The substratum is dark brown loam about 16 inches thick. Basalt bedrock is at a depth of about 51 inches. The surface layer is neutral and the subsoil is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 7.5 to 10 inches. Effective rooting depth is 40 to 60 inches or more.

This soil is used for dryfarmed small grain, hay, pasture, irrigated crops, range, and wildlife habitat.

Representative profile of Maupin variant loam, 50 feet north of State Highway 216 in the NW1/4NE1/4SW1/4 section 9, T. 4 S., R. 13 E.

- Ap1-0 to 4 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- Ap2-4 to 10 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- B2-10 to 20 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent round nodules; neutral; abrupt wavy boundary.
- B3ca-20 to 35 inches; brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; weak medium subangular block structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 10 percent nodules; moderately calcareous; moderately alkaline; clear wavy
- C1ca-35 to 43 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 10 percent nodules; moderately calcareous; moderately alkaline; abrupt wavy boundary.
- C2sica-43 to 51 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; massive; weakly cemented; very hard, firm, slightly sticky and slightly



plastic; few very fine roots; many very fine tubular pores; 10 percent nodules; strongly calcareous; moderately alkaline; abrupt wavy boundary.

IIR-51 inches; basalt bedrock with a thin indurated capping.

The A horizon is loam or silt loam. The B horizon is loam or heavy loam. Depth to bedrock is 40 to 60 inches or more.

**33-Maupin variant loam.** A representative mapping unit is in the NW1/4NE1/4SW1/4 section 9, T. 4 S., R. 13 E. This soil is on uplands. Slopes average about 2 percent.

Included with this soil in mapping were areas of Maupin and Bakeoven soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIE-3, nonirrigated and IIE-2, irrigated; Shrubby Rolling Hills range site.

## Nansene Series

The Nansene series consists of well drained soils formed in loess on uplands. Slopes are 35 to 70 percent. Elevation is 300 to 1,500 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 11 to 13 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 140 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 22 inches thick. The subsoil is dark brown silt loam about 10 inches thick. The upper 20 inches of the substratum is dark brown silt loam, and the lower 10 inches is grayish brown silt loam. Basalt bedrock is at a depth of about 62 inches. The surface layer and subsoil are neutral, and the substratum is neutral to moderately alkaline.

Permeability is moderate, and the available water capacity is 6 to 11 inches. Water-supplying capacity is 8 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for range and wildlife habitat.

Representative profile of Nansene silt loam, 35 to 70 percent slopes, in NW1/4NW1/4NE1/4 section 29, T. 1 N., R. 15 E.

A11-0 to 4 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak thin platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

A12-4 to 14 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral; clear smooth boundary.

A13-14 to 22 inches; very dark brown (10YR 2/2) coarse silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine to medium tubular pores; neutral; gradual smooth boundary.

B2-22 to 82 inches; dark brown (10YR 3/3) coarse silt loam, dark brown (10YR 4/8) dry; weak coarse prismatic structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral; gradual smooth boundary.

C1-32 to 52 inches; dark brown. (10YR 3/8) coarse silt loam, brown (10YR 5/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine tubular pores; neutral; gradual smooth boundary.

C2ca-52 to 62 inches; grayish brown (10YR 5/2) silt loam, light brownish gray (10YR 6/2) moist; massive; slightly hard to hard, friable, slightly sticky and slightly plastic; few very fine roots; 5 percent fragments 1/16 inch in diameter; calcareous nodules; moderately calcareous; disseminated and segregated lime; moderately alkaline.

IIR-62 inches; basalt bedrock.

The A horizon is dark grayish brown or dark brown when dry. The B horizon is dark brown or dark grayish brown when dry and moist. The C horizon is dark brown to grayish brown when moist. Clay content of the soil is 10 to 18 percent. The soil is less than 5 percent fragments 1 inch or less in diameter. Rock is exposed on as much as 10 percent of the surface layer in places. Depth to basalt bedrock is 40 to 60 inches or more.

## 34F-Nansene silt loam, 35 to 70 percent slopes

A representative mapping unit is in the NW1/4NW1/4NE1/4, section 29, T. 1 N., R. 15 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping are areas of Walla Walla, Licksillet, and Wrentham soils and Rock outcrop that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Steep North range site.

## Pedigo Series

The Pedigo series consists of somewhat poorly drained soils formed in alluvium derived from loess and volcanic ash on bottom lands. Slopes are 0 to 3 percent. Elevation is 200 to 2,700 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 50° to 53° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.

In a representative profile the surface and subsurface layers are black silt loam to a depth of 40 inches. The upper 9 inches of the underlying material is very dark gray silt loam, and below this is dark grayish brown loam to a depth of 60 inches or more. The soil material in the profile is moderately alkaline to neutral.

Permeability is moderate, and the available water capacity is 10 to 11 inches. Water-supplying capacity is 9 to 13 inches. Effective rooting depth is more than 60 inches.

These soils are used for hay, pasture, dryfarmed small grain, range, and wildlife habitat.

Representative profile of Pedigo silt loam in the SE1/4NW1/4 section 21, T. 1 S., R. 13 E.:

Ap-0 to 8 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; moderately calcareous; moderately alkaline; abrupt smooth boundary.

A12-8 to 21 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak coarse structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; weakly calcareous; moderately alkaline; abrupt smooth boundary.

AC-21 to 40 inches; black (10YR 2/1) silt loam, yellowish brown (10YR 5/2) dry; massive; hard, friable, slight sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; clear smooth boundary.

C1-40 to 49 inches; very dark gray (10YR 3/1) silt loam, light brownish gray (10YR 6/2); massive; hard, friable, slightly sticky and slightly plastic; few roots; many fine and few medium tubular pores; neutral; clear smooth boundary.

C2-49 to 60 inches; dark grayish brown (10YR 4/2) loam; massive; hard, friable, slightly sticky and slightly plastic; few roots; many fine and few medium tubular pores; neutral.

The A horizon is dark grayish brown or dark brown when dry and very dark brown, dark grayish brown, black, or very dark grayish brown when moist. It is silt loam, coarse silt loam, or loam and is moderately calcareous to strongly calcareous. The AC horizon is light gray, light brownish gray, or grayish brown when dry and very dark gray, very dark grayish brown, or black when moist. It is coarse silt loam, silt loam, or silty clay loam.

**35-Pedigo silt loam.** A representative mapping unit is in the SE1/4NW1/4 section 21, T. 1 S., R. 13 E. This soil is in long, narrow areas on alluvial bottom lands adjacent to streams. Slopes are 0 to 3 percent.

Included with this soil in mapping are areas of Hermiston, Endersby, and Tygh soils.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIw-1; Alkaline Bottom range site.

### Quincy Series

The Quincy series consists of soils formed in sandy alluvium from mixed material on bottom lands. Slopes are 0 to 3 percent. Elevation is 1,400 to 1,500 feet. In uncultivated areas, the vegetation is cottonwoods, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark gray loamy fine sand about 6 inches thick. The underlying material to a depth of 35 inches is very dark grayish brown sand, the next 9 inches is dark gray fine sand, and below this to a depth of 60 inches or more is dark gray very fine sand. The surface layer is medium acid, and the underlying material is slightly acid to neutral.

Permeability is rapid, and the available water capacity is 3 to 6 inches. Water-supplying water-supplying capacity is variable and depends upon the depth to the water table. Effective rooting depth is 40 to 60 inches.

This soil is used for irrigated hay and pasture, crops, range, and wildlife habitat.

Representative profile of Quincy loamy fine sand, wet, in the NW1/4SW1/4NW1/4, section 12, T. 4 S., R. 13 E.

Ap-0 to 6 inches; very dark gray (10YR 3/1) loamy fine sand, gray (10YR 5/1) dry; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; medium acid; clear smooth boundary.

C1-6 to 41 inches; very dark grayish brown (10YR 3/2) sand, grayish brown (10YR 5/2) dry; single grained; loose; many very fine roots; 10 percent very fine pebbles; slightly acid; clear wavy boundary.

C2-41 to 50 inches; dark gray (10YR 4/1) fine sand, gray (10YR 5/1) dry; single grained; loose; common fine roots; common dark brown (7.5YR 4/4) moist, mottles; slightly acid; clear wavy boundary.

C3-50 to 60 inches; dark gray (10YR 4/1) very fine sand, gray (10YR 6/1) dry; single grained; loose; very few roots; neutral.

The A horizon is gray or grayish brown when dry and very dark gray or very dark grayish brown when moist. It is loamy fine sand or loamy sand and is as much as 20 percent coarse fragments 2 to 10 millimeters in size. The C1 horizon is gray to grayish brown when dry. It is loamy sand or sand and is 10 to 20 percent pebbles. The C2 horizon is gray or light gray when dry and has common to many dark brown mottles. It is sand or very fine sand.

Quincy soils are excessively drained or somewhat excessively drained. However, this Quincy soil is on bottom land and remains wetter throughout the year than is normal for the Quincy series because of a water table at a depth of 40 to 60 inches.

**36-Quincy loamy fine sand, wet.** A representative mapping unit is in the NW1/4SW1/4NW1/4 section 12, T. 4 S., R. 13 E. This soil is on bottom lands along major streams. Slopes are 0 to 3 percent.

Included with this soil in mapping were areas of Endersby, Tygh, and Pedigo soils. These soils make up as much as 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Depth to a water table is 40 to 60 inches in spring and early in summer. Some areas are subject to overflow. Capability unit IIIw-1; Semi-Moist Bottom range site.

### Riverwash

37--Riverwash. A representative mapping unit is in the NE1/4SW1/4NW1/4 section 11, T. 4 S., R. 13 E. Riverwash is in narrow, irregularly shaped strips in the bends of stream channels along the Columbia and Deschutes Rivers and along drainageways in the survey area. It is 2 to 10 feet above the normal waterline. The strips are 40 to 200 yards wide. Riverwash consists of well-rounded sand, gravel, stones and boulders, chiefly basalt. The surface layer generally is uneven. This area has little or no vegetation.

Riverwash is subject to overflow when the water is high and is extremely droughty when the water is low. During each overflow, new deposits are received and some material is removed. Adjacent river sandbars are included in the unit.

Riverwash is used for wildlife habitat and as a source of sand and gravel. Capability subclass VIIIw; not placed in a range site.

### Rock Outcrop

**38-Rock outcrop-Rubble land complex.** A representative mapping unit is in the NW1/4NE1/4, section 17, T. 3 S., R. 15 E. This complex is about 65 to 75 percent Rock outcrop and 20 to 30 percent Rubble land. It is on uplands in basalt outcrop and rubble (fig. 5). Elevation is 200 to 3,600 feet. Rock outcrop-Rubble land complex has little or no vegetation except on included soils. The average annual precipitation is 10 to 22 inches, the average annual air temperature is 45° to 52° F, and the frost-free period is 70 to 210 days.



**Figure 5: Area of Rock outcrop-Rubble land complex. Slopes are 30 to 100 percent.**

This complex is severely eroded. The almost perpendicular basalt cliffs are as much as 500 feet high and have stony or bouldery foot slopes. Slopes are 30 to 100 percent.

Included with this complex in mapping were areas of Wrentham, Nansene, Licksillet, and Wyeth soils. These soils make up as much as 15 percent of the unit.

This complex is used mainly for wildlife habitat and water supply. Capability subclass VIIIs; not placed in a range site.

**39-Rock outcrop-Xeropsamments complex.** A representative mapping unit is in the NW1/4NW1/4SW1/4 section 2, T. 2 N., R. 11 E. This complex is along the Columbia River. These areas were previously part of the Columbia River channel but are now terraces above the river. Stream action has scoured holes in the basalt lava beds and deposited sand and water-worn gravel. Numerous large and small outcrops of bedrock protrude from a few inches to as much as 15 feet above the soil and make up 50 to 75 percent of the complex. The soil consists mostly of sandy water-laid and windlaid material 5 to more than 60 inches deep. It is light colored and contains little organic matter. The root zone is shallow, and the water-supplying capacity and natural fertility are low. The principal concerns are wind erosion and fire. The complex is not subject to overflow. Slopes are 0 to 30 percent.

This complex is poorly suited to grazing. Large areas are idle because they are not readily accessible to live-

stock. In the northwestern part of the survey area, some drought-resistant woody species occur. Capability subclass VIIIs; not placed in a range site.

### Sherar Series

The Sherar series consists of well drained soils formed in loess and gravelly colluvium on uplands. Slopes are 5 to 70 percent. Elevation is 1,500 to 2,500 feet. The vegetation is bunchgrasses forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown cobbly loam and clay loam about 9 inches thick. The upper 9 inches of the subsoil is dark brown clay, and the lower 11 inches is dark brown gravelly clay. The upper 6 inches of the substratum is dark brown very gravelly clay. Rippable bedrock is at a depth of about 35 inches. The soil material throughout the profile is neutral.

Permeability is slow, and the available water capacity is 2 to 6 inches. Water-supplying capacity is 2 to 5 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range and wildlife habitat.

Representative profile of Sherar cobbly loam, 5 to 45 percent slopes, 35 feet upslope from road in the NW1/4NE1/4SW1/4 section 29, T. 3 S., R. 14 E.:

- A11-0 to 3 inches; very dark grayish brown (10YR 3/2) cobbly loam; grayish brown (10YR 5/2) dry; moderate thin platy and weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent cobbles and 5 percent pebbles; neutral; abrupt smooth boundary.
  - A12-3 to 9 inches; very dark grayish brown (10YR 3/2) clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; 10 percent cobbles and 5 percent pebbles; neutral; abrupt smooth boundary.
  - IIB2t-9 to 18 inches dark brown (7.5YR 3/3) clay, dark brown (7.5YR 4/4) dry; weak medium prismatic structure parting to strong medium subangular blocky; extremely hard, very firm, very sticky and very plastic; few roots; many very fine tubular pores; common thin clay films; 10 percent cobbles and 5 percent pebbles neutral; clear wavy boundary.
  - IIB3t-18 to 29 inches; dark brown (7.5YR 4/3) gravelly clay, dark brown (7.5YR 4/4) dry; weak medium subangular blocky structure; extremely hard, firm, sticky and plastic; few roots; common very fine tubular pores; common thin clay films; 30 percent pebbles and 5 percent cobbles neutral; clear wavy
  - IIC1-29 to 35 inches; dark brown (7.5YR 4/3) very gravelly clay, dark brown (7.5YR 4/4) moist; massive; extremely hard, v firm, very sticky and very plastic 45 percent pebbles and percent cobbles; neutral; clear wavy boundary.
  - IIIC2-35 to 50 inches; dark brown (10YR 4/3) moist; very cobbly semi-consolidated extremely hard breccia.
- The A horizon is very dark grayish brown or dark brown when moist. It is cobbly loam, cobbly clay loam, or clay loam and is 5 to 10 percent pebbles and 10 to 25 percent cobbles. The B horizon is dark brown or yellowish brown when dry and dark brown or brown when moist. It is clay or gravelly clay. It is 40 to 50 percent clay, 5

to 30 percent pebbles, and 10 to 20 percent cobbles. Depth to rippable bedrock is 20 to 40 inches.

**40E-Sherar cobbly loam, 5 to 45 percent slopes.**

A representative mapping unit is in the NW1/4NE1/4SE1/4 section 29, T. 3 S., R. 14 E. This soil is in broad, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Sinamox soils that make up as much as 1 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate to severe. Capability subclass VIe; Shrubby South Exposure range site.

**41F-Sherar very cobbly loam, 45 to 70 percent slopes.** A representative mapping unit is in the SE1/4NE1/4SW1/4 section 1, T. 4 S., R. 14 E. This soil is in long, broad, irregularly shaped areas and has south-facing slopes. It has a profile similar to the one described as representative of the series, but the surface layer is very cobbly.

Included with this soil in mapping were areas of Sinamox soils that make up as much as 2 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Droughty Steep South range site.

**Sinamox Series**

The Sinamox series consists of well drained soils formed in loess and gravelly colluvium on uplands. Slopes are 1 to 70 percent. Elevation is 1,600 to 2,600 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is black and very dark grayish brown silt loam about 24 inches thick. The subsoil is dark brown silt loam about 9 inches thick. The upper 16 inches of the substratum is brown gravelly clay loam, and the lower 14 inches is dark yellowish brown silty clay. Rippable bedrock is at a depth of about 63 inches. The soil material in the profile is neutral to a depth of 49 inches and moderately alkaline below that depth.

Permeability is moderately slow, and the available water capacity is 5 to 11 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Sinamox silt loam, 45 to 70 percent slopes, in SW1/4SW1/4SW1/4, section 12, T. 4 S., R. 13 E.:

A11-0 to 3 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak medium platy and weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-3 to 9 inches; black (10YR 2/1) silt loam, grayish brown (10YR 5/2) dry; weak fine granular and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

A3-9 to 24 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 4/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B2-24 to 33 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

IIC1-33 to 49 inches; brown (10YR 4/3) gravelly clay loam pale brown (10YR 6/3) dry; massive; hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; 25 percent pebbles; neutral; clear wavy boundary.

IIIC2ca-49 to 63 inches; dark yellowish brown (10YR 4/4) silty clay, light yellowish brown (10YR 6/4) moist; massive; extremely hard, very firm, sticky and very plastic; 10 percent pebbles; moderately alkaline; weakly calcareous; abrupt wavy boundary.

IVC3-63 to 70 inches; dark brown (10YR 4/3) moist; semiconsolidated very cobbly breccia.

The A horizon is very dark grayish brown or grayish brown when dry and very dark grayish brown, very dark brown or black when moist. The B horizon is dark brown or brown when dry and very dark grayish brown or dark brown when moist. It is silt loam and is 13 to 22 percent clay. Depth to rippable bedrock is 40 to 60 inches or more.

**42B-Sinamox silt loam, 1 to 7 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SE1/4 section 28, T. 3 S., R. 14 E. This soil is on ridgetops in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Sherar soils that make up about 5 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-3; Shrubby Rolling Hills range site.

**42C-Sinamox silt loam, 7 to 12 percent slopes.** A representative mapping unit is in the NE1/4SW1/4SE1/4, section 6, T. 4 S., R. 14 E. This soil is on ridgetops in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Sherar soils that make up about 6 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Shrubby Rolling Hills range site.

**42D-Sinamox silt loam, 12 to 20 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 32, T. 3 S., R. 14 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping were areas of Sherar soils that make up about 6 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-7; Shrubby Rolling Hills range site.

**42E-Sinamox silt loam, 20 to 45 percent slopes.**

A representative mapping unit is in the NE1/4SW1/4SW1/4 section 36, T. 8 S., R. 13 E. This soil is in long, narrow areas and has north-facing slopes.

Included with this soil in mapping were areas of

Sherar soils that make up as much as 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty North Exposure range site.

#### **42F-Sinamox silt loam, 45 to 70 percent slopes.**

A representative mapping unit is in the SW1/4SW1/4SW1/4 section 12, T. 4: ., R. 13 E. This soil is in long, narrow areas and has north-facing slopes. It has a profile described as representative of the series.

Included with this soil in mapping were areas of Sherar soils that make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Steep North range site.

### **Skyline Series**

The Skyline series consists of well drained soils formed in loess, volcanic ash, and colluvium over bedrock on uplands. Slopes are 5 to 70 percent. Elevation is 500 to 3,500 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 47° to 49° F, and the frost-free period is 110 to 140 days at 32° and 140 to 160 days at 28°.

In a representative profile the surface layer is very dark grayish brown very cobbly loam and cobbly loam about 9 inches thick. The subsoil is dark brown gravelly loam about 5 inches thick. Sandstone bedrock is at a depth of about 16 inches. The soil material in the profile is neutral.

Permeability is moderate, and the available water capacity is 1 to 3 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 12 to 20 inches.

These soils are used for range and wildlife habitat.

Representative profile of a Skyline very cobbly loam in an area of Skyline-Hesslan complex, 40 to 65 percent slopes, 1,000 feet north of the county road in the NE1/4NE1/4NW1/4 section 26, T. 1 S., R. 12 E.:

A1-0 to 2 inches; very dark grayish brown (10YR 3/2) very cobbly loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent fine and medium pebbles; 20 percent cobbles, and 10 percent stones; neutral; abrupt smooth boundary.

A3-2 to 9 inches; very dark grayish brown (10YR 3/2) cobbly loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent fine pebbles and 16 percent cobbles; neutral; clear smooth boundary.

B2-9 to 14 inches; dark brown (10YR 3/3) gravelly loam, brown (10YR 4/3) dry weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 15 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

IIC-14 to 16 inches; semiconsolidated sandstone bedrock,

The A horizon is grayish brown, brown, or dark grayish brown when dry and very dark grayish brown or dark brown when moist. It is cobbly loam or very cobbly loam and is 20 to 40 percent rock fragments 2 millimeters to 10 inches in size. The content of surface stones is 5 to 20

percent. The B horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is cobbly loam to cobbly heavy loam and is 10 to 30 percent rock fragments 2 millimeters to 10 inches in size. It has weak to moderate, medium, subangular blocky structure. The soil is 12 to 20 inches deep to semiconsolidated sandstone bedrock.

**43F-Skyline-Hesslan complex, 40 to 65 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 26, T. 1 S., R. 12 E. This complex is about 50 to 70 percent a Skyline very cobbly loam and 10 to 30 percent a Hesslan stony loam. The Skyline soil has south-facing slopes, and the Hesslan soil has north-facing side slopes. The soils have the profiles described as representative of their respective series.

Included with this complex in mapping were areas of Frailey loam and Wamic loam. These soils make up about 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. This complex is used for range and wildlife habitat. Capability subclass VIIIs; Oak Steep South range site.

### **Tygh Series**

The Tygh series consists of somewhat poorly drained soils on bottom lands. They formed in alluvium derived from volcanic ash, loess, and weathered sedimentary rocks. Slopes are 0 to 3 percent. Elevation is 200 to 1,800 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 48° to 52° F, and the frost-free period is 130 to 150 days at 32° and 150 to 180 days at 28°.

In a representative profile the surface layer is very dark brown fine sandy loam about 10 inches thick. The upper 20 inches of the underlying material is dark grayish brown fine sandy loam, the next 11 inches is dark gray sandy loam, the next 5 inches is gray and dark gray loamy sand, and below this is gray to dark gray very gravelly sand to a depth of 60 inches or more. The soil material throughout the profile is neutral.

Permeability is moderately rapid, and the available water capacity is 4 to 8 inches. These soils are subject to seasonal flooding. Effective rooting depth is 40 to 60 inches.

These soils are used for dryfarmed and irrigated small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Tygh fine sandy loam, 200 feet north of Fifteen Mile Creek in the NE1/4NW1/4SW1/4, section 33, T. 1 S., R. 13 E.:

Ap-0 to 10 inches; very dark brown (10YR 2/2) fine sandy loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many very fine irregular pores; 2 percent gravel; neutral; abrupt smooth boundary.

C1-10 to 17 inches; dark grayish brown (10YR 4/2) fine sandy loam, light brownish y (10YR 4/2) dry; common prominent fine reddish brown 5YR 4/4 mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; neutral; clear wavy boundary.



C2-17 to 30 inches; dark grayish brown (10YR 4/2) fine sandy loam, gray (10YR 6/1) dry; many prominent reddish brown (5YR 4/4) mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; neutral; clear wavy boundary.

C3-30 to 41 inches; dark gray (10YR 4/1) sandy loam, gray (10YR 6/1) dry; common medium prominent reddish brown (5YR 4/4) mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; 2 percent gravel; few black (10YR 2/1) manganese stains; neutral; clear wavy boundary.

C4-41 to 46 inches; gray and dark gray (10YR 5/1-4/1) loamy sand, light gray (10YR 7/1) dry; common large prominent reddish brown (5YR 4/4) mottles; single grained; loose, nonsticky and nonplastic; few very fine roots; common very fine tubular pores; 5 percent gravel; neutral; clear wavy boundary.

IIC5-46 to 60 inches; gray to dark gray (10YR 5/1-4/1) very gravelly sand, light gray (10YR 7/1) dry; common large prominent reddish brown (5YR 4/4) mottles; single grained; loose, nonsticky and nonplastic; few very fine roots; few very fine irregular pores; 75 percent pebbles and 5 percent cobbles; neutral.

The A horizon is fine sandy loam or very fine sandy loam. It has weak fine granular structure or is single grained. The C horizon is fine sandy loam, silt loam, or loam and has thin lenses that range from silt to medium gravel. Common to many, fine to medium, dark brown or reddish brown when moist mottles are below a depth of 10 inches. They increase in size and number with depth.

**44-Tygh fine sandy loam.** A representative mapping unit is in the NE1/4NW1/4SW1/4 section 33, T. 1 S., R. 13 E. This soil is adjacent to streams in long strips that are about 100 to 150 feet wide. Slopes are 0 to 3 percent.

Included with this soil in mapping were areas of

Endersby, Hermiston, and Pedigo soils and cobbly soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. The hazard of streambank erosion is severe (fig. 6). Capability unit IIIw-1; Semi-Moist Bottom range site.

### Van Horn Series

The Van Horn series consists of well drained soils formed in stratified old alluvial deposits on uplands. Slopes are 0 to 35 percent. Elevation is 100 to 850 feet. In uncultivated areas, the vegetation is Douglas-fir, ponderosa pine, forbs, and shrubs. The average annual precipitation is 20 to 25 inches, the average annual air temperature is 49 to 52 F, and the frost-free period is 150 to 180 days at 32° and 180 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown and dark brown loam about 11 inches thick. The subsoil is dark brown loam and clay loam about 38 inches thick. The substratum is dark brown loam 11 inches or more thick. The soil material in the profile is slightly acid or neutral.

Permeability is moderate, and the available water capacity is 8 to 9 inches. Water-supplying capacity is 12 to 15 inches. Effective rooting depth is more than 60 inches.

These soils are used mostly for fruit orchards, hay, pasture, and wildlife habitat and for some range.

Representative profile of Van Horn loam, 8 to 12 percent slopes, in the NE1/4SW1/4NW1/4 section 18, T. 2N., R. 11 E.:

A1p-0 to 5 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak medium granular structure; slightly hard, very friable, slightly sticky

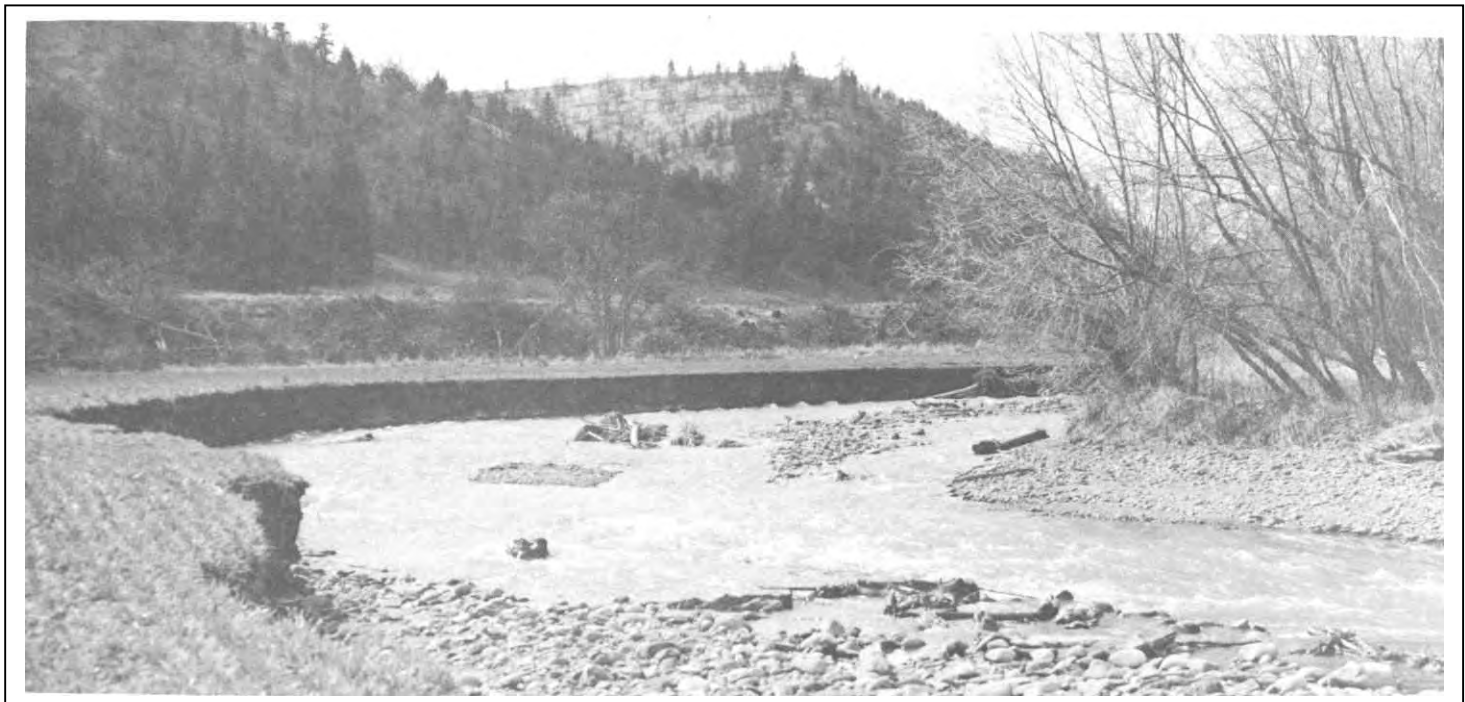


Figure 6.-Streambank erosion on Tygh fine sandy loam.

and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

A12-5 to 11 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; clear smooth boundary.

B1-11 to 21 inches; dark brown (10YR 3/3) loam, grayish brown (10YR 5/3) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; slightly acid; clear smooth boundary.

B21t-21 to 33 inches; dark brown (10YR 3/3) heavy loam, brown (10YR 6/3) dry; moderate medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; few thin clay films on ped faces and common moderately thick clay films in pores; many gray (10YR 7/2) sand coatings on peds; slightly acid; gradual smooth boundary.

B22t-33 to 49 inches; dark brown (10YR 3/3) clay loam, pale brown (10YR 6/3) dry; moderate medium subangular blocky structure; very hard, firm, sticky and slightly plastic; few very fine roots; many very fine tubular pores; few thin clay films on ped faces and common thin clay films in pores; many gray (10YR 7/2) sand coatings on peds; neutral; gradual smooth boundary.

C-49 to 60 inches; dark brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral.

The A horizon is grayish brown or brown when dry and very dark grayish brown or dark brown when moist. It is very fine sandy loam, fine sandy loam, or loam. The B2 horizon is light brownish gray, pale brown, brown, or yellowish brown when dry and dark brown, dark yellowish brown, or dark grayish brown when moist. It is clay loam, sandy clay loam, or heavy loam and is 22 to 35 percent clay.

**45B-Van Horn loam, 0 to 8 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NW1/4 section 7, T. 2 N., R. 12 E. This soil is in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**45C-Van Horn loam, 8 to 12 percent slopes.** A representative mapping unit is in the NE1/4SW1/4NW1/4 section 18, T. 2 N., R. 11 E. This soil is in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**45D-Van Horn loam, 12 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NW1/4 section 7, T. 2 N., R. 12 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**45E-Van Horn loam, 20 to 35 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SW1/4, section 6, T. 2 N., R. 12 E. This soil is in narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth, Cherryhill, and Wind River soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVe-1; Pine-Oak-Fescue range site.

## Walla Walla Series

The Walla Walla series consists of well drained soils formed in loess on uplands. Slopes are 3 to 60 percent. Elevation is 300 to 2,000 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 49° to 62° F, and the frost-free period is 160 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 13 inches thick. The subsoil is dark brown and brown silt loam about 18 inches thick. The substratum is dark yellowish brown silt loam to a depth of 82 inches or more. The surface layer is slightly acid and neutral, the subsoil is neutral, and the substratum is neutral and mildly alkaline.

Permeability is moderate, and the available water capacity is 7 to 12 inches. Water-supplying capacity is 8 to 12 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Walla Walla silt loam, 12 to 20 percent north slopes, about 600 feet north of the line between sections 12 and 13 in the SE1/4SW1/4SW1/4, section 12, T. 1 N., R. 14 E.:

Ap-0 to 7 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak thin platy structure parting to weak fine granular; soft to slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; slightly acid; abrupt smooth boundary.

A12-7 to 13 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

B1-13 to 20 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to very weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine pores; neutral; clear smooth boundary.

B2-20 to 31 inches; brown (10YR 4/3) silt loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to very weak medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; gradual smooth boundary.

C11-31 to 44 inches; dark yellowish brown (10YR 3/4) silt loam, pale brown (10YR 6/3) dry; massive;

slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; gradual smooth boundary.

C12-44 to 82 inches; dark yellowish brown (10YR 3/4) silt loam, pale brown (10YR 6/3) dry massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; mildly alkaline.

The A horizon is dark grayish brown, grayish brown, or brown when dry and very dark brown, very dark grayish brown, or dark brown when moist. It is silt loam or coarse silt loam. The B horizon is silt loam or coarse silt loam. The C horizon is light brownish gray or pale brown when dry and dark yellowish brown or brown when moist. It is silt loam or coarse silt loam. Lime in mycelium form is below a depth of 55 inches in some places. Depth to bedrock is 40 to more than 60 inches.

**46B-Walla Walla silt loam, 3 to 7 percent slopes.** A representative mapping unit is in the SW1/4SW1/4SW1/4 section 2, T. 1 N., R. 15 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIE-3; Rolling Hills range site.

**46C-Walla Walla silt loam, 7 to 12 percent slopes.**

A representative mapping unit is in the SW1/4SW1/4SW1/4 section 3, T. 1 N., R. 15 S. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-1; Rolling Hills range site.

**46D-Walla Walla silt loam, 12 to 20 percent north slopes.**

A representative mapping unit is in the SE1/4SW1/4SW1/4 section 12, T. 1 N., R. 14 E. This soil is in long, broad, convex areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Anderly and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-4; Droughty North Exposure range site.

**47D-Walla Walla silt loam, 12 to 20 percent south slopes.** A representative mapping unit is in the SW1/4SW1/4SW1/4 section 6, T. 1 N., R. 15 E. This soil is in long, broad, convex areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIE-4; Rolling Hills range site.

**47E-Walla Walla silt loam, 20 to 35 percent north slopes.** A representative mapping unit is in the NE1/4SW1/4SW1/4 section 9, T. 1 N., R. 14 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVE-3; North Exposure range site.

**48E-Walla Walla silt loam, 20 to 35 percent south slopes.** A representative mapping unit is in the NW1/4NW1/4NW1/4 section 10, T. 1 N., R. 14 E. This soil is in long, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IVE-2; Droughty South Exposure range site.

**48F-Walla Walla silt loam, 35 to 50 percent south slopes.** A representative mapping unit is in the W1/4SE1/4NE1/4 section 7, T. 1 N., R. 14 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Anderly and Nansene soils that make up about 10 percent of this mapping unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Droughty South Exposure range site.

### Wamic Series

The Wamic series consists of well drained soils formed in volcanic ash, and loess overlying alluvium or colluvium weathered from basalt or andesite on uplands. Slopes are 1 to 70 percent. Elevation is 1,000 to 3,600 feet. In uncultivated areas, the vegetation is ponderosa pine, Douglas-fir, oak forbs, and shrubs. The average annual precipitation is 14 to 20 inches, the average annual air temperature is 46° to 50° F, and the frost-free period is 100 to 150 days at 32° and 150 to 200 days at 28°.

In a representative profile the surface layer is very dark grayish brown loam about 7 inches thick. The subsoil is dark brown loam about 21 inches thick. The substratum is dark brown heavy loam 16 or more inches thick. The soil material throughout the profile is neutral.

Permeability is moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 12.5 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, timber, and wildlife habitat.

Representative profile of Wamic loam, 5 to 12 percent south slopes, 100 feet south of road in the NE1/4NW1/4NW1/4 section 26, T. 2 S., R. 12 E.:

Ap-0 to 7 inches; very dark grayish brown (10YR 3/2) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

B1-7 to 18 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear wavy boundary.

B2-18 to 28 inches; dark brown (10YR 4/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many

very fine and common fine tubular pores; about 2 percent very fine pebbles; light gray (10YR 7/2) when dry coatings of very fine sand on peds; neutral; abrupt wavy boundary.

IIC-28 to 44 inches; dark brown (10YR 4/3) heavy loam, pale brown (10YR 4/3) dry; massive; very hard, firm, sticky and plastic; few fine roots; many very fine and common fine tubular pores; about 2 percent very fine pebbles; brown (7.5YR 4/4) when dry thick clay films in nearly all pores and on faces of fractures; neutral.

IIIR-44 inches; basalt bedrock.

The A horizon is light brownish gray or pale brown when dry and very dark grayish brown or dark brown when moist. It is loam, very fine sandy loam, or silt loam. It has weak granular or subangular blocky structure. The B horizon is light brownish gray, pale brown, or light yellowish brown when dry and dark brown, brown, or dark yellowish brown when moist. It is loam or silt loam, is 18 to 22 percent clay, and is more than 15 percent particles coarser textured than very fine sand. The substratum is pale brown or light yellowish brown when dry and brown or dark yellowish brown when moist. It is heavy loam, foam, or sandy clay loam and is 20 to 80 percent clay.

The amount of ash in the soil ranges from 20 to 60 percent. Depth to bedrock is 40 to 60 inches or more.

**49B-Wamic loam, 1 to 5 percent slopes.** A representative mapping unit is in the SW1/4SE1/4SW1/4 section 26, T. 1 N., R. 12 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 6 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIIe-1; Pine-Oak-Fescue range site; woodland group 60.

**49C-Wamic loam, 5 to 12 percent north slopes.** A representative mapping unit is in the SE1/4NW1/4NW1/4 section 36, T. 2 S., R. 12 E. This soil is on ridgetops in broad, smooth areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-4; Pine-Oak-Fescue range site; woodland group 60.

**50C-Wamic loam, 5 to 12 percent south slopes.** A representative mapping unit is in the NE1/4NW1/4NW1/4 section 26, T. 2 S., R. 12 E. This soil is in long, irregularly shaped areas and has south-facing slopes. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-5; Oak South Exposure range site.

**50D-Wamic loam, 12 to 20 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 14, T. 2 S., R. 14 E. This soil is in irregularly shaped areas.

Included with this soil in mapping were areas of Bald, Bodell, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-4; Pine-Oak-Fescue range site; woodland group 60.

**50E-Wamic loam, 20 to 40 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NE1/4 section 31, T. 2 S., R. 13 E. This soil is in long, broad areas and narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Bald, Hesslan, Skyline, and Frailey soils. These soils make up about 10 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIe; Pine-Douglas Fir-Sedge range site; woodland group 6r.

**50F-Wamic loam, 40 to 70 percent slopes.** A representative mapping unit is in the NE1/4SW1/4SW1/4 section 10, T. 2 N., R. 12 E. This soil is in long, narrow, irregularly shaped areas. It has a profile similar to the one described as representative of the series, but the surface layer is darker colored.

Included with this soil in mapping were areas of Bald, Hesslan, Frailey, and Skyline soils. These soils make up as much as 20 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VIIe; Pine-Douglas Fir-Sedge range site; woodland group 6r.

**51D-Wamic-Skyline complex, 2 to 20 percent slopes.** A representative mapping unit is in the NW1/4NW1/4NE1/4 section 86, T. 2 S., R. 12 E. This 4complex is about 46 to 70 percent a Wamic loam and about 16 to 40 percent a Skyline very cobbly loam. The Wamic soil is on ridgetops or side slopes in circular or elongated mounds. The Skyline soil is in areas where the ridgetops break off into canyons.

Included with this complex in mapping were areas of very shallow, very stony, and deep stony soils. These soils make up about 20 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. This complex is used for range and wildlife habitat. Capability subclass VIe; Wamic soil in Oak South Exposure range site; Skyline soil in Oak Steep South range site.

### Wapinitia Series

The Wapinitia series consists of well drained soils, formed in loess and volcanic ash on uplands. Slopes are 0 to 36 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 60° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 6 inches thick. The upper 13 inches of the subsoil is very dark brown silt loam, and the lower 10 inches is dark brown silty clay loam. The upper 7 inches of the substratum is dark yellowish brown fine sandy loam, and the lower 14 inches is dark brown clay loam. Basalt bedrock is at a depth of about 60 inches. The surface layer and upper part of the subsoil are slightly acid, and the lower part of the subsoil and the substratum is neutral.

Permeability is moderately slow, and the available water capacity is 7 to 12 inches. Water-supplying capacity is 10 to 14 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for small grain, dryfarmed hay, pasture, range, irrigated crops, and wildlife habitat.

Representative profile of Wapinitia silt loam in an area of Watama-Wapinitia silt loams, 0 to 5 percent slopes, 50 feet east of graveled county road and 450 feet south of main irrigation canal in the NW1/4NE1/4SE1/4 section 17, T. 5 S., R. 12 E.:

- Ap-0 to 6 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; slightly acid; abrupt smooth boundary.
- B1-6 to 19 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine tubular pores; few thin clay films on peds; common noncalcareous nodules 1/4 to 3/4 inch in diameter; slightly acid; clear smooth boundary.
- B2t-19 to 29 inches; dark brown (10YR 3/3) silty clay loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many very fine roots; many to common very fine and fine tubular pores; many thin clay films on peds; common noncalcareous nodules 1/4 to 3/4 inch in diameter; neutral; clear smooth boundary.
- IIC1-29 to 36 inches; dark yellowish brown (10YR 3/4) fine sandy loam, yellowish brown (10YR 5/4) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine tubular pores; common clay bridges; neutral; clear smooth boundary.
- IIC2-36 to 50 inches; dark brown (10YR 4/3) clay loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; neutral; abrupt smooth boundary.
- IIIR-50 inches; basalt bedrock.

The A horizon is dark grayish brown or grayish brown when dry and very dark brown or very dark grayish brown when moist. It is silt loam or loam. The B horizon is grayish brown or brown when dry. It is clay loam or silty clay loam and is 27 to 35 percent clay. It contains 2 to 5 percent noncalcareous nodules 1/4 to 3/4 inch in diameter and more than 16 percent particles coarser textured than very fine sand. The horizon is fine sandy loam, loam, or clay loam. Depth to basalt bedrock is 40 to 60 inches.

The Wapinitia series is mapped only in complexes with Watama soils. Refer to the Watama series for a description of these mapping units.

## Wapinitia Variant

The Wapinitia variant consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 1 to 7 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 12 inches thick. The upper 10 inches of the subsoil is very dark grayish brown

silty clay loam, and the lower 31 inches is dark brown and brown clay. Basalt is at a depth of 53 inches. The surface layer and subsoil are neutral.

Permeability is slow, and the available water capacity is 7 to 11.5 inches. Water-supplying capacity is 10 to 13 inches. Effective rooting depth is 40 to 60 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Wapinitia variant silt loam, 1 to 7 percent slopes, 100 feet north of road in the SW1/4SE1/4SW1/4 section 28, T. 5 S., R. 12 E.:

- Ap1-0 to 5 inches; very dark brown (10YR 2/2) silt loam, dark brown (10YR 4/2) dry; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.
- Ap2-5 to 12 inches; very dark brown (10YR 2/2) loam, dark brown (10YR 4/3) dry; moderate fine granular and weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- B1-12 to 22 inches; very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure; hard, firm, sticky and very plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.
- IIIB2t-22 to 32 inches; dark brown (10YR 3/3) clay, brown (10YR 6/3) dry; weak medium prismatic and strong medium blocky structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; common thin clay films on peds; 5 percent pebbles 2 millimeters to 3 inches in size; neutral; clear wavy boundary.
- IIIB22t-32 to 63 inches; brown (10YR 4/3) clay, brown (10YR 5/3) dry; weak medium prismatic and strong medium blocky structure; extremely hard, very firm, sticky and very plastic; few very fine roots; few very fine tubular pores; common moderately thick clay films on peds; 5 percent pebbles 2 millimeters to 3 inches in size; neutral; abrupt smooth boundary.
- IIIR-53 to 60 inches; basalt.

The A horizon is silt loam or loam. Depth to bedrock is 40 to 60 inches or more.

**52B-Wapinitia variant silt loam, 1 to 7 percent slopes.** A representative mapping unit is in SW1/4SE1/4SW1/4 section 28, T. 5 S., R. 12 E. This soil is in narrow, irregularly shaped areas. Slopes average about 4 percent.

Included with this soil in mapping were areas of Wapinitia, Watama, and Bakeoven soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is moderate. Capability unit IIIe-5; Shrubby Rolling Hills range site.

## Warden Series

The Warden series consists of well drained soils formed in a loess mantle over calcareous, silty lacustrine sediment on terraces. Slopes are 5 to 40 percent. Elevation is 600 to 1,000 feet. The vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is about 9 inches, the average annual air temperature is 51° to 53° F, and the frost-free period is 130 to 180 days at 32° and 180 to 200 days at 28°.



In a representative profile the surface layer is very dark grayish brown and dark brown silt loam about 8 inches thick. The subsoil is dark brown silt loam about 13 inches thick. The substratum is dark grayish brown silt loam about 39 inches thick. The soil material in the profile is neutral to strongly alkaline. Lime accumulation is at a depth of 20 to 30 inches.

Permeability is moderate, and the available water capacity is 10 to 12 inches. Water-supplying capacity is 6 to 9 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for hay, pasture, range, and wildlife habitat.

Representative profile of Warden silt loam, 5 to 40 percent slopes, in abandoned field 30 feet northeast of Sinamox Road in the SE1/4SW1/4NE1/4 section 27, T. 2 S., R. 15 E.

A1-0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; abrupt smooth boundary.

A12-3 to 8 inches; dark brown (10YR 3/3) silt loam, grayish brown (10YR 5/2) dry; weak medium prismatic structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common fine tubular pores; neutral; abrupt wavy boundary.

B2-8 to 21 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak coarse prismatic structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; mildly alkaline; abrupt wavy boundary.

IIC1ca-21 to 34 inches; dark grayish brown (2.5Y 4/3) silt loam, pale brown (10YR 6/3) dry; massive; hard, friable, slightly sticky and slightly plastic; many very fine roots; many fine tubular pores; many fine to medium (1/4 to 1 inch) calcareous concretions; moderately alkaline; strongly calcareous; clear wavy boundary.

IIC2ca-34 to 45 inches; dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (10YR 6/2) dry; massive; hard, friable, friable and firm, slightly sticky and slightly plastic; common very fine roots; many fine tubular pores; strongly alkaline; strongly calcareous; clear wavy boundary.

IIC3ca-45 to 60 inches; dark grayish brown (2.5Y 4/2) silt loam, light brownish gray (2.5Y 6/2) dry; massive; hard, friable, slightly sticky and slightly plastic; few roots; many very fine irregular pores; strongly alkaline; strongly calcareous.

The A horizon is grayish brown or light brownish gray when dry. The B horizon is brown or pale brown when dry and dark brown or dark yellowish brown when moist. The C horizon is light brownish gray, brown, or pale brown when dry and grayish brown or dark grayish brown when moist. It is as much as 5 percent calcareous concretions ¼ to 1 inch in diameter. It is moderately calcareous to strongly calcareous.

**53E-Warden silt loam, 5 to 40 percent slopes.** A representative mapping unit is in the SE1/4SW1/4NE1/4 section 27, T. 2 S., R. 15 E. This soil is in narrow and broad, irregularly shaped, dissected terraces.

Included with this soil in mapping were areas of Licksillet and Wrentham soils. These soils make up as much as 10 percent of the unit.

Runoff is medium or slow, and the hazard of erosion is slight to severe. Capability subclass VIe; Silty Terrace range site.

## Watama Series

The Watama series consists of well drained soils formed in loess and volcanic ash on uplands. Slopes are 0 to 35 percent. Elevation is 1,800 to 3,400 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 13 to 16 inches, the average annual air temperature is 48° to 50° F, and the frost-free period is 120 to 170 days at 32° and 170 to 200 days at 28°.

In a representative profile the surface layer is very dark brown and very dark grayish brown silt loam about 10 inches thick. The upper 14 inches of the subsoil is dark brown loam, and the lower 10 inches is brown clay loam. Basalt bedrock is at a depth of about 34 inches. The soil material in the profile is neutral throughout.

Permeability is moderately slow; and the available water capacity is 3.5 to 8 inches. water-supplying capacity is 6 to 10 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for dryfarmed small grain, hay, pasture, range, irrigated crops, and wildlife habitat.

Representative profile of a Watama silt loam in an area of Watama-Wapinitia silt loams, 0 to 5 percent slopes, 75 feet south of gravel road in the NE1/4NW1/4NE1/4 section 16, T. 5 S., R. 12 E.:

A11-0 to 4 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 6/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; abrupt smooth boundary.

A12-4 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B1-10 to 17 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak to moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral; clear smooth boundary.

B21-17 to 24 inches; dark brown (10YR 3/3) heavy loam, brown (10YR 6/3) dry; weak coarse prismatic and moderate medium subangular blocky structure; very hard, firm, sticky and plastic; common very fine roots; many very fine tubular pores; common very dark grayish brown (10YR 3/2) coatings on peds; 2 percent cobbles; neutral; clear smooth boundary.

B22-24 to 34 inches; brown (10YR 4/3) light clay loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; very hard, firm, sticky and plastic; common very fine roots; many very fine tubular pores; common dark brown (10YR 3/3) coatings on peds; 2 percent cobbles; neutral; clear smooth boundary.

IIR-34 inches; basalt bedrock.

Depth to basalt bedrock is 20 to 40 inches.

**54B-Watama-Wapinitia silt loams, 0 to 5 percent slopes.** A representative mapping unit is in the NE1/4NW1/4NE1/4 section 16, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 30 percent a Wapinitia silt loam. These soils are in narrow, irregularly shaped areas. Slopes average about 3 percent. Both soils have the profile described as representative of their respective series.

Included with this complex in mapping are areas of

Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-3 nonirrigated, and IIe-2 irrigated; Shrubby Rolling Hills range site.

**54C-Watama-Wapinitia silt loams, 5 to 12 percent slopes.**

A representative mapping unit is in the NW1/4SW1/4SE1/4 section 3, T. 5 S., R. 12 E. This complex is about 65 to 65 percent a Watama silt loam and 25 to 30 percent a Wapinitia silt loam. These soils are on ridgetops in long, broad or narrow areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Shrubby Rolling Hills range site.

**54D-Watama-Wapinitia silt loams, 12 to 20 percent slopes.**

A representative mapping unit is in the SE1/4SE1/4SW1/4 section 3, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 35 percent a Wapinitia silt loam. These soils are in long, narrow, irregularly shaped areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate.

Capability unit IIIe-4; Shrubby Rolling Hills Range site.

**54E-Watama-Wapinitia silt loams, 20 to 35 percent slopes.**

A representative mapping unit is in the NW1/4NE1/4NW1/4 section 3, T. 5 S., R. 12 E. This complex is about 55 to 65 percent a Watama silt loam and 25 to 35 percent a Wapinitia silt loam. These soils are in long, narrow, irregularly shaped areas.

Included with this complex in mapping were areas of Bakeoven, Maupin, and Wamic soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe.

Capability unit IIVe-2; North Exposure range site.

**Wato Series**

The Wato series consists of well drained soils formed in loess on uplands. Slopes are 3 to 35 percent. Elevation is 300 to 1,500 feet. In uncultivated areas, the vegetation is bunchgrasses, forbs, and shrubs. The average annual precipitation is 12 to 14 inches, the average annual air temperature is 51° to 54° F, and the frost-free period is 150 to 170 days at 32° and 170 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown very fine sandy loam about 15 inches thick. The subsoil is dark brown loam about 27 inches thick. The substratum is dark brown fine sandy loam about 24 inches thick. The soil material throughout the profile is neutral.

Permeability is moderately rapid, and the available water capacity is 6 to 10 inches. Water-supplying capacity is 7 to 10 inches. Effective rooting depth is 40 to 60 inches or more.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

Representative profile of Wato very fine sandy loam, 3 to 7 percent slopes, 150 feet west of road in the NW1/4NE1/4NW1/4 section 32, T. 2 N., R. 14 E.:

A11-0 to 3 inches; very dark grayish brown (10YR 3/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral; clear smooth boundary.

A12-3 to 15 inches; very dark grayish brown (10YR 3/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 2 percent fragments 1 to 2 millimeters in size; neutral; clear smooth boundary.

B1-15 to 21 inches; dark brown (10YR 3/3) loam, brown (10YR 4/3) dry; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular an tubular pores; 2 percent fragments 1 to 2 millimeters in size; neutral; clear wavy boundary.

B2-21 to 42 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium prismatic and weak medium subangular bloc structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 3 percent fragments 1 to 2 millimeters in size; neutral; clear smooth boundary.

C1-42 to 52 inches; dark brown (10YR 4/3) fine sandy loam, pale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; many to common very fine roots; many very fine tubular pores; 6 percent weathered fragments 1 to 2 millimeters in size; neutral; clear wavy boundary.

C2-52 to 66 inches; dark brown (10YR 4/3) fine sandy loam, ale brown (10YR 6/3) dry; massive; slightly hard, friable, slightly sticky and nonplastic; few very fine roots; 10 percent weathered fragments 1 to 2 millimeters in size; neutral; abrupt wavy boundary.

The B horizon is dark brown to brown when dry. It is very fine sandy loam to loam.

**55B-Wato very fine sandy loam, 3 to 7 percent slopes.** A representative mapping unit is in the NW1/4NE1/4NW1/4 section 32, T. 2 N., R. 14 E. This soil is on ridgetops in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up about 5 percent of the unit.

Runoff is slow. The hazard of water erosion is slight or moderate, and the hazard of soil blowing is moderate. Some areas are moderately eroded and have lower crop yields than noneroded areas. Capability unit IIIe-6; Rolling Hills range site.

**55C-Wato very fine sandy loam, 7 to 12 percent slopes.** A representative mapping unit is in the SW1/4NE1/4NE1/4 section 3, T. 2 N., R. 14 E. This soil is on ridgetops in broad, smooth, convex areas.

Included with this soil in mapping were areas of Licksillet, Walls Walla, Anderly, and Nansene soils. These soils make up about 10 percent of the unit.

Runoff is medium. The hazard of water erosion is moderate. Capability unit IIIe-6; Rolling Hills range site.

**55D-Wato very fine sandy loam, 12 to 20 percent north slopes.** A representative mapping unit is

in the NE1/4NE1/4NW1/4, section 32, T. 2 N., R. 14 E. This soil is in long, broad, convex areas.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-4; Droughty North Exposure range site.

**55E-Wato very fine sandy loam, 20 to 35 percent north slopes.** A representative mapping unit is in the NE1/4SE1/4NW1/4, section 31, T. 2 N., R. 14 E. This soil is in long, narrow, broad, irregularly shaped areas.

Included with this soil in mapping were areas of Licksillet, Walla Walla, Anderly, and Nansene soils. These soils make up as much as 16 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability unit IIVe-3; North Exposure range site.

### Wind River Series

The Wind River series consists of well drained soils formed in old alluvium on uplands. Slopes are 0 to 30 percent. Elevation is 200 to 800 feet. In uncultivated areas, the vegetation is Douglas-fir, ponderosa pine, Oregon white oak, forbs, and shrubs. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 49° to 52° F, and the frost-free period is 150 to 180 days at 32° and 180 to 210 days at 28°.

In a representative profile the surface layer is very dark grayish brown fine sandy loam about 10 inches thick. The subsoil is dark brown fine sandy loam about 34 inches thick. The substratum is dark yellowish brown sandy loam to a depth of 60 inches or more. Depth to bedrock is more than 60 inches. The soil material in the profile ranges from medium acid to neutral.

Permeability is moderately rapid, and the available water capacity is 7 to 8 inches. Water-supplying capacity is 10 to 14 inches. Effective rooting depth is more than 60 inches.

These soils are used for fruit orchards, pasture, range, and wildlife habitat.

Representative profile of Wind River fine sandy loam, 0 to 8 percent slopes, 400 feet north of Old Columbia River Highway in the NW1/4SE1/4NW1/4 section 6, T. 2 N., R. 12 E..

Ap1-0 to 6 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; medium acid; abrupt smooth boundary.

Ap2-6 to 10 inches, very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular and tubular pores; slightly acid; gradual smooth boundary.

B2-10 to 17 inches; dark brown (7.5YR 3/3) fine sandy loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine roots; few fine tubular pores; neutral; gradual smooth boundary.

B3-17 to 44 inches; dark brown (7.5YR 3/4) fine sandy loam, brown (10YR 5/4) dry; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; few 1 to 6 centimeter nodules; neutral; gradual smooth boundary.

C1-44 to 61 inches; dark yellowish brown (10YR 4/4) sandy loam, brown (10YR 5/4) dry; massive, slightly hard, friable, nonsticky and nonplastic; common very fine roots; neutral; clear wavy boundary.

The A horizon is brown, grayish brown, or dark grayish brown when dry and very dark grayish brown, very dark brown, or dark brown moist. It is fine sandy loam or sandy loam. The B horizon is brown, grayish brown, or dark grayish brown when dry and very dark grayish brown, very dark brown, or dark brown moist. It is fine sandy loam, loam, or sandy loam. It has weak coarse prismatic or weak coarse or medium subangular blocky structure. The C horizon is yellowish brown, brown, or light yellowish brown when dry and dark yellowish brown or brown moist. It is fine sandy loam, sandy loam, loamy fine sand, or sand and is 0 to 20 percent rock fragments 2 to 5 millimeters in diameter.

**56B-Wind River fine sandy loam, 0 to 8 percent slopes.** A representative mapping unit is in the NW1/4SE1/4NW1/4 section 6, T. 2 N., R. 12 E. This soil is on ridgetops in broad, irregularly shaped areas. It has the profile described as representative of the series.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is slow, and the hazard of erosion is slight. Capability unit IIe-1; Pine-Oak-Fescue range site.

**56C-Wind River fine sandy loam, 8 to 12 percent slopes.** A representative mapping unit is in the NE1/4NE1/4NW1/4 section 6, T. 2 N., R. 12 E. This soil is on ridgetops in broad, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is medium, and the hazard of erosion is moderate. Capability unit IIIe-2; Pine-Oak-Fescue range site.

**56D-Wind River fine sandy loam, 12 to 30 percent slopes.** A representative mapping unit is in the SE1/4SE1/4SE1/4 section 1, T. 2 N., R. 11 E. This soil is in long, narrow, irregularly shaped areas.

Included with this soil in mapping were areas of Chenoweth and Van Horn soils. These soils make up about 10 percent of the unit.

Runoff is medium to rapid, and the hazard of erosion is moderate to severe. Capability unit IIVe-1; Pine-Oak Fescue range site.

### Wrentham Series

The Wrentham series consists of well drained soils formed in loess and basalt colluvium on uplands. Slopes are 35 to 70 percent. Elevation is 1,500 to 3,600 feet. The vegetation is bunchgrasses forbs, and shrubs. The average annual precipitation is 10 to 13 inches, the average annual air temperature is 45° to 62° F, and the frost-free period is 60 to 100 days at 32° and 100 to 150 days at 28°.

In a representative profile the surface layer is very dark brown silt loam about 18 inches thick. The upper

3 inches of the subsoil is dark brown heavy silt loam, and the lower 17 inches is dark brown very cobbly silty clay loam. Basalt bedrock is at a depth of about 38 inches. The soil material in the profile is mainly neutral, but the lower part of the subsoil is mildly alkaline.

Permeability is moderately slow, and the available water capacity is 2.5 to 7 inches. Water-supplying capacity is 6 to 8 inches. Effective rooting depth is 20 to 40 inches.

These soils are used for range, wildlife habitat, and water supply.

representative profile of Wrentham silt loam in an area of Wrentham-Rock outcrop complex, 35 to 70 percent slopes, 20 feet north of Sinamox Road in the SE1/4SE1/4 section 28, T. 2 S., R. 15 E.:

- A11-0 to 5 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak very thin platy and weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; few fine and very fine irregular pores; 5 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.
- A12-6 to 10 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 6 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.
- A13-10 to 18 inches; very dark brown (10YR 2/2) silt loam, dark brown (10YR 4/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slight sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 6 percent cobbles; neutral; gradual smooth boundary.
- B1-18 to 21 inches; dark brown (7.5YR 3/3) heavy silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent pebbles and 6 percent cobbles; neutral; gradual smooth boundary.
- B21-21 to 32 inches; dark brown (7.5YR 3/3) very cobbly light silty clay loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; many very fine tubular pores; thin clay films on ped surfaces; 26 percent pebbles and 26 percent cobbles; neutral; gradual smooth boundary.
- B22-32 to 38 inches; dark brown (7.5YR 3/4) very cobbly silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium subangular blocky structure; hard, firm, sticky, plastic; few very fine roots; many very fine tubular pores; 25 percent pebbles and 40 percent cobbles; 50 to 86 percent basalt fragments 1 to 12 inches in diameter; mildly alkaline; abrupt wavy boundary.
- IIR-38 inches; basalt bedrock.

The A horizon is very dark brown or very dark grayish brown when moist. It is 0 to 25 percent coarse fragments, by volume. The B horizon is very dark brown or dark brown when moist. It is heavy silt loam, light silty clay loam, or silty clay loam. It is 18 to 30 percent clay and 50 to 86 percent rock fragments. Depth to basalt bedrock is 20 to 40 inches.

**57F-Wrentham-Rock outcrop complex, 35 to 70 percent slopes.** A representative mapping unit is in the SE1/4SE1/4NE1/4 section 28, T. 2 S., R. 15 E. This complex is about 50 to 85 percent Wrentham silt loam and 10 to 35 percent Rock outcrop. It is in long, narrow

areas and has north-facing slopes (fig. 7). The Wrentham soil has the profile described as representative of the series.

Included with this complex in mapping were areas of Cantala, Condom Bakeoven, and Lick Licksillet soils. These soils make up as much as 15 percent of the unit.

Runoff is rapid, and the hazard of erosion is severe. Capability subclass VII<sub>s</sub>; Wrentham soil in Steep North range site. Rock outcrop not in a range site.

### ***Use and Management of the Soils***

In this section some principles for the management of cropland are described, the soils are grouped into capability units according to the capability classification used by the Soil Conservation Service, yields of principal crops are estimated, and the management of soils when used for range, woodland and windbreaks, wildlife, recreational development, and engineering is discussed.

### ***Crops and Pasture***

Under the grain-fallow system of farming used in the survey area, the major management needs are controlling erosion, conserving moisture, preserving soil structure and tilth, maintaining the organic-matter content and the supply of plant nutrients, using proper silage, managing crop residues, using a suitable cropping system, controlling annual and perennial weeds, and using commercial fertilizer and amendments as needed. Soils that have slopes of more than 7 percent require intensive conservation practices to keep annual soil losses less than about 4 or 5 tone per acre. Each field needs to be evaluated for the best combination of alternative treatments to control erosion and maintain crop yields. Irrigated cropland needs proper irrigation management and soil protection against erosion. Onsite technical assistance is available from the Soil Conservation Service.

### ***Management needs***

Different soils require different treatments, and the same soil may require different treatment from year to year or from crop to crop. The basic management needs for grain summer fallow are described in the following paragraphs.

***Conserving moisture.***-Many cultivated soils in Wasco County, Oregon. Northern Part, are limited in productivity because of inadequate moisture. It is important, therefore, to conserve and use efficiently all available moisture. During the fallow season, evaporation losses can be kept to a minimum by maintaining a cloddy surface mulch and tilling only enough to control weeds.

***Controlling erosion.***-This is a most urgent need. Many of the soils are shallow or only moderately deep. Further erosion reduces the ability of the soils to store moisture and supply nutrients, and continued erosion so reduces their productivity that in time they are suitable only for low-producing range or pasture. Erosion



**Figure 7:** The north-facing soil is Wrentham-Rock outcrop complex, 35 to 70 percent slopes (mostly on right side of hill in center of background), the land on the right is Rock outcrop-Rubble land complex, and the south-facing soil is Licksillet extremely stony loam, 40 to 70 percent slopes (mostly on left side of hill in center of background). The

reduces yields and results in sedimentation downstream. Minimum or cloddy tillage, maintenance of organic-matter content, preservation of soil structure, and installation of such practices as diversions and grassed waterways help to control erosion.

*Preserving soil structure.*-Proper tillage and maintenance of the organic-matter content are the two principal factors in preserving soil structure. Excessive tillage while the soil is fallow tends to destroy organic matter and soil aggregates. This reduces the free movement of water, air, and roots through the soil.

*Maintaining organic-matter content:* Organic matter is the partly decomposed remains of plants and soil organisms. The organic-matter content of the surface layer of the soils of the survey area ranges from a high of 3 or 4 percent under native plant cover to a low of 1 or 2 percent after a long period of cultivation.

Organic matter binds soil particles together in aggregate and thus helps to preserve soil structure. It is the source of most of the available nitrogen in the soil and also supplies other plant nutrients, such as phos-

phorus and sulfur. The decomposition of organic matter releases nutrients in a form available to plants.

The organic matter in the soil is constantly decomposing. Therefore, the supply must be renewed regularly and often.

An adequate supply can be maintained by:

1. Returning all crop residues to the soil. Crop residues are the main source of organic matter. The organic matter is lost if residues are burned or otherwise destroyed or removed.
2. Using commercial fertilizers to balance plant and soil organism requirements in relation to available moisture.
3. Growing grass and legumes in a rotation.

*Supplying plant nutrients.*-Nitrogen fertilizer is used on all but the driest and shallowest cultivated soils in the survey area. Sulfur is used on about one-third of the dryfarmed areas and on all irrigated crops, particularly alfalfa. Phosphate fertilizers are used on most irrigated soils but only in a minor amount on dry-



farmed soils. Boron is commonly needed for good alfalfa production. Most other plant nutrients are adequate. Soil tests and Oregon State University fertilizer guides are available and useful for specific crops.

**Weed control.**-Mechanical and chemical control of annual and perennial weeds are widely used. A persistent weed control program is needed. Control of cheatgrass, grain, rye, and morning glory is especially important.

Providing proper irrigation water management. Better water management by sprinkler irrigation can be accomplished by rough leveling to eliminate pockets, sharp breaks, and other irregularities. Properly designed and operated sprinkler systems are essential to good water management. Such soil properties as intake rate, available water capacity, and permeability are important for properly designed systems. Leveling is needed on all soils before surface irrigation. If soils are properly leveled, water moves quickly and evenly over a field and wets the root zone to a uniform depth. Properly designed ditches and structures are essential to uniform water distribution. After the first leveling, floating is needed periodically to eliminate high spots and fill low spots, so that crops can be irrigated uniformly without wasting water. Ordinarily, several years of floating are required before a field is properly leveled and distribution of water is fast and efficient.

### **Cropping systems**

A cropping system can be a regular rotation of different crops, in which the crops follow each other in a definite order, or it can consist of only one crop grown year after year. The number and variety of cropping systems in the survey area are limited by the low precipitation and the shortage of irrigation water. The principal cropping system is grain and fallow. Another dryfarmed cropping system is grass or grass and alfalfa rotated with grain or grain and fallow.

**Fallow cropping system.**-Most of the cropland in the survey area is used for summer-fallow grain farming. In summer-fallow dryfarming, the soil is kept free of vegetation during one crop season in order to store additional moisture for the growth and yield of a crop the following season. This practice also helps to control weeds and conserves plant nutrients.

The most common method of fallowing is to leave crop stubble standing during the winter. The soil is tilled in February, March, or April, before the weeds have removed much of the moisture and before the surface layer becomes too dry. Tillage is also performed during the summer to keep the soil free of weeds and to prepare a seedbed for fall planting.

Only about a third of the precipitation that occurs during a 2-year period is utilized by crops. Water losses through evaporation from fallow soils are high, and in certain years runoff is rapid because of slow infiltration on finely tilled seedbeds or frozen ground.

**Grass-Legume rotation.**-A small acreage in the survey area is utilized for a rotation of grass and legume, with grain and fallow. This rotation is used to improve fertility, increase the rate of water infiltration, and reduce soil erosion.

Grasses and legumes can be used for rotation hay or pasture. Grasses and legumes seeded on summer-fallow or in spring of the stubble year generally can be used for forage the second year.

Plowing up the grass-legume sod and rotating to other fields needs to be done at about the time of maximum root growth. Experiments at the Sherman Branch Experiment Station show maximum root growth of suited species is reached in about 4 years. Soils used for grass-legume rotations are plowed in 4 or 5 years and then reseeded to grain.

A successful grass-legume seeding depends on a firm seedbed, a suitable seed mixture, and proper seeding. The success of the rotation depends on fitting the rotation in with other rotations on the rest of the farm. Recommendations for grass-legume varieties and seeding rates are available from the County Extension Agent and the Soil Conservation Service.

**Irrigated cropping systems.**-Chenoweth, Cherryhill, Van Horn, Walls Walla, and Wind River soils adjacent to the Columbia River are suited to apples, peaches, apricots, and sweet cherries. Irrigation water is provided by wells and from the Columbia River.

Cover crops are grown in orchards to control erosion. Suitable cover crops are barley or wheat, alone or grown with a legume, such as hairy vetch, common vetch, or peas. The cover crop is disked or mowed in the spring to conserve moisture, and enough residue is left on the surface to control erosion.

The acreage in irrigated hay and pasture has increased during the past 10 years. Irrigated forage is grown along the bottom lands adjacent to streams or in areas where wells or irrigation dams have been constructed.

Alfalfa is the principal legume grown for hay. It is grown alone or in combination with suitable grasses. Yields are good throughout a wide range of conditions. Seed mixtures for hay or pasture are provided by the Extension Service and the Soil Conservation Service.

Good stands, adequate irrigation and fertilization, and controlled grazing are essential for high yields of pasture crops and hay. Sulfur is needed annually on alfalfa. Soil tests can be made to determine the need for phosphorus and boron. Irrigated grass pastures need nitrogen fertilizer each year. Irrigated grass-legume pastures may need sulfur and phosphorus.

Management of grazing is essential for high yields. Good management increases yields, reduces selective grazing, cuts forage wastes, and controls the quality of the forage. Pastures can be divided, and grazing rotated every 2 to 4 days in several pastures to allow 3 to 4 weeks of regrowth.

### **Capability grouping**

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The soils are grouped according to their limitations when used for field crops, the risk of damage when they are so used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils; does not

take into consideration possible but unlikely major reclamation projects; and does not apply to some crops that require special management.

Those familiar with the capability classification can infer from it much about the behavior of soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for range, for forest trees, or for engineering.

In the capability system, the kinds of soils are grouped at three levels: the capability class, the subclass, and the unit. These are discussed in the following paragraphs.

**CAPABILITY CLASSES**, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife habitat. (None in survey area.)

Class VI soils have severe limitations that make them generally unsuitable for cultivation and limit their use largely to pasture, range, woodland, or wildlife habitat.

Class VII soils have very severe limitations that make them unsuitable for cultivation and that restrict their use largely to pasture, range, woodland, or wildlife habitat.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or esthetic purposes.

**CAPABILITY SUBCLASSES** are soil groups within one class; they are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIw. The letter *e* indicates that the main limitation is risk of erosion; *w* that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, that the chief limitation is climate that is too cold or too dry.

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by *w*, *s*, and *c*, because the soils in class V are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife habitat, or recreation.

**CAPABILITY UNITS** are soil groups within the subclasses. The soils in one capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, IIw-1 or IIIe-2. Thus, in one symbol, the Roman numeral designates the capability class, or degree of limitation; the small letter indicates the subclass, or kind of limitation, as defined in the foregoing paragraph; and the Arabic numeral specifically identifies the capability unit within each subclass. In this survey, only the cultivated soils are grouped at three levels. The noncultivated soils are grouped at two levels, in capability subclasses.

In the following pages the capability unit in the survey area are described. The names of soil series represented in a capability unit are given in the description of the capability unit, but this does not mean that all the soils of a given series appear in the unit. To find the capability unit or subclass in which a soil has been placed, refer to the "Guide to Mapping Units" at the back of this survey.

#### **CAPABILITY UNIT I-1**

This capability unit consists of soils in the Endersby and Hermiston series. These soils are somewhat excessively drained or well drained loams and silt loams. Slopes are 0 to 3 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 130 to 180 days at 32° F and 180 to 200 days at 28°.

Permeability is moderate or moderately rapid, and the available water capacity is 6.6 to 12.6 inches. Water-supplying capacity is 8 to 13 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated crops and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 6 to 8 years, and grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June but in several areas dams impound water for use throughout the summer. Irrigation methods include sprinkler, border, contour furrow, and wild flooding.

#### **CAPABILITY UNIT IIe-1**

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained fine sandy loams, silt

loams, and loams. Slopes are 0 to 8 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F and 170 to 250 days at 28°.

Permeability is moderately rapid to moderately slow, and the available water capacity is 6.5 to 11 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow, and the hazard of erosion is slight.

These soils are used for fruit orchards, hay, pasture, and wildlife habitat.

Cover crops are used in orchards as a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but some perennials are used where irrigation water is adequate. Spring mowing or disking reduces the cover crop and conserves soil moisture. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter or early in spring in one application, 6 to 8 pounds of zinc in a spray, and 2 to 3 pounds of boron in a spray.

For trees less than 10 years old, 1/4 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries commonly are planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 56 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is mostly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT II-2

This capability unit consists of soils in the Maupin, Maupin variant, Watama, and Wapinitia series. These soils are well drained silt loams and loams. Slopes are 0 to 5 percent. The annual precipitation is 10 to 16 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 3 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated hay, pasture, grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 5 to 8 years, and then grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until

late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection.

#### CAPABILITY UNIT II-3

This capability unit consists of soils in the Cantala, Dufur, Endersby, Hermiston, Maupin, Maupin variant, Walla Walla, Watama, and Wapinitia series. These soils are somewhat excessively drained and well drained silt loams and loams. Slopes are 0 to 7 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 150 to 210 days at 28°.

Permeability is moderate, and the available water capacity is 7 to 15 inches. Water-supplying capacity is 5 to 13 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow, and the hazard of erosion is slight.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest is helpful in erosion control. Cloddy fallow and minimum tillage increases water intake and reduces soil erosion.

#### CAPABILITY UNIT II-1

The only soil in this capability unit is Pedigo silt loam. It is a somewhat poorly drained soil. Slopes are 0 to 3 percent. The annual precipitation is 10 to 13 inches. The frost-free period is 130 to 180 days at 32° F and 180 to 200 days at 28°.

Permeability is moderate, and the available water capacity is 10 to 11 inches. Water-supplying capacity is 9 to 13 inches. Typically, roots penetrate to a depth of more than 60 inches. Runoff is, slow, and the hazard of erosion is slight.

This soil is used for irrigated hay, pasture, dryfarmed grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown for 5 to 8 years and

then grain is grown the next year. Alfalfa generally needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection.

A grain-fallow system of dryfarming is commonly used. In the fall year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed in some soils.

Several winter wheat varieties are suitable. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

#### CAPABILITY UNIT IIIe-1

This capability unit consists of soils in the Cantala, Dufur, Walla Walla, and Wamic series. These soils are well drained silt loams and loams. Slopes are 1 to 12 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 160 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 8 to 12 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is slow or medium, and the hazard of erosion is slight or moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fall year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest, cloddy fallow and minimum tillage, and contour farming are needed to keep soil erosion losses to less than about 4 to 6 tons per acre per year.

#### CAPABILITY UNIT IIIe-2

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained silt loams, fine sandy loams, and loams. Slopes are 7 to 20 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F and 170 to 260 days at 28°.

Permeability is moderately rapid to moderately slow, and the available water capacity is 7 to 11 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of 40 to 60 inches or more. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for fruit orchards, hay, pasture, and wildlife habitat.

Cover crops are used in orchards for erosion control and as a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but some perennials are used where irrigation water is adequate. Spring mowing or disking reduces the cover crop and conserves soil moisture. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter and early in spring in one application, 6 to 8 pounds of zinc in a spray, and 2 to 3 pounds of boron in a spray.

For trees less than 10 years old, 1/4 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries are commonly planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 66 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is mostly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT IIIe-3

The only soil in this capability unit is Sinamox silt loam, 1 to 7 percent slopes. It is a well drained soil. The annual precipitation is 10 to 12 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderately slow, and the available water capacity is 5 to 11 inches. Water-supplying capacity is 6 to 9 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

This soil is used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce

water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Straw scattering at harvest, clod fallow and minimum tillage, and contour farming are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-4**

This capability unit consists of soils in the Cantala, Dufur, Walla Walla, Wamic, Watama, Wapinitia, and Wato series. These soils are well drained silt loams, loams, and very fine sandy loams. The frost-free period is 100 to 170 days at 32° F.

Permeability is moderately rapid to moderately slow, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for dryfarmed small grain, hay, pasture, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using dikes, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 1,700 pounds of crop residue per acre on the soil surface during winter are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-5**

This capability unit consists of soils in the Anderly, Condom Duart, Maupin, Sinamox, Wamic, and Wapinitia variant series. These soils are well drained loams and silt loams. Slopes are 1 to 20 percent. The annual precipitation is 10 to 20 inches. The frost-free period is 100 to 170 days at 32° F.

Permeability is slow to moderate, and the available water capacity is 3 to 11 inches. Water-supplying capacity is 6 to 13 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. At higher elevations early fall seeding is needed to ensure a stand. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, clod fallow and minimum tillage, diversion terraces, contour farming, and as much as 1,000 pounds of crop residue per acre on the soil surface during winter are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### **CAPABILITY UNIT IIIe-6**

This capability unit consists of soils in the Wato series. These soils are well drained very fine sandy loam. Slopes are 3 to 12 percent. The annual precipitation is 12 to 14 inches. The frost-free period is 150 to 170 days at 32° F and 170 to 210 days at 28° F.

Permeability is moderately rapid, and the available water capacity is 6 to 10 inches. Water-supplying capacity is 7 to 10 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow or medium. The hazard of water erosion is slight or moderate, and the hazard of soil blowing is moderate. Some areas are moderately eroded.

These soils are used for dryfarmed small grain, hay, pasture, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces, contour farming, and about 1,000 pounds of crop residue per acre on an established crop are needed on the soil surface at all times to keep water erosion and soil blowing losses to less than about 4 or 5 tons per acre per year.



#### CAPABILITY UNIT IIIe-7

This capability unit consists of soils in the Anderly and Sinamox series. These soils are well drained silt loams. Slopes are 12 to 20 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is from 3 to 11 inches. Water-supplying capacity is 6 to 9 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is medium, and the hazard of erosion is moderate.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces, contour farming, as much as 2,100 pounds of crop residue per acre on the soil surface over winter, or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IIIw-1

This capability unit consists of soils in the Quincy and Tygh series. These soils are loamy fine sands and fine sandy loams. They are subject to seasonal flooding or have a water table at a depth of 40 to 60 inches. Slopes are 0 to 3 percent. The annual precipitation is 10 to 20 inches. The frost-free period is 120 to 170 days at 32° F and 150 to 200 days at 28°.

Permeability is rapid or moderately rapid, and the available water capacity is 3 to 8 inches. Water-supplying capacity is variable and depends upon depth to the water table. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is slow, and the hazard of erosion is slight.

These soils are used for irrigated grain, hay, pasture, dryfarmed grain, and wildlife habitat.

Irrigated alfalfa or alfalfa and grass is grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grazing in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown for 5 to 8 years, and then grain is grown the next year. Alfalfa needs annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be at the full bud stage, the second cutting at the 1/10 to

1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Some fields adjoining streams need streambank protection, and some fields need protection against flooding. A water table confines roots to a depth of less than 40 to 60 inches unless additional drainage is provided.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

#### CAPABILITY UNIT IVe-1

This capability unit consists of soils in the Chenoweth, Cherryhill, Van Horn, and Wind River series. These soils are well drained loams, silt loams, and fine sandy loams. Slopes are 12 to 35 percent. The annual precipitation is 14 to 30 inches. The frost-free period is 140 to 210 days at 32° F.

Permeability is moderately slow to moderately rapid, and the available water capacity is 7 to 9 inches. Water-supplying capacity is 8 to 15 inches. Typically, roots penetrate to a depth of more than 60 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or severe.

These soils are used for fruit orchards, pasture, range, and wildlife habitat.

Cover crops are essential in orchards for erosion control, and they also provide a source of organic matter. An annual grain or mixed grain and legume cover crop is common, but perennials are better suited for erosion control. If adequate irrigation water is available, mowing alone is sufficient to reduce the cover crop. Conservation of soil moisture is necessary in nonirrigated orchards. The cover crop is fertilized as follows.

For mature bearing trees, 100 pounds per acre of nitrogen is applied late in winter or early in spring in one application, 6 to 8 pounds of zinc in a spray, 2 to 3 pounds of boron in a spray.

For young trees less than 10 years old, 1/2 pound of nitrogen per tree is applied in a split application late in winter or early in spring and a second application in June.

Irrigated cherries are commonly planted in a diamond pattern. The trees are spaced 30 feet by 30 feet, and 56 trees can be planted per acre. Only 48 trees per acre can be planted in a square pattern at the same spacing.

Systematic pruning is practiced. Harvesting is most-

ly done by hand. Rigorous and timely spraying for cherry fruit fly and other insects and diseases is necessary.

#### CAPABILITY UNIT IVe-2

This capability unit consists of soils in the Dufur, Walla Walla, Watama, and Wapinitia series. These soils are well drained silt loams. Slopes are 20 to 40 percent. The annual precipitation is 12 to 16 inches. The frost-free period is 120 to 170 days at 32° F and 170 to 200 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is 4 to 12 inches. Water-supplying capacity is 6 to 14 inches. Typically, roots penetrate to a depth of 20 to 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the ring by lowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 2,500 pounds of crop residue per acre on the soil surface during winter or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IVe-3

This capability unit consists of soils in the Cantata, Walla Walla, and Wato series. These soils are well drained silt loams and very fine sandy loams. Slopes are 20 to 35 percent. The annual precipitation is 10 to 14 inches. The frost-free period is 100 to 170 days at 32° F and 150 to 210 days at 28°.

Permeability is moderate or moderately rapid, and the available water capacity is 6 to 12 inches. Water-supplying capacity is 8 to 12 inches. Typically, roots penetrate to a depth of 40 to more than 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for dryfarmed small grain, hay, pasture, range, and wildlife habitat.

A grain-fallow system of dryfarming is commonly used. In the fallow year a seedbed is prepared in the spring by plowing or by using disks, sweeps, or chisels. Weeds are controlled and soil moisture is retained through the use of rod weeder. Nitrogen fertilizer is applied in the fallow year. Sulfur is needed on some soils.

Several winter wheat varieties are suitable. Early fall seeding provides extra cover and helps reduce water erosion during the winter. Annual broadleaf weeds are generally controlled in the fall or spring depending on weather, crops, and weed size. Perennial weeds are controlled by use of chemicals and mechanical practices. Grain is harvested in bulk, and the straw is scattered or dumped.

Combinations of straw scattering at harvest, cloddy fallow and minimum tillage, diversion terraces where slopes are as much as 18 percent, contour farming, and as much as 2,800 pounds of crop residue per acre on the soil surface over winter or conversion to permanent pasture or hay are needed to keep soil erosion losses to less than about 4 or 5 tons per acre per year.

#### CAPABILITY UNIT IVw-1

This capability unit consists of Cumulic Haplaquolls. These soils are nearly level, somewhat poorly drained, or poorly drained silt loams, loams, sandy loams, clay loams, and clays. The annual precipitation is 15 to 30 inches. The frost-free period is 100 to 180 days at 32° F and 180 to 210 days at 28°.

Permeability is moderate to slow, and the available water capacity and water-supplying capacity are variable depending upon texture and depth to water table. Typically, roots penetrate to a depth of 20 to more than 60 inches. These soils are occasionally flooded and are subject to channeling and washing. Runoff is slow, and the hazard of erosion is slight. These soils are subject to overflow and in places are ponded during months of high precipitation.

These soils are used for hay, pasture, range, and wildlife habitat.

Alfalfa and grass are grown for hay, which is used for sale or winter feed. Some haylands are used for aftermath grating in the fall. However, grazing is generally avoided to maintain the vigor of alfalfa. Hay is generally grown 5 to 8 years, and grain is grown the next year. Alfalfa generally needs an annual application of sulfur or gypsum and, on some fields, phosphorus and boron. Soil tests can determine amounts needed. The first cutting of alfalfa should be done at the full bud stage, the second cutting at the 1/10 to 1/2 bloom stage, and the third cutting 4 to 6 weeks before the last killing frost.

Irrigation water is available from streamflow until late in June, but in several areas dams impound water for use throughout the summer. Good irrigation water management is important. Irrigation methods include sprinkler, border, contour furrow, and wild flooding. Fields adjoining streams need streambank protection, and most fields need protection against flooding. A water table confines roots to a depth of less than 20 to 60 inches unless additional drainage is provided.

#### CAPABILITY SUBCLASS VIe

This capability subclass consists of soils in the Anderly, Bakeoven, Bins, Cherryhill, London, Duart, Frailey, Ketchly, Sherar, Sinamox, Skyline, Walla Walla, Wamic, and Warden series. These soils are well drained, and they formed in loess and volcanic ash and

in colluvium or residuum weathered from sandstone, conglomerate, and basalt. Slopes are 2 to 55 percent. The annual precipitation is 9 to 30 inches. The frost-free period is 50 to 180 days at 32° F and 90 to 200 days at 28°.

Permeability is slow to moderate, and the available water capacity is about 1 inch to 12 inches. Water-supplying capacity is 3 to 20 inches. Typically, roots penetrate to a depth of about 4 to more than 60 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, pasture, timber, wildlife habitat, and water supply. For use and management suggestions see the sections, "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VI**

This capability subclass consists of soils in the Bald and Bindle series. These soils are well drained, and they formed in volcanic ash and colluvium derived from basalt. Slopes are 1 to 45 percent. The annual precipitation is 20 to 30 inches. The frost-free period is 50 to 140 days at 32° F and 90 to 180 days at 28°.

Permeability is moderate, and the available water capacity is 2 to 7 inches. Water-supplying capacity is 12 to 20 inches. Typically, roots penetrate to a depth of 20 to 40 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VII**

This capability subclass consists of soils in the Bins, Frailey, Ketchly, Nansene, Sherar, Sinamox, and Wamic series. These soils are well drained, and they formed in loess and volcanic ash and in colluvium or residuum weathered from sandstone, conglomerate, and basalt. Slopes are 30 to 70 percent. The annual precipitation is 10 to 30 inches. The frost-free period is 50 to 180 days at 32° F and 90 to 220 days at 28°.

Permeability is slow to moderate, and the available water capacity is 2 to 12 inches. Water-supplying capacity is 2 to 20 inches. Typically, roots penetrate to a depth of 20 to more than 60 inches. Runoff is rapid, and the hazard of erosion is severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIII**

This capability subclass consists of soils in the Bakeoven, Bald, Bald variant, Bindle, Bodell, Condom Hessler, Licksillet, Maupin, Skyline, Watama, and Wrentham series and Rock outcrop. The soils are well drained, and they formed on uplands in loess and volcanic ash and in colluvium and residuum weathered from sandstone, and conglomerate, and basalt. Slopes range from 2 to 70 percent. The annual precipitation

ranges from 10 to 30 inches. The frost-free period is 50 to 170 days at 32° F and 90 to 210 days at 28°.

Permeability is moderate or moderately slow, and the available water capacity is about 1 inch to 11 inches. Water-supplying capacity is about 3 to 20 inches. Typically, roots penetrate to a depth of about 4 to 40 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

These soils are used for range, timber, wildlife habitat, and water supply. For use and management suggestions see the sections "Range," "Wildlife," and "Woodland and Windbreaks."

#### **CAPABILITY SUBCLASS VIIIe**

This capability subclass consists only of Dune land. This land type consists of areas where westerly winds have drifted sand into small dunes. It is barren, and has little or no value for farming or grazing. Dune land is used for wildlife habitat.

#### **CAPABILITY SUBCLASS VIIIb**

This capability subclass consists of Rock outcrop. Rubble land complex and Rock outcrop-Xeropsamments complex. Rock outcrop-Rubble land complex consists of severely eroded areas and basalt cliffs that have stony or bouldery foot slopes. Slopes are mainly 30 to 100 percent. Rock outcrop-Xeropsamments complex is old scoured terraces along the Columbia River and consists of outcroppings of rock, sand, and gravel. Slopes are 0 to 30 percent. Most of the area is not accessible to livestock.

These complexes are used for wildlife habitat, for water supply, and as a source of material for roads and other construction.

#### **CAPABILITY SUBCLASS VIIIc**

This capability subclass consists of Riverwash. Riverwash is subject to overflow and shifting during normal high water and has little or no value for farming.

Riverwash is used for wildlife habitat and as a source of material for roads and other construction.

#### **Estimated yields**

Table 2 shows estimated average yields per acre of selected crops for most soils in the survey area. Estimates are used on the most common combination of management practices used by most farmers and ranchers in Wasco County, Oregon, Northern Part. The estimated yields for dryfarmed wheat is for the year of harvest or every 2 years. It is based on data from Agricultural Stabilization and Conservation Service records for the determination of the 10-year cereal grain base. Most dryfarmed mapping units in the survey area are included in these records.

Estimated yields of cherries and apples are based on the records of farmers. The yield data for grass-legume hay are based on leaving a 50 percent stubble. These data are estimated from actual use records, clipping information, and observations.

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

## Range

About 75 percent of the survey area is in two types of range, based on the sensitivity of the vegetation to climate. The western third of the survey area is dominated by Oregon white oak and coniferous trees. Oaks follow the flow of warm, moist air from the Columbia Gorge and south from The Dalles along the base of the Cascade Mountains for about 35 miles. The eastern part of the survey area is beyond this temperate influence, and bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass make up nearly 100 percent of the original plant community. South of Tygh Ridge, a more complex type of vegetation occurs. It consists of native bunchgrass, western juniper, big sagebrush, and bitterbrush. This area lies adjacent to the White River Game Management Area administered by the Oregon Wildlife Commission, and deer and elk use the area for winter range.

A significant ecological change in recent years is the increase of Oregon white oak. Because Oregon white oak sprouts following fire, it has replaced pon-

derosa pine in the more favorable soil areas. As a result, the original pine-oak savannahs have been replaced by young stands of "scrub" oak that now dominate much of the landscape from The Dalles south along the western portion of the survey area.

### *Range sites and condition classes*

Soils that have the capacity to produce the same kinds, amounts, and proportions of range plants are grouped into range sites. A range site is the product of all environmental factors responsible for its development.

A plant community existing within a range site that has not undergone abnormal disturbance is the potential, or climax, plant community, for that site. Climax plant communities are not precise or fixed in their composition but vary, within reasonable limits, from year to year and from place to place.

Abnormal disturbance, such as overuse by livestock, excessive burning, erosion, or plowing, results in changes in the climax plant community or even its complete destruction if disturbance is drastic enough. When the range site has not deteriorated significantly under such disturbance, secondary plant succession

S. F. GREENFIELD, JR., range conservationist, Soil Conservation Service, helped prepare this section.

progresses in the direction of the natural potential or climax plant community for the site.

Four range condition classes are used to indicate the degree of departure from the potential, or climax, vegetation brought about by grazing or other uses. The classes show the present condition of the native vegetation on a range site in relation to the native vegetation that could grow there.

A range is in excellent condition if 76 to 100 percent of the vegetation is of the same kind as that in the climax stand. It is in good condition if the percentage is 51 to 75 ; in fair condition if the percentage is 26 to 50 ; and in poor condition if the percentage is less than 25.

When changes occur in the climax plant community due to use by livestock or disturbance, some plant species increase, others decrease. The species that increase or decrease depends upon the grazing animal, season of use, and the degree of utilization. By comparing the composition of the present plant community to the potential plant community, it is possible to see how individual species have increased while others decreased. Plants not present in the climax community which show up in the present plant community are invaders for the site.

The composition of climax and present plant communities together with other range site information provides the basis for selecting range management systems.

Management programs on range generally try to increase desirable plants and restore range to as near climax condition as possible. Some programs are designed to create or maintain plant communities somewhat removed from the climax to fit specific needs in the grazing program, to provide for wildlife habitat, or for other benefits. Any management objective should be compatible with conservation objectives.

Grazing of understory plants on forest land is compatible with timber management if it is controlled in a manner that maintains or enhances both timber and forage resources. However, there are several factors that affect forage production and grazing use. Tree spacing and canopy cover strongly influence both the composition and productivity of the understory. As the shade cast by tree canopies increases, productivity decreases and species that are not shade tolerant decrease in number or die. When forest cover is cut or burned, maximum forage production can occur for a number of years under proper treatment and management.

Environmental variations on forest land also influence plant composition and forage production. In this survey area, south-facing slopes and other less favorable tree-producing sites have good stands of forage bunchgrasses because of the more nearly open tree canopy. In the upper mountain areas, especially on north-facing slopes, the value for grazing is low because of the normally dense canopy cover and the heavy accumulation of fallen needles under the trees. Such a condition leaves only a sparse understory of shade-tolerant grasses and forbs.

Table 3 shows, for each soil, the range site; the total annual production in favorable, normal, and unfavorable years; and the names of major plant species and the percentage of each in the composition of the potential plant community.

A range site supports a distinctive potential plant community, or combination of plants, that can grow on a site that has not undergone major disturbance. Soils that produce the same kind, amount, and proportion of range plants are grouped into range sites. Range sites can be interpreted directly from the soil map where the relationships between soils and vegetation have been correlated. Properties that determine the capacity of the soil to supply moisture and plant nutrients have the greatest influence on range plants and their productivity. Soil reaction, salt content, and a seasonal high water table are also important.

Potential production refers to the amount of vegetation that can be expected from a well-managed range that is supporting the potential plant community. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. A favorable year is one in which the amount and distribution of precipitation and the temperature result in growing conditions substantially better than average; a normal year is one in which these conditions are about average for the area; an unfavorable year is one in which growing conditions are well below average, generally because of low available soil moisture.

Dry weight refers to the total air-dry vegetation produced per acre each year by the potential plant community. All vegetation, both that which is highly palatable and that which is unpalatable to livestock, is included. Some vegetation also may be grazed extensively by wildlife and some of it may not. Plant species that have special value for livestock forage are mentioned in the description of each soil mapping unit.

Common names are listed for the grasses, forbs, and shrubs that make up most of the potential plant community on each soil. Under the heading "Composition" in table 3, the proportion of each species is presented as the percentage, in dry-weight, of the total annual production of herbaceous and woody plants. The amount that can be used as forage depends on the kinds of grazing animals and on the season when the forage is grazed. All of the vegetation produced is normally not used.

#### ROLLING HILLS RANGE SITE

This range site is on Anderly, Bakeoven, Cantala, Condom Duarte, Dufur, Walla Walla, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt looms and very fine sandy looms that formed mostly in loess and volcanic ash on broad ridgetops and rolling uplands. They are nearly level to steep.

Elevation ranges from 300 to 3,600 feet. The average annual precipitation is 10 to 14 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Permeability is moderate or moderately rapid, and the water-supplying capacity is 6 to 12



inches. Roots penetrate to a depth of 20 to 60 inches or more. Major forage grasses begin to grow about March 20.

Where this site is in poor condition, big sagebrush and an understory of Sandberg bluegrass commonly increase in the stand. Bluebunch wheatgrass and Idaho fescue have been nearly eliminated. If deterioration is severe, cheatgrass, squirreltail, and annual weeds invade and dominate.

Special improvement measures are suited to most areas of this site. If the range is in fair and poor condition, spraying to control brush or cheatgrass and seeding grasses are practical. Where a reasonably good stand of perennial grasses is under the brush, spraying alone is practical.

#### SCABLAND RANGE SITE

This range site is on Bakeoven soils. It is mainly in the eastern and southern parts of the survey area. These soils are well drained. They have a surface layer of very cobbly loam or very stony loam, and a subsoil of very cobbly loam or very cobbly clay loam. They formed in loess and in residuum weathered from basalt on uplands. They are nearly level to moderately steep.

Elevation ranges from 1,600 to 3,600 feet. The average annual precipitation is 10 to 13 inches. Runoff is slow to rapid, and the hazard of erosion is slight or moderate. Permeability is moderately slow, and the water-supplying capacity is less than 2.5 inches. Roots penetrate to a depth of 4 to 12 inches. The major forage grass, Sandberg bluegrass, begins to grow about April 1. Some areas commonly have a distinctive pattern of circular mounds, or biscuits, surrounded by scabland (fig. 8).

Where this site is in poor condition, the already sparse stand of bunchgrasses has been nearly eliminated. Sandberg bluegrass is depleted, and stiff sage-

brush and forbs have increased. If deterioration is severe, only bare ground, stones, and hedged sagebrush occupy the site.

Special improvement measures generally are not suited to this site. Stiff sagebrush is a natural part of the plant community and provides valuable forage late in fall, in winter, and early in spring. Brush spraying should be avoided to protect the stiff sagebrush.

In areas of this range site in the southern part of the survey area south of Tygh Valley, western juniper has a canopy cover of 5 to 10 percent. These areas are in a 12- to 16-inch precipitation zone. The vegetation consists of Sandberg bluegrass, 45 percent; bluebunch wheatgrass, 2 percent; Thurber needlegrass, 2 percent; Oregon bluegrass, 5 percent; squirreltail, 2 percent; lomatium, 2 percent; snow eriogonum, 5 percent; western juniper, 35 percent; and other shrubs, 2 percent.

#### DROUGHTY SOUTH EXPOSURE RANGE SITE

This range site is on Anderly, Duart, Licksillet, and Walla Walla soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very stony loams that formed in loess, volcanic ash, and mixed colluvium. They are steep and very steep and have south-facing slopes. They are on uplands. Elevation ranges from 200 to 2,800 feet. The average annual precipitation is 10 to 14 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is moderate, and the water-supplying capacity is 2 to 12 inches. Roots penetrate to a depth of 12 to 60 inches or more. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the perennial bunchgrasses have been nearly eliminated. Squirreltail and a small amount of bluebunch wheatgrass are in some protected places, such as under the brush or in rocky areas. If deterioration is severe, big sagebrush,



Figure 8: Scabland range site is in foreground (biscuit part is Condon soil). The cultivated field in the center is Condon silt loam, 2 to 20 percent slopes. Scabland range site is in near background, and Rolling Hills range site is in far background.

snakeweed, and rabbitbrush become dominant and annual grasses and weeds invade the site.

Special improvement measures generally are suited to this site. If the range is in poor condition, spraying to control brush and seeding grasses are practical. However, drill seeding on the very stony Lickskillet soil is hard on equipment and is not considered practical. Where brush control is a concern and a reasonably good stand of grass is under the brush, spraying alone can be the most practical way of returning this site to optimum production.

#### **DROUGHTY STEEP SOUTH RANGE SITE**

This range site is on Lickskillet and Sherar soils. It is mainly on the breaks of the Deschutes River along the eastern boundary of the survey area. These soils are well drained extremely stony loams and very cobbly loams that formed in loess and colluvium. They are very steep and have south-facing slopes. They are on uplands (fig. 9). Elevation ranges from 200 to 300 feet. The average annual precipitation is 10 to 13 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is slow to moderate, and the water-supplying capacity is 2 to 5 inches. Roots penetrate to a depth of 12 to 40 inches. Major forage grasses begin to grow about February 20.

Where this site is in poor condition, broom snakeweed, rabbitbrush, and big sagebrush have nearly re-

placed the stand of forage bunchgrasses. Cheatgrass and low-value forbs are dominant. If deterioration is severe, much of the ground is bare and rocky.

Special improvement measures generally are not suited to this site because the soils are steep, extremely stony or very cobbly, and very droughty.

#### **SOUTH EXPOSURE RANGE SITE**

This range site is only on Bodell cobbly loam, 5 to 45 percent slopes. It is mainly in the northwestern part of the survey area. This soil is well drained. It formed in loess, volcanic ash, and basalt colluvium. It is nearly level to steep and has south-facing slopes. It is on uplands. Elevation commonly ranges from 500 to 2,500 feet. The average annual precipitation is 20 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderate, and the water-supplying capacity is 4 to 7 inches. Roots penetrate to a depth of 12 to 20 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, cheatgrass and a variety of forbs have nearly replaced the stand of perennial bunchgrasses. If deterioration is severe, annual forbs and low-value grasses dominate, and the site takes on a weedy appearance.

Special improvement measures generally are not suited to this site because the soil is stony and shallow.



Figure 9: Lickskillet extremely stony loam, 40 to 70 percent slopes, in Droughty Steep South range site.

#### STEEP SOUTH RANGE SITE

This range site is only on Bodell very cobbly loam, 45 to 75 percent slopes. It is mainly in the northwestern part of the survey area. This soil is well drained, and it formed in loess, volcanic ash and in basalt colluvium. It is very steep and has south-facing slopes. It is on uplands. Elevation commonly ranges from 500 to 2,500 feet. The average annual precipitation is 20 to 30 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate and the water-supplying capacity is 4 to 7 inches. Roots penetrate to a depth of 12 to 20 inches. Major forage grasses begin to grow about March 1.

Where this soil is in poor condition, cheatgrass and a variety of forbs have nearly replaced the stand of perennial bunchgrasses. If deterioration is severe, annual forbs and low-value grasses dominate and the site takes on a weedy appearance.

Special improvement measures are not suited to this site because it is steep, stony, and shallow.

#### DROUGHTY NORTH EXPOSURE RANGE SITE

This range site is on Cantala, Dufur, Sinamox, Walla Walla, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very fine sandy loams that formed in loess, volcanic ash, and alluvium. They have north-facing slopes and are on uplands.

Elevation ranges from 800 to 3,000 feet. The average annual precipitation is 10 to 14 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or high. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 12 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer has been destroyed and bare ground is exposed. During deterioration, bluebunch wheatgrass, temporarily increases and dominates in places because selective summer grazing by cattle and heavy use by sheep or deer deplete the stand of Idaho fescue. If deterioration is severe, snakeweed, annual grasses, and brush are prominent.

Special improvement measures are suited to this site. If the range is in poor condition, spraying to control brush and seeding grasses are practical. Were a reasonably good stand of grass is under the brush spraying alone can be the most practical way of re turning the site to optimum production.

#### NORTH EXPOSURE RANGE SITE

This range site is on Cantala, Dufur, Walla Walla, Watama, Wapinitia, and Wato soils. It is in the eastern part of the survey area. These soils are well drained silt loams and very fine sandy loams that formed mainly in loess and volcanic ash. They are steep and have north-facing slopes. They are on uplands.

Elevation ranges from 1,000 to 3,600 feet. The average annual precipitation is 10 to 16 inches. Runoff is

rapid, and the hazard of erosion is severe. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 14 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer is destroyed and bare ground is exposed. Sandberg bluegrass and perennial forbs are prominent in the stand. During deterioration, bluebunch wheatgrass temporarily increases and dominates in places because selective summer grazing by cattle and heavy use by sheep or deer deplete the stand of Idaho fescue. If deterioration is severe, the site becomes weedy and brushy.

Special improvement measures generally are suited to this site. If the range is in poor condition and a reasonable stand of grass is under the brush, spraying to control brush can be the most practical way of returning the site to optimum production.

#### STEEP NORTH RANGE SITE

This range site is on Nansene, Sinamox, and Wrentham soils. It is in the eastern part of the survey area. These soils are well drained silt loams that formed in loess and mixed colluvium. They are steep or very steep and have north-facing slopes. They are on uplands.

Elevation ranges from 300 to 3,600 feet. The average annual precipitation is 10 to 13 inches. Runoff is rapid, and the hazard of erosion is severe. Permeability is moderate, and the water-supplying capacity is 6 to 12 inches. Roots penetrate to a depth of 20 inches to more than 60 inches. Major forage grasses begin to grow about April 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced. The mulch layer of lichens and mosses that protected the surface layer has been destroyed and bareground is exposed. Sandberg bluegrass and perennial forbs are prominent. During deterioration, bluebunch wheatgrass temporarily increases and dominates the site in places because selective summer grazing by cattle and heavy use by sheep and deer deplete the stand of Idaho fescue. If deterioration is severe, sagebrush and cheatgrass invade strongly and the site becomes weedy and brushy.

Special improvement measures generally are not suited to this site because the soils are steep. However, if the range is in poor condition and a reasonable stand of grass is under the brush, spraying to control brush on the more gently sloping soils is practical.

#### SHRUBBY ROLLING HILLS RANGE SITE

This range site is on Maupin, Maupin variant, Sinamox, Watama, Wapinitia, and Wapinitia variant soils. It is in the southern part of the survey area south of Tygh Ridge. These soils are well drained loams and silt loams that formed in volcanic ash and in colluvium. They are nearly level to moderately steep and are on uplands.

Elevation ranges from 1,500 to 3,400 feet. The aver-

age annual precipitation is 10 to 16 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Permeability is moderate or moderately slow, and the water-supplying capacity is 6 to 14 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, bluebunch wheatgrass and Idaho fescue have been nearly eliminated from the stand. Bitterbrush is commonly hedged, and dead plants occur. Low-value shrubs increase, and juniper from adjacent areas invade the site in places. If deterioration is severe, annual weeds invade the areas of shallow and eroded soils.

Special improvement measures are suited to this site. If the range is in poor condition, clearing the juniper or spraying to control brush and seeding grasses are practical. Where brush is the concern and a reasonably good stand of grass is under the brush, spraying alone can be the most practical way of returning this site to optimum production. Plans for manipulating brush should consider the amount and value of existing bitterbrush and other forage shrubs.

In the area south of Tygh Valley in the southern part of the survey area, Maupin and Watama soils in this range site are mapped in complexes with Bakeoven soils (see Scabland range site description). For the percentages of Maupin and Watama soils in these mapping units, see descriptions of the mapping units.

#### SHRUBBY SOUTH EXPOSURE RANGE SITE

This range site is on Sherar cobbly loam, 5 to 45 percent slopes. It is in the southern part of the survey area, south of Tygh Ridge. These soils are well drained cobbly loams that formed in loess and colluvium. They have south-facing slopes and are on uplands.

Elevation ranges from 1,500 to 2,500 feet. The average annual precipitation is 10 to 12 inches. Runoff is medium or rapid, and the hazard of erosion is moderate or severe. Permeability is slow, and the water-supplying capacity is 2 to 5 inches. Depth to very gravelly semiconsolidated tuff is 20 to 40 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, the forage bunchgrasses are low in vigor and widely spaced and matchweed, big sagebrush, and rabbitbrush are prominent. If deterioration is severe, the site becomes brushy and weedy. Bitterbrush and other forage shrubs are hedged, and dead plants occur.

Special improvement measures are suited to this site. If the range is in poor condition, reducing the brush and seeding grasses are practical. Where a reasonable stand of grass is under the brush, spraying for selective reduction of sagebrush and rabbitbrush can be the most practical way of returning the site to optimum production. Plans for manipulating brush should consider the amount and value of existing forage shrubs.

#### SILTY TERRACE RANGE SITE

This range site is on Warden silt loam, 5 to 40 percent slopes. It is commonly on terraces along the Deschutes River another places in the eastern part of

the survey area. This well drained soil formed in loess and lacustrine silt. It is gently sloping on bench terraces and terrace fronts.

Elevation ranges from 600 to 1,000 feet. The average annual precipitation is 9 to 10 inches. Runoff is slow or medium, and the hazard of erosion is slight to severe. Permeability is moderate, and the water-supplying capacity is 6 to 9 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor range condition, big sagebrush and gray rabbitbrush have nearly replaced the stand of bluebunch wheatgrass. If deterioration is severe, cheatgrass and annual weeds replace the perennial forbs and grasses.

Special improvement measures are well suited to this site. Where the range is in fair and poor condition, reducing brush and seeding drought-resistant grasses is practical. Where a reasonably good stand of perennial grasses remains under the brush, spraying alone may be the most practical way of returning this site to optimum condition.

#### SEMI-MOIST BOTTOM RANGE SITE

This range site is on Endersby, Hermiston, Quincy, and Tygh soils. These soils are well drained to somewhat poorly drained loams, silt loams, loamy fine sands, and fine sandy loams that formed mostly in alluvium. They are nearly level and are on bottom lands.

Elevation ranges from 200 to 2,500 feet. The average annual precipitation is 10 to 20 inches. Runoff is slow, and the hazard of erosion is slight. Some of the soils are subject to flooding and have a high water table, and the hazard of streambank erosion is high. Permeability is moderate or moderately rapid, and the water-supplying capacity is about 9 to 13 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, big sagebrush and rabbitbrush have nearly replaced the stand of giant wildrye. If deterioration is severe, the site becomes very brushy or very weedy and much ground is left bare.

Many areas of this site are in irrigated hay or pasture, but special improvement measures are suited to this site if it is not used for crops. Streamside vegetation, especially shrubs and giant wildrye, is important to streambank stabilization and wildlife cover, and it should be taken into account when planning management.

#### ALKALINE BOTTOM RANGE SITE

This range site is only on Pedigo silt loam. It is along drainageways in the eastern part of the survey area. This soil is somewhat poorly drained. It formed in alluvium from loess and some volcanic ash washed from uplands. It is nearly level and is on bottom lands.

Elevation ranges from 200 to 2,700 feet. The average annual precipitation is 10 to 13 inches. Runoff is slow, and the hazard of erosion is slight. However, during periods of high streamflow, the hazard of streambank erosion is severe in several places. Permeability is

moderate, and the water-supplying capacity is 9 to 13 inches. Roots penetrate to a depth of more than 60 inches. Major forage grasses begin to grow about April 1.

any areas of this site are in irrigated hay or pasture, but special improvement measures are well suited to this site if it is not used for crops. Streamside vegetation, especially giant wildrye and riparian shrubs, is important to streambank stabilization and wildlife cover, and it should be taken into account when planning management.

#### OAK SOUTH EXPOSURE RANGE SITE

This range site is on Cherryhill and Wamic soils. It is in the northwestern part of the survey area. These soils are well drained loams and silt loams that formed in loess, volcanic ash, colluvium, and alluvium. They are nearly level to very steep and have south-facing slopes. They are on uplands.

Elevation commonly ranges from 500 to 2,000 feet. The average annual precipitation is 14 to 20 inches. Runoff is medium or rapid, and the hazard of erosion is moderate to severe. Permeability is moderately slow, and the water-supplying capacity is 8 to 12 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, oaks and such perennial forbs as arrowleaf balsamroot and lupine have severely reduced the stand of forage bunchgrasses. If deterioration is severe, cheatgrass and other low-value plants dominate the understory.

Most areas of Cherryhill soils are in fruit orchards or other crops, but special improvement measures generally are suited to this site if it is not cultivated. Where the range has been burned, oak becomes more dense and reproduction is more profuse. After a fire, it is practical to broadcast seed of suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak reproduction. The site provides important aesthetic values. Habitat for wildlife should be taken into account when planning management.

#### OAK STEEP SOUTH RANGE SITE

This range site is on Skyline and Hesslan soils. It is mainly in the northwestern part of the survey area. These soils are well drained stony loams and very cobbly loams that formed in loess, volcanic ash, and colluvium. They are nearly level to very steep and have south-facing slopes. They are on uplands.

Elevation commonly ranges from 1,000 to 3,500 feet. The average annual precipitation is 14 to 20 inches. Runoff is moderate or rapid, and the hazard of erosion is moderate or severe. Permeability is moderate. In the Skyline soils, roots penetrate to a depth of 12 to 20 inches and the water-supplying capacity is 6 to 9 inches. In the Hesslan soils, roots penetrate to a depth of 20 to 40 inches and the water-supplying capacity is 5 to 7 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, cheatgrass, annual weeds, and other shallow-rooted plants have

replaced the stand of tall bunchgrasses. If deterioration is severe, much ground is left bare.

Special improvement measures are not suited to this site because the soils are steep and stony or cobbly.

#### OAK STEEP NORTH RANGE SITE

This range site is on Hesslan soils of the Skyline-Hesslan complex, 30 to 70 percent slopes. It is mainly in the northwestern part of the survey area. These are well drained stony loams that formed in loess, volcanic ash, and colluvium. They are steep or very steep and have north-facing slopes. They are on uplands.

Elevation commonly ranges from 1,000 to 3,000 feet. The average annual precipitation is 14 to 20 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate, and the water-supplying capacity is 6 to 7 inches. Roots penetrate to a depth of 20 to 40 inches or more. Major forage grasses begin to grow about April 1.

Where this site is in poor condition, oaks and such perennial forbs as lupine and arrowleaf balsamroot have severely reduced the stand of forage bunchgrasses. If deterioration is severe, cheatgrass and other plants of low-forage value dominate the understory.

Special improvement measures are not suited to this site because the soils are steep and stony. Where the range has burned, dense stands of oak occur. After fire it is practical to broadcast seed suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak regeneration. This site also provides important forage and cover for deer and other wildlife, which needs to be taken into account when planning management.

#### OAK-PINE STEEP SOUTH RANGE SITE

This range site is on Bald very cobbly loam, 45 to 75 percent slopes. It is in the northwestern part of the survey area. This soil is well drained, and it formed in loess, volcanic ash, and basalt colluvium. It is very steep and has south-facing slopes. It is on uplands.

Elevation commonly ranges from 200 to 3,000 feet. The average annual precipitation is 25 to 30 inches. Runoff is rapid, and the hazard of erosion is high. Permeability is moderate, and the water-supplying capacity is 12 to 15 inches. Roots penetrate to a depth of 20 to 40 inches. Major forage grasses begin to grow about March 1.

Where this site is in poor condition, cheatgrass and other shallow-rooted plants occupy the openings. Also, perennial forbs, shrubs, and white oak reproduction have reduced, the stand of forage bunchgrasses. If deterioration is severe, much ground is left bare.

Special improvement measures are not suited to this site because this soil is very steep and very cobbly.

#### PINE-OAK-FESCUE RANGE SITE

This range site is on Chenoweth, Cherryhill, Van Horn, Wamic, and Wind River soils. Wamic soils are along the western part of the survey area, and they sometimes occur as small hummocks interspersed with areas of shallow and very stony scabland. The other



soils are in the northwestern part of the survey area. These soils are well drained loams, silt loams, and fine sandy loams that formed in loess, volcanic ash, and alluvium. They are on ridgetops and on uplands. They are nearly level to steep.

Elevation commonly ranges from 100 to 2,500 feet. The average annual precipitation is 14 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderately slow to moderately rapid, and the water-supplying capacity is 8 to 14 inches. Roots penetrate to a depth of 40 to more than 60 inches. Major forage grasses begin to grow about March 15.

Where this site is in poor condition, the competition from dense shrub and oak reproduction severely reduces the stand of understory plants, especially grasses. If deterioration is severe, cheatgrass and other low-value plants dominate and much soil is bare.

Many areas of the site are used for fruit orchards or other crops, but in uncultivated areas, special management is suited to this site to improve plant resources. Where the range has been cut over or burned, oak reproduction and shrub growth occur in a dense stand. After a fire, it is practical to broadcast seed suitable plants before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive oak and shrub reproduction. This site provides important aesthetic values, habitat for wildlife, and is a component of the deer and elk winter range in this area. These considerations need to be taken into account when planning management alternatives.

Shallow and very cobbly Skyline soils interspersed with the deeper Wamic soils are also in this site. They are in a complex pattern, and it was not practical to separate them. Only the Wamic soils should be considered when evaluating forage production for the site. For the percentage of each soil refer to the mapping unit description for Wamic-Skyline complex, 2 to 20 percent slopes.

#### PINE-DOUGLAS FIR-SEGE RANGE SITE

This range site is on Bald, Cherryhill, Frailey, and Wamic soils. Bald and Cherryhill soils are in the northwestern part of the survey area. Frailey and Wamic soils are along the western part of the survey area. These soils are well drained silt loams, loams, and cobbly loams that formed in loess, volcanic ash, colluvium, and alluvium. Slopes are 5 to 70 percent. The soils are on uplands.

Elevation ranges from 500 to 3,000 feet. The average annual precipitation is 14 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe. Permeability is moderately slow or moderate, and the water-supplying capacity is 8 to 15 inches. Roots penetrate to a depth of 20 to 60 inches. Major forage grasses begin to grow about March 15 in most areas.

In the absence of fire and where ponderosa pine has been logged from the stand, the more shade-tolerant Douglas-fir has increased in abundance and dominates many of the present stands. As the understory deteriorates, elk sedge and other forage bunchgrasses lose

vigor and decrease in the stand. If deterioration is severe, the more densely shaded areas have only a few spindly shrubs, scattered forbs, and an occasional spear of grass.

Where this site has been severely cut over or burned, shrubs of many kinds increase in vigor and abundance, and the range can produce a considerable amount of forage for a number of years. After fire or logging, it is practical to broadcast seed suitable plants in disturbed areas before fall rains settle the seedbed. A major objective of seeding is to stabilize the soil and prevent excessive shrub reproduction. This site provides important forage and cover for deer and elk, which need to be taken into account when planning management.

#### Woodland and Windbreaks

In this section, the relationship between soils and trees is described. Interpretations useful to landowners and operators in developing and carrying out plans for establishment and management of tree crops (fig. 10) and windbreaks are given.

Forests cover about 65,000 acres, or 12 percent of the survey area. About 35 percent is owned by farmers, 37 percent is privately owned, 23 percent is owned by the forest industry, and 5 percent is owned by Federal and local governments.

The principal forest cover types (9) include inland Douglas-fir, ponderosa pine, and western juniper.

#### Woodland management and productivity

Table 4 contains information useful to woodland owners or forest managers planning the use of soils for wood crops. Those soils suitable for wood crops are listed, and the woodland group for each soil is given. All soils in the same woodland group require the same general kinds of management and have about the same potential productivity.

The first part of the woodland group, a number, indicates the potential productivity of the soils for important trees. The number 1 indicates very high productivity; 2, high; 3, moderately high; 4, moderate; and 5, low. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *f* indicates high content of coarse fragments in the soil profile, and *r*, steep slopes. The letter *o* indicates no significant limitations or restrictions.

In table 4 the soils are also rated for a number of factors to be considered in management. The ratings slight, moderate, and severe are used to indicate the degree of major soil limitations.

*The hazard of erosion* indicates the risk of loss of soil in well-managed woodland. The risk is *slight* if the expected soil loss is small; *moderate* if some measures are needed to control erosion during logging and road construction; and *severe* if intensive management or special equipment and methods are needed to prevent excessive loss of soil.

JAMES T. BEENE, forester, Soil Conservation Service, helped prepare this section.



**Figure 10: Thinning mixed pine and fir stand on Wamic loam, 12 to 20 percent slopes.**

*Equipment limitation* ratings reflect the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. A rating of *slight* indicates that use of equipment is not limited to a particular kind of equipment or time of year; *moderate* indicates a short seasonal limitation or a need for some modification in management or equipment; *severe* indicates a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

*Seedling mortality* ratings indicate the degree that the soil affects expected mortality of planted tree seedlings when plant competition is not a limiting factor. The ratings are for seedlings from good planting stock that are properly planted during a period of sufficient rainfall. A rating of *slight* indicates that the expected mortality of the planted seedlings is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

*Plant competition* ratings indicate the degree to which undesirable plants are expected to invade or grow if openings are made in the tree canopy. The invading plants compete with native plants or planted seedlings by impeding or preventing their growth.

A rating of *slight* indicates little or no competition from other plants; *moderate* indicates that plant competition is expected to hinder the development of a fully stocked stand of desirable trees; *severe* means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

The *potential productivity* of merchantable trees on a soil is expressed as a *site index*. This index is the average height, in feet, of the dominant and codominant Douglas-fir trees at the age of 50 years (4) and ponderosa pine at 100 years. The site index applies to fully stocked, even-aged, unmanaged stands. Conversion of site index into yield may be made by referring to table 5 and 6.

*Trees to plant* are those that are suitable for commercial wood production and that are suited to the soils.

#### **Windbreaks**

Windbreaks are established to protect livestock, buildings, and yards from winds and snow (13). Windbreaks also help protect fruit trees and gardens,

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All tables have been updated and are available as a separate document..

and they furnish habitat for wildlife. Several rows of both broadleaved and coniferous species provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field, the interval depending on erodibility of the soil. They protect cropland and crops from wind and hold snow on the fields, and they also provide food and cover for wildlife.

Some plants help to beautify and screen homes and other buildings and to abate noise around them. The plants, mostly evergreen shrubs and trees, are closely spaced. Healthy planting stock of suitable species planted properly on a well prepared site and maintained in good condition can ensure a high degree of plant survival.

### ***Windbreak groups***

Most soils of the survey area have been placed in one of two windbreak groups. Timbered soils, steep soils, and shallow soils are excluded.

#### **WINDBREAK GROUP 1**

This group consists of well drained to poorly drained silt loams, loams, fine sandy loams, and loamy fine sands. These soils are on uplands, fans, and alluvial bottoms. Slopes are mainly 0 to 30 percent. The native vegetation is grasses, forbs, shrubs, and some oaks and ponderosa pine. The average annual precipitation is about 10 to 30 inches. Runoff is slow to rapid, and the hazard of erosion is slight to severe.

Successful dryland plantings require careful site preparation and clean cultivation. Irrigated windbreaks need to be cultivated in early years of establishment to the degree that competing vegetation does not seriously impede survival or growth of windbreak species.

The suited deciduous trees are black locust and Russian-olive. The suited shrubs are common lilac, caragana, Amur honeysuckle, and Tatarian honeysuckle. The suited evergreens are Rocky Mountain juniper, Austrian pine, Scotch pine, and ponderosa

pine. Junipers are hosts to the cedar-apple rust disease and, consequently, should not be planted in areas of apple orchards.

Lombardy poplar, hybrid poplar, Douglas-fir, black willow, mountain ash, and Nanking cherry are suited where precipitation is more than about 15 inches or where the soils are irrigated.

#### **WINDBREAK GROUP 2**

This group consists of well drained silt loams, loams, and very fine sandy loams on uplands. Slopes are mainly 0 to 40 percent. The native vegetation is grasses and forbs. The average annual precipitation is about 9 to 16 inches. Runoff is slow or medium, and the hazard of erosion is slight or moderate. Most roots penetrate to a depth of 20 to 60 inches or more.

The soils in this group receive less precipitation than soils in group 1 and, consequently, windbreaks generally are more difficult to establish. Height, grow, and general development is slower. Planting sites need summer fallowing the year prior to planting, careful site preparation before planting, and clean cultivation throughout the life of the windbreak unless irrigated.

The suited deciduous trees are black locust and Russian-olive. The suited shrubs are common lilac and caragana. The suited evergreens are ponderosa pine and Rocky Mountain juniper.

Lombardy poplar, hybrid poplar, Douglas-fir, black willow, mountain ash, and Nanking cherry are also suited if irrigated.

### **Wildlife**

All of the soils in the survey area are suited to and support habitat for one or more species of wildlife. This survey area embraces an area which includes the transition from arid grasslands to heavily timbered slopes on the side of Mt. Hood (fig. 11). Elevations range from 100 to 3,600 feet. The average annual

ROBERT A. CORTHELL, biologist, Soil Conservation Service, helped prepare this section.



**Figure 11: Mule deer grazing in an open, grassy area. The soils are mostly Bakeoven, Condon, Licksillet, and Wrentham soils.**

precipitation ranges from 9 inches to more than 30 inches.

The transition from arid grassland to woodland has produced rich and varied plant communities which provide habitat for many kinds of wildlife. For example, oak and pine trees are common, and they are among the most valuable trees for wildlife. The distribution of wildlife has also been influenced by the proximity of the Columbia River Gorge which has allowed western Oregon species such as the black-tailed deer and the band-tailed pigeon to become established in the survey area on the east slope of the Cascade Mountain range. Species of wildlife that are not native to the area, such as ring-necked pheasant, chukar partridge, wild turkey, California quail, and Hungarian partridge, have been introduced and have found suitable habitat within the survey area.

Perennial streams which drain the survey area provide habitat for rainbow trout and steelhead trout. Fishpond construction has generally been limited by unfavorable soil characteristics, and fish production is only fair when ponds are constructed.

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover, and they affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, and water. If any one of these elements is missing, inadequate, or inaccessible, wildlife either is scarce or does not inhabit the area.

If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, by properly managing the existing plant cover,

and by fostering the natural establishment of desirable plants.

In table 7 the soils in the survey area are rated according to their potential to support the main kinds of wildlife habitat in the area. This information can be used in

1. Planning the use of parks, wildlife refuges, nature study areas, and other developments for wildlife.
2. Selecting soils that are suitable for creating, improving, or maintaining specific elements of wildlife habitat.
3. Determining the intensity of management needed for each element of the habitat.
4. Determining areas that are suitable for acquisition to manage for wildlife.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose. A rating of *fair* means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderate intensity of management and fairly frequent attention are required for satisfactory results. A rating of *poor* means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort. A rating of *very poor* means that restrictions for the element of wildlife habitat or kind of wildlife are very severe, and that unsatisfactory results can be expected. Wildlife habitat is impractical or even impossible to create, improve, or maintain on soils that have such a rating.

The elements of wildlife are briefly described in the following paragraphs.

*Grain and seed crops* are seed-producing annuals used by wildlife. Examples are wheat, oats, and barley. The major soil properties that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flood hazard. Soil temperature and moisture are also considerations.

*Grasses and legumes* are domestic perennial grasses and herbaceous legumes used by wildlife for food and cover. Examples are fescue, bluegrass, brome grass, timothy, orchardgrass, clover, alfalfa, and vetch. Major soil properties that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, and slope. Soil temperature and moisture are also considerations.

*Wild herbaceous plants* are native or naturally established herbaceous grasses and forbs, including weeds, that provide food and cover for wildlife. Examples are balsamroot, goldenrod, beggarweed, big bluegrass, Sandberg bluegrass, wheatgrass, fescue, and milkvetch. Major soil properties that affect the growth of these plants are depth of the root zone, texture of the sur-

face layer, available water capacity, wetness, surface stoniness, and flood hazard. Soil temperature and moisture are also considerations.

*Hardwood trees* and the associated woody understory provide cover for wildlife and produce nuts or other fruit, buds, catkins, twigs, bark, or foliage that wildlife eat. Examples of native plants are Oregon white oak, cherry, apple, dogwood, sumac, blackberry, Oregon-grape, blueberry, and briars. Examples of fruit-producing shrubs that are commercially available and suitable for planting on soils rated good are Russian-olive and multiflora rose. Major soil properties that affect growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness.

*Coniferous plants* are cone-bearing trees, shrubs, or ground cover that furnish habitat or supply food in the form of browse, seeds, or fruitlike cones. Examples are pine, spruce, hemlock, fir, and juniper. Major soil properties that affect the growth of coniferous plants are depth of the root zone, available water capacity, and wetness.

*Shrubs* are bushy woody plants that produce fruits, buds, twigs, bark, or foliage used by wildlife or that provide cover and shade for some species of wildlife. Examples are mountainmahogany, bitterbrush, snowberry, and big sagebrush. Major soil properties that affect the growth of shrubs are depth of the root zone, available water capacity, and moisture.

*Wetland plants* are annual and perennial wild herbaceous plants that grow on moist or wet sites, exclusive of submerged or floating aquatics. They produce food or cover for wildlife that use wetland as habitat. Examples of wetland plants are wild millet, rushes, sedges, reeds, cordgrass, and cattail. Major soil properties affecting wetland plants are texture of the surface layer, wetness, reaction, slope, and surface stoniness.

*Shallow water areas* are bodies of surface water that have an average depth of less than 5 feet and are useful to wildlife. They can be naturally wet areas, or they can be created by dams or levees or by water-control devices in marshes or streams. Examples are muskrat marshes, waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds. Major soil properties affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. The availability of a dependable water supply is important if water areas are to be developed.

The kinds of wildlife habitat are briefly described in the following paragraphs.

*Openland habitat* consists of cropland, pasture, meadow, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kinds of wildlife attracted to these areas include dove, quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, and partridge.

*Woodland habitat* consists of hardwoods or conifers or a mixture of both, with associated grasses, legumes, and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, ruffed grouse,

blue grouse, mountain quail, band-tailed pigeon, tree squirrels, raccoon, deer, elk (fig. 12), and black bear. Tygh and Endersby soils are in the bottom land and Hesslan, Skyline, and Frailey soils occupy the steep slopes.

*Wetland habitat* consists of water-tolerant plants in open, marshy, or swampy shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, kingfishers, muskrat, and beaver.

*Rangeland habitat* consists of wild herbaceous plants and shrubs on range. Examples of wildlife attracted to this habitat are deer, chukar, California and mountain quail, meadowlark, Hungarian partridge, and dove.

## Recreation

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for camp areas, picnic areas, playgrounds, and paths and trails. The ratings are based on such restrictive soil features as flooding, wetness, slope, and texture of the surface layer. Not considered in these ratings, but important in evaluating a site, are location and accessibility of the area, size and shape of the area and its scenic quality, the ability of the soil to support vegetation, access to water, potential water impoundment sites available, and either access to public sewerlines or capacity of the soil to absorb septic tank effluent. Soils subject to flooding are limited, in varying degrees, for recreational use by the duration of flooding and the season when it occurs. Onsite assessment of height, duration, and frequency of flooding is essential in planning recreational facilities.

In table 8 the limitations of soils are rated as slight, moderate, or severe. *Slight* means that the soil properties are generally favorable and that the limitations are minor and easily overcome. *Moderate* means that the limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

The information in table 8 can be supplemented by additional information in other parts of this survey. Especially helpful are interpretations for septic tank absorption fields, given in table 9, and interpretations for dwellings without basements and for local roads and streets, given in table 10.

*Camp areas* require such site preparation as shaping and leveling tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils for this use have mild slopes and are not wet nor subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing camping sites.



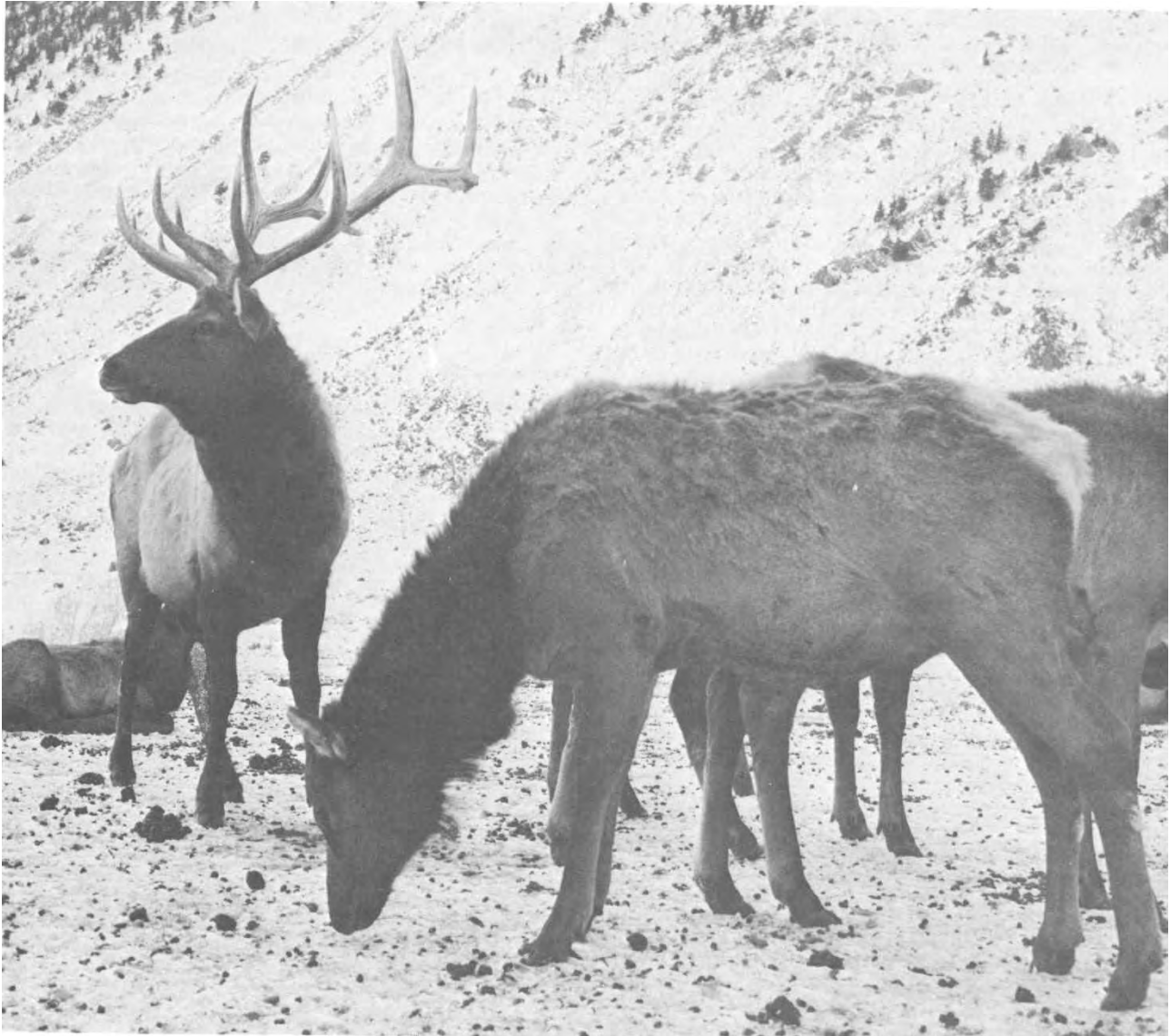


Figure 12: Elk wintering in woodland area.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for use as picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

*Playgrounds* require soils that can withstand intensive foot traffic. The best soils are almost level and not wet nor subject to flooding during the season of use. The surface is free of stones or boulders, is firm after

rain, and is not dusty when dry. If shaping is required to obtain a uniform grade, the depth of the soil over rock should be sufficient to allow necessary grading.

The design and layout of *paths and trails* for walking, horseback riding, and bicycling should require little or no cutting and filling. The best soils for this use are those that are not wet, are firm after rain, are not dusty when dry, and are not subject to flooding more than once during the period of use. They should have moderate slopes and have few or no stones or boulders on the surface.

## Engineering

This section provides information about the use of soils for building sites, sanitary facilities, construction materials, and water management. Among those who can benefit from this section are engineers, landowners, community decision makers and planners, town and city managers, land developers, builders, contractors, and farmers and ranchers.

The ratings in tables in this section are based on test data and estimated data in the "Soil Properties" section. The ratings were determined jointly by soil scientists and engineers of the Soil Conservation Service using known relationships between the soil properties and the behavior of soils in various engineering uses.

Among the soil properties and site conditions identified by the soil survey and used in determining the ratings in this section are grain-size distribution, liquid limit, plasticity index, soil reaction, depth to and hardness of bedrock within 5 or 6 feet of the surface, soil wetness characteristics, depth to a seasonal water table, slope, likelihood of flooding, natural soil structure or aggregation, in-place soil density, and geologic origin of the soil material. Where pertinent, data about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of absorbed cation were also considered.

Based on the information assembled about soil properties, ranges of values can be estimated for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, shear strength, compressibility, slope stability, and other factors of expected soil behavior in engineering uses. As appropriate, these values can be applied to each major horizon of each soil or to the entire profile.

These factors of soil behavior affect construction and maintenance of roads, airport runways, pipelines, foundations for small buildings, ponds and small dams, irrigation projects, drainage systems, sewage and refuse disposal systems, and other engineering works. The ranges of values can be used to: select potential residential, commercial, industrial, and recreational areas; make preliminary estimates pertinent to construction in a particular area; evaluate alternate routes for roads, streets, highways, pipelines, and underground cables; evaluate alternate sites for location of sanitary landfills, onsite sewage disposal systems, and other waste disposal facilities; plan detailed onsite investigations of soils and geology; find sources of gravel, sand, clay, and to soil; plan farm drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; relate performance of structures already built to the properties of the kinds of soil on which they are built so that performance of similar structures on the same or a similar soil in other locations can be predicted; and predict the trafficability of soils for cross-country movement of vehicles and construction equipment.

Data presented in this section are useful for land-

use planning and for choosing alternative practices or general designs that will overcome unfavorable soil properties and minimize soil-related failures. Limitations to the use of these data, however, should be well understood. First, the data are generally not presented for soil material below a depth of 5 or 6 feet. Also, because of the scale of the detailed map in this soil survey, small areas of soils that differ from the dominant soil may be included in mapping. Thus, these data do not eliminate the need for onsite investigations and testing.

The information is presented mainly in tables. Table 9 shows, for each kind of soil, ratings of the degree and kind of limitations for sanitary facilities; table 10 for building site development; and table 11, for water management. Table 12 shows the suitability of each kind of soil as a source of construction material.

The information in the tables, along with the soil map, the soil descriptions, and other data provided in this survey can be used to make additional interpretations and to construct interpretive maps for specific uses of land.

Some of the terms used in this soil survey have different meanings in soil science and in engineering; many of these terms are defined in the Glossary.

### Sanitary facilities

Favorable soil properties and site features are needed for proper functioning of septic tank absorption fields, sewage lagoons, and sanitary landfills. The nature of the soil is important in selecting sites for these facilities and in identifying limiting soil properties and site features to be considered in design and installation. Also, those soil properties that affect ease of excavation or installation of these facilities will be of interest to contractors and local officials. Table 9 shows the degree and kind of limitations of each soil for such uses and for use of the soil as daily cover for landfills.

If the degree of soil limitation is expressed as *slight*, soils are generally favorable for the specified use and limitations are minor and easily overcome; if *moderate*, soil properties or site features are unfavorable for the specified use, but limitations can be overcome by special planning and design; and if *severe*, soil properties or site features are so unfavorable or difficult to overcome that major soil reclamation, special designs, or intensive maintenance are required.

*Septic tank absorption fields* are subsurface systems of tile or perforated pipe that distribute effluent from a septic tank into the natural soil. Only the soil horizons between depths of 18 and 72 inches are evaluated for this use. The soil properties and site features considered are those that affect the absorption of the effluent and those that affect the construction of the system.

Properties and features that affect the absorption of the effluent are permeability, depth to seasonal high water table, depth to bedrock, any susceptibility to flooding. Stones, boulders, and a shallow depth to bedrock interfere with installation. Excessive slope

ELWIN A. ROSS, engineer, Soil Conservation Service, helped prepare this section.

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All tables have been updated and are available as a separate document.

may cause lateral seepage and surfacing of the effluent in downslope areas. Also, soil erosion and soil slippage are hazards where absorption fields are installed in sloping soils.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below

the tile lines. In these soils the absorption field does not adequately filter the effluent, and ground water in the area may be contaminated.

Percolation tests are performed to determine the absorptive capacity of the soil and its suitability for septic tank absorption fields. These tests should be per-

formed during the season when the water table is highest and the soil is at minimum absorptive capacity.

On many of the soils that have moderate or severe limitations for septic tank absorption fields, a system to lower the seasonal water table or the size of the absorption field could be increased so that performance is satisfactory.

*Sewage lagoons* are shallow ponds constructed to hold sewage while bacteria decompose the solid and liquid wastes. Lagoons have a nearly level flow area surrounded by cut slopes or embankments of compacted, nearly impervious soil material. They generally are designed to hold sewage within a depth of 2 to 5 feet. Impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of local ground water. Soils that are very high in organic-matter content and those that have cobbles, stones, and boulders are undesirable. Unless the soil has very slow permeability, contamination of local ground water is a hazard in areas where the seasonally high water table is above the level of the lagoon floor. In soils where the water table is seasonally high, seepage of ground water into the lagoon can seriously reduce its capacity for liquid waste. Slope, depth to bedrock, and susceptibility to flooding also affect the suitability of sites for sewage lagoons or the cost of construction. Shear strength and permeability of compacted soils affect the performance of embankments.

*Sanitary landfill* is a method of disposing of solid waste, either in excavated trenches or on the surface of the soil. The waste is spread, compacted, and covered daily with thin layers of soil. Landfill areas are subject to heavy vehicular traffic. Ease of excavation, risk of polluting ground water, and trafficability affect the suitability of a soil for this use. The best soils have a loamy or silty texture, have moderate or slow permeability, are deep to bedrock and a seasonal water table, are free of large stones and boulders, and are not subject to flooding. In areas where the seasonal water table is high, water seeps into the trenches and causes problems in excavating and filling the trenches. Seepage into the refuse increases the risk of pollution of ground water. Clayey soils are likely to be sticky and difficult to spread. Sandy or gravelly soils generally have rapid permeability that might allow noxious liquids to contaminate local ground water.

Unless otherwise stated, the ratings in table 9 apply only to soil properties and features within a depth of about 6 feet. If the trench is deeper, ratings of slight or moderate may not be valid. Site investigation is needed before a site is selected.

In the area type of sanitary landfill, refuse is placed on the surface of the soil in successive layers. The limitations caused by soil texture, depth to bedrock, and stone content do not apply to this type of landfill. Soil wetness, however, can be a limitation because of difficulty in operating equipment.

*Daily cover for landfill* should be soil that is easy to excavate and spread over the compacted fill during both wet and dry weather. Soils that are loamy or silty and free of stones or boulders are better than other soils. Clayey soils may be sticky and difficult to spread; sandy soils may be subject to soil blowing.

The soils selected for final cover of landfills should be suitable for growing plants. Of all horizons, the A horizon in most soils has the best workability, a higher content of organic matter, and the best potential for growing plants. Thus, for either the area- or trench-type landfill, stockpiling material from the A horizon for use as the surface layer of the final cover is desirable.

Where it is necessary to bring in soil material for daily or final cover, thickness of suitable soil material available and depth to a seasonal high water table in soils surrounding the sites should be evaluated. Other factors to be evaluate are those that affect reclamation of the borrow areas, such as slope, erodibility, and potential for plant growth.

### ***Building site development***

The degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, and local roads and streets are indicated in table 10. A *slight* limitation indicates that soil properties are favorable for the specified use; any limitation is minor and easily overcome. A *moderate* limitation indicates that soil properties and site features are unfavorable for the specified use, but the limitations can be overcome or minimized by special planning and design. A *severe* limitation indicates one or more soil properties or site features are so unfavorable or difficult to overcome that a major increase in construction effort, special design, or intensive maintenance is required. For some soils rated severe, such costly measures are not feasible.

*Shallow excavations* are used for pipelines, sewerlines, telephone and power transmission lines, basements, open ditches, and cemeteries. Such digging or trenching is influenced by the soil wetness or seasonal high water table, the texture and consistence of soils, the tendency of soils to cave in or slough, and the presence of very firm, dense soil layers, bedrock, or large stones. In addition, excavations are affected by slope of the soil and the probability of flooding. Ratings do not apply to soil horizons below a depth of 6 feet unless otherwise noted.

In the soil series descriptions, the consistence of each soil horizon is defined, and the presence of very firm or extremely firm horizons, generally difficult to excavate, is indicated.

*Dwellings and small commercial buildings* referred to in table 10 are built on undisturbed soil and have foundation loads of a dwelling no more than three stories high. Separate ratings are made for small commercial buildings without basements and for dwellings with and without basements. For such structures, soils should be sufficiently stable that cracking or subsidence from settling or shear failure of the foundation does not occur. These ratings were determined from estimates of the shear strength, compressibility, and shrink-swell potential of the soil. Soil texture, plasticity and in-place density, potential frost action, soil wetness, and depth to a seasonal high water table were also considered. Soil wetness and depth to a seasonal high water table indicate potential difficulty in providing adequate drainage for basements, lawns, and gar-

dens. Depth to bedrock, slope, and the large stones in or on the soil are also important considerations in the choice of sites for these structures and were considered in determining the ratings. Susceptibility to flooding is a serious limitation.

*Local roads and streets* referred to in table 10 have an all-weather surface that can carry light to medium traffic all year. They consist of subgrade of the underlying soil material; a base of gravel, crushed rock fragments, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. The roads are graded with soil material at hand, and most cuts and fills are less than 6 feet deep.

The load-supporting capacity and the stability of the soil as well as the quantity and workability of fill material available are important in design and construction of roads and streets. The classifications of the soil and the soil texture, density, shrink-swell potential, and potential frost action are indicators of the traffic-supporting capacity used in making ratings. Soil wetness, flooding, slope, depth to hard rock or very compact layers, and content of large stones, all of which affect stability and ease of excavation, were also considered.

### **Water management**

Many soil properties and site features that affect water management practices have been identified in this soil survey. In table 11 soil and site features that affect use are indicated for each kind of soil. This information is significant in planning, installing, and maintaining water control structures.

*Pond reservoir areas* hold water behind a dam or embankment. Soils suitable for this use have low seepage potential, which is determined by the permeability and the depth to fractured or permeable bedrock or other permeable material.

*Embankments, dikes, and levees* require soil material that is resistant to seepage, erosion, and piping and that has favorable stability, shrink-swell potential, shear strength, and compaction characteristics. Stones and organic matter in a soil downgrade the suitability of a soil for use in embankments, dikes, and levees.

*Drainage* of soil is affected by such soil properties as permeability, texture, structure, depth to bedrock, hardpan, or other layers that influence rate of water movement, depth to the water table, slope, stability of ditchbanks, susceptibility to flooding, salinity and alkalinity, and availability of outlets for drainage.

*Irrigation* is affected by such features as slope, susceptibility to flooding, hazards of water erosion and soil blowing, Texture, presence of salts and alkali, depth of root zone, rate of water intake at the surface, permeability of the soil below the surface layer, available water capacity, need for drainage, and depth to the water table.

*Terraces and diversions* are embankments, or a combination of channels and ridges, constructed across a slope to intercept runoff. They allow water to soak into the soil or flow slowly to an outlet. Features

that affect suitability of a soil for terraces are uniformity and steepness of slope; depth to bedrock; hardpan, or other unfavorable material; large stones; permeability; ease of establishing vegetation; and resistance to water erosion, soil blowing, soil slipping, and piping.

*Grassed waterways* are constructed to channel runoff to outlets at nonerosive velocities. Features that affect the use of soils for waterways are slope, permeability, erodibility, wetness, and suitability for permanent vegetation.

### **Construction materials**

The suitability of each soil as a source of road fill, sand, gravel, and topsoil is indicated in table 12 by ratings of good, fair, or poor. The texture thickness, and organic-matter content of each soil horizon are important factors in rating soils for use as construction materials. Each soil is evaluated to the depth observed and described as the survey is made, generally about 6 feet.

*Roadfill* is soil material used in embankments for roads. The ratings reflect the ease of excavating and working the material and the expected performance of the material where it has been compacted and adequately drained. The performance of soil after it is stabilized with lime or cement is not considered in the ratings, but information about some of the soil properties that influence such performance is given in the descriptions of the soil series.

The ratings apply to the soil profile between the A horizon and a depth of 5 to 6 feet. It is assumed that soil horizons will be mixed during excavation and spreading. Many soils have horizons of contrasting suitability within their profile. The estimated engineering properties in table 13 provide more specific information about the nature of each horizon. This information can help determine its suitability for roadfill.

Soils rated *good* are coarse grained. They have low shrink-swell potential, low potential frost action, and few cobbles and stones. They are at least moderately well drained and have slopes of 15 percent or less. Soils rated *fair* have a plasticity index of less than 15 and have other limiting features, such as high shrink-swell potential, moderately steep slopes, wetness, or many stones. If the thickness of suitable material is less than 3 feet, the entire soil is rated *poor*.

*Sand and gravel* are used in great quantities in many kinds of construction. The ratings in table 12 provide guidance as to where to look for probable sources and are based on the probability that soils in a given area contain sizable quantities of sand or gravel. A soil rated *good* or *fair* has a layer of suitable material at least 3 feet thick, the top of which is within a depth of 6 feet. Coarse fragments of soft bedrock material, such as shale and siltstone, are not considered to be sand and gravel. Fine-grained soils are not suitable sources of sand and gravel.

The ratings do not take into account depth to the water table or other factors that affect excavation of



the material. Descriptions of grain size, kinds of minerals, reaction, and stratification are given in the soil series descriptions and in table 13.

Topsoil is used in areas where vegetation is to be established and maintained. Suitability is affected mainly by the ease of working and spreading the soil material in preparing a seedbed and by the ability of the soil material to support plant life. Also considered is the damage that can result to the area from which the topsoil is taken.

Soils rated *good* have at least 16 inches of friable loamy material at their surface. They are free of stones, are low in content of gravel, and have gentle slopes. They are low in soluble salts that can limit or prevent plant growth. They are naturally fertile or respond well to fertilizer. They are not so wet that excavation is difficult during most of the year.

Soils rated *fair* are loose sandy or firm loamy or clayey soils in which the suitable material is only 8 to 16 inches thick or soils that have appreciable amounts of gravel, stones, or soluble salt.

Soils rated *poor* are very sandy soils, very firm clayey soils, soils that have suitable layers less than 8 inches thick; soils that have large amounts of gravel, stones or soluble salts; steep soils; and poorly drained soils.

Although a rating of *good* is not based entirely on high content of organic matter, a surface horizon is generally preferred for topsoil because of its organic-matter content. This horizon is designated as A1 or Ap in the soil series descriptions. The absorption and retention of moisture and nutrients for plant growth are greatly increased by organic matter. Consequently, careful preservation and use of material from these horizons is desirable.

## Soil Properties

Extensive data about soil properties are summarized on the following pages. The two main sources of these data are the many thousands of soil borings made during the course of the survey and the laboratory analyses of selected soil samples from typical profiles.

In making soil borings during field mapping, soil scientists can identify several important soil properties. They note the seasonal soil moisture condition or the presence of free water and its depth. For each horizon in the profile, they note the thickness of the soil and color of the soil material; the texture, or amount of clay, silt, sand, and gravel or other coarse fragments; the structure, or the natural pattern of cracks and pores in the undisturbed soil; and the consistence of the soil material in place under the existing soil moisture conditions. They record the depth of plant roots, determine the pH or reaction of the soil, and identify any free carbonates.

Samples of soil material are analyzed in the laboratory to verify the field estimates of soil properties and to determine all major properties of key soils, especially properties that cannot be estimated accurately by field observation. Laboratory analyses are not conducted for all soil series in the survey area, but labora-

tory data for many of the soil series not tested are available from nearby survey areas.

The available field and laboratory data are summarized in tables. The tables give the estimated range of engineering properties, the engineering classification, and the physical and chemical properties of each major horizon of each soil in the survey area. They also present pertinent soil and water features, engineering test data, and data obtained from physical and chemical laboratory analyses of soils.

## Engineering properties

Table 13 gives estimates of engineering properties and classifications for the major horizons of each soil in the survey area. These estimates are presented as ranges in values most likely to exist in areas where the soil is mapped.

Most soils have, within the upper 5 or 6 feet, horizons of contrasting properties. Information is presented for each of these contrasting horizons. Depth to the upper and lower boundaries of each horizon in a typical profile of each soil is indicated. More information about the range in depth and about other properties of each horizon is given for each soil series in the section "Descriptions of the Soils."

Texture is described in table 13 in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in soil material that is less than 2 millimeters in diameter. "Loam," for example, is soil material that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If a soil contains gravel or other particles coarser than sand, an appropriate modifier is added, for example, "gravelly loam." Other texture terms are defined in the Glossary.

The two systems commonly used in classifying soils for engineering use are the Unified Soil Classification System (Unified) (2) and the American Association of State Highway and Transportation Officials Soil Classification System (AASHTO) (1). In table 13 soils in the survey area are classified according to both systems.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter, plasticity index, liquid limit, and organic-matter content. Soils are grouped into 15 classes - eight classes of coarse-grained soils, identified as GW, GP, GM, GC, SW, SP, SM, and SC; six classes of fine-grained soils, identified as ML, CL, OL, MH, CH, and OH; and one class of highly organic soils, identified as Pt. Soils on the borderline between two classes have a dual classification symbol, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect their use in highway construction and maintenance. In this system a mineral soil is classified as one of seven basic groups ranging from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines. At the other extreme, in group A-7, are fine-grained soils.

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Highly organic soils are classified as A-8 on the basis of visual inspection.

When laboratory data are available, the A-1, A-2, and A-7 groups are further classified as follows: A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, and A-7-6. As an additional refinement, the desirability of soils as subgrade material can be indicated by a group index number. These numbers range from 0 for the best sub grade material to 20 or higher for the poorest. The AASHTO classification for soils tested in the survey area, with group index numbers in parentheses, is given in table 16. The estimated classification, without group index numbers, is given in table 13. Also in table 18 the percentage, by weight, of cobbles or the rock fragments more than 3 inches in diameter are estimated for each major horizon. These estimates are determined mainly by observing volume percentage in the field and then converting that, by formula, to weight percentage.

A comparison of these and other systems of size limits for soil separates can be found in the PCA soil primer (7).

Percentage of the soil material less than 3 inches in diameter that passes each of four sieves (U. S. standard) is estimated for each major horizon. The estimates are based on tests of soils that were sampled in the survey area and in nearby areas and on field estimates from many borings made during the survey.

*Liquid limit and plasticity index* indicate the effect of water on the strength and consistence of soil. These indexes are used in both the Unified and AASHTO soil classification systems. They are also used as indicators in making general predictions of soil behavior. Range in liquid limit and plasticity index are estimated on the basis of test data from the survey area or from nearby areas and on observations of the many soil borings made during the survey.

All estimates in table 13 have been rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount across classification boundaries (1 or 2 percent), the classification of the marginal zone has been omitted.

#### ***Physical and chemical properties***

Table 14 shows estimated values for several soil characteristics and features that affect behavior of soils in engineering uses. These estimates are given for each major horizon, at the depths indicated, in the representative profile of each soil. The estimates are based on field observations and on test data for these and similar soils.

*Permeability* is estimated on the basis of known relationships between the soil characteristics observed in the field-particularly soil structure, porosity, and gradation or texture-that influence the downward movement of water in the soil. The estimates are for water movement in a vertical direction when the soil is saturated. Not considered in the estimates are lateral seepage or such transient soil features as plowpans and surface crusts. Permeability of the soil is an important factor to be considered in the planning and designing of drainage systems, in evaluating the poten-

tial of soils for septic tank systems and other waste disposal systems, and in many other aspects of land use and management.

*Available water capacity* is rated on the basis of soil characteristics that influence the ability of the soil to hold water and make it available to plants. Important characteristics are content of organic matter, soil texture, and soil structure. Shallow-rooted plants are not likely to use the available water from the deeper soil horizons. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design of irrigation systems.

*Soil reaction* is expressed as range in pH values. The range in pH of each major horizon is based on many field checks. For many soils, the values have been verified by laboratory analyses. Soil reaction is important in selecting the crops, ornamental plants, or other plants to be grown; in evaluating soil amendments for fertility and stabilization; and in evaluating the corrosivity of soils.

*Salinity* is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25° C. Estimates are based on field and laboratory measurements at representative sites of the nonirrigated soils. The salinity of individual irrigated fields is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of individual fields can differ greatly from the value given in table 14. Salinity affects the suitability of a soil for crop production, its stability when used as a construction material, and its potential to corrode metal and concrete.

*Shrink-swell potential* depends mainly on the amount and kind of clay in the soil. Laboratory measurements of the swelling of undisturbed clods were made for many soils. For others the swelling was estimated on the basis of the kind and amount of clay in the soil and on measurements of similar soils. The size of the load and the magnitude of the change in soil moisture content also influence the swelling of soils. Shrinking and swelling of some soils can cause damage to building foundations, basement walls, roads, and other structures unless special designs are used. A *high* shrink-swell potential indicates that special design and added expense may be required if the planned use of the soil will not tolerate large volume changes.

*Risk of corrosion*, as used in table 14, pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to soil moisture, particle-size distribution, total acidity, and electrical conductivity of the soil material. The rate of corrosion of concrete is based mainly on the sulfate content, texture, and acidity of the soil. Protective measures for steel or more resistant concrete help to avoid or minimize damage resulting from the corrosion. Installations of steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than an installation that is entirely within one kind of soil or within one soil horizon.

*Erosion factors* are used to predict the amounts of erosion that will result from specific kinds of land use

and treatment. The soil erodibility factor (K) is a measure of the susceptibility of the soil to erosion by water. Soils having the highest K values are the most erodible. The soil-loss tolerance factor (T) is the maximum rate of soil erosion, whether from rainfall or soil blowing, that can occur without reducing crop production or environmental quality. The rate is expressed in terms of soil loss per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties that affect their resistance to soil blowing if cultivated. The groups are used to predict the susceptibility of soil to blowing and the amount of soil lost as a result of blowing. Soils are grouped according to the following distinctions

1. Sands, coarse sands, fine sands, and very fine sands. These soils are extremely erodible, so vegetation is difficult to establish. They are generally not suitable for crops.

2. Loamy sands, loamy fine sands, and loamy very fine sands. These soils are very *highly erodible*, but crops can be grown if intensive measures to control soil blowing are used.

3. Sandy loamy, coarse sandy loamy, fine sandy loamy, and very fine sandy loamy. These soils are highly erodible, but crops can be grown if intensive measures to control soil blowing are used.

- 4L. Calcareous loamy soils that are less than 35 percent clay and more than 5 percent finely divided calcium carbonate. These soils are erodible, but crops can be grown if intensive measures to control soil blowing are used.

4. Clays, silty clays, clay loamy, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible, but crops can be grown if measures to control soil blowing are used.

5. Loamy soils that are less than 18 percent clay and less than 5 percent finely divided calcium carbonate and sandy clay loams and sandy clays that are less than 5 percent finely divided calcium carbonate. These soils are slightly erodible, but crops can be grown if measures to control soil blowing are used.

6. Loamy soils that are 18 to 35 percent clay and less than 5 percent finely divided calcium carbonate, except silty clay loams. These soils are very slightly erodible, and crops can easily be grown.

7. Silty clay loamy that are less than 35 percent clay and less than 5 percent finely divided calcium carbonate. These soils are very slightly erodible, and crops can easily be grown.

8. Stony or gravelly soils and other soils not subject to soil blowing.

#### **Soil and water features**

Table 15 contains information helpful in planning land uses and engineering projects that are likely to be affected by soil and water features.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils not protected by vegetation are placed in one of four groups on the basis of the intake of water after the soils have been wetted and have received precipitation from long-duration storms.

The four hydrologic soil groups are

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of deep, well drained to excessively drained sands or gravels. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep to deep, moderately well drained to well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils that have a layer that impedes the downward movement of water or soils that have moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clay soils that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

*Flooding* is the temporary covering of soil with water from overflowing streams, with runoff from adjacent slopes, and by tides. Water standing for short periods after rainfall or snowmelt and water in swamps and marshes is not considered flooding. Flooding is rated in general terms that describe the frequency and duration of flooding and the time of year when flooding is most likely. The ratings are based on evidence in the soil profile of the effects of flooding, namely thin strata of gravel, sand, silt, or, in places, clay deposited by floodwater; irregular decrease in organic-matter content with increasing depth; and absence of distinctive soil horizons that form in soils of the area that are not subject to flooding. The ratings are also based on local information about floodwater levels in the area and the extent of flooding; and information that relates the position of each soil on the landscape to historic floods.

The generalized description of flood hazards is of value in land-use planning and provides a valid basis for land-use restrictions. The soil data are less specific, however, than those provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

*High water table* is the highest level of a saturated zone more than 6 inches thick in soils for a continuous period of more than 2 weeks during most years. The depth to a high water table applies to undrained soils. Estimates are based mainly on the relationship between grayish colors or mottles in the soil and the depth to free water observed in many borings made during the course of the soil survey. Indicated are the depth to the high water table; the kind of water table, that is perched, artesian, or apparent; and the months of the year that the water table commonly is high. Only saturated zones above a depth of 5 or 6 feet are indicated.

Information about the high water table helps in assessing the need for specially designed foundations, the need for specific kinds of drainage systems, and the need for footing wins to insure dry basements. Such information is also needed to decide whether or not construction of basements is feasible and to determine how septic tank absorption fields and other underground installations will function. Also, a high water table affects ease of excavation.

*Depth to bedrock* is shown for all soils that are underlain by bedrock at depths of 5 to 6 feet or less. For many soils, the limited depth to bedrock is apart of the definition of the soil series. The depths shown are based on measurements made in many soil borings and other observations during the soil mapping. The kind of bedrock and its relative hardness as related to ease of excavation is also shown. Rippable bedrock can be excavated with a single-tooth attachment on a 200 horsepower tractor, but hard bedrock generally requires blasting.

*Cemented pans* are hard subsurface layers that are strongly compacted (indurated). Such pans cause difficulty in excavation. The hardness of pans is similar to that of bedrock.

*Potential frost action* refers to the likelihood of damage to pavements and other structures by frost heaving and low soil strength after thawing. Frost action results from the movement of soil moisture into the freezing zone, which causes the formation of ice lenses. Soil texture, temperature, moisture content, porosity, permeability, and content of organic matter are the most important soil properties that affect frost action. It is assumed that the soil is not covered by insulating vegetation or snow and is not artificially drained. Silty and clayey soils that have a high water table in winter are most susceptible to frost action. Well drained very gravelly or sandy soils are the least susceptible.

#### ***Engineering test data***

Samples from soils of the Dufur series representative of Wasco County, Northern Part, were tested by standard AASHTO procedures to help evaluate the soils for engineering purposes. Only selected layers of each soil were sampled. The results of these tests and the classification of each soil sample according to both the AASHTO and Unified systems are shown in table 16. The samples tested do not represent the entire range of soil characteristics in the survey area or even within the series sampled. The results of the tests, however, can be used as a general guide in estimating the physical properties of the soils. Tests made were for moisture-density relationships, grain-size distribution, liquid limit, and plasticity index.

In the moisture density, or compaction test, a sample of the soil material is compacted several times with a constant compactive effort, each time at a successively higher moisture content. The moisture content increases until the optimum moisture content is reached. After that the density decreases as moisture content increases. The highest density obtained in the compaction test is the maximum density. Moisture

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density data are important in construction because optimum stability is generally obtained if the soil is compacted to approximately the maximum dry density when it is at approximately the optimum moisture content.

The results of the mechanical analysis, obtained by combined sieve and hydrometer methods, can be used to determine the relative proportions of the different size particles that make up the soil sample. The percentage of fine-grained material determined by the hydrometer method should not be used in determining textural classes of soils.

Liquid limit and plasticity index are discussed in the section relating "Engineering Properties."

The specific gravity of a soil is the ratio of the weight in air of a given volume of soil particles at a stated temperature to the weight in air of an equal volume of distilled water at stated temperature. Most soils have specific gravities in the range of 2.65 or 2.85.

### ***Formation, Morphology, and Classification***

In this section, the factors that have affected the formation and composition of the soils in the survey area are described, and some important morphological features are discussed. The last part of the section deals with the classification of the soils of the survey area.

#### **Formation**

Most soils are formed by weathering and other processes that act on parent material. The characteristics of the soil at any given point depend on the parent material, climate, plants and animals, relief, and time.

The active forces that gradually form a soil from parent material are climate and plant and animal life. Relief strongly influences natural drainage, aeration, runoff, erosion, and exposure to sun and wind, and, as a result, it influences the effectiveness of the active

soil forming processes. Generally, soil forming factors are complex. Each force interacts with others and, slowly but constantly, changes are brought about. A soil passes slowly through stages that can be considered as youth, maturity, and old age. Therefore, the character and thickness of a soil depend upon the intensity of the soil forming processes, the length of time during which the various processes have acted, and the resistance of the parent material to change.

At any stage in formation, a soil can be affected by mechanical agencies and by man. The surface layer can be wholly or partly removed by erosion and the material beneath it can become exposed. The soil-forming forces then begin acting on the exposed material to form a new surface layer. Accelerated erosion caused by improper use can severely limit the use of the soil for many years. Grading, shaping, and leveling by man rearrange the soil horizons and interrupt the effects of soil forming factors. Irrigating a soil when it normally is dry has the effect of placing the soil in a different climate environment. Draining by ditch or tile drains counteracts the effects of relief and climate, thereby changing the relationship among the soil forming factors. Applying amendments and chemicals affects the chemical composition of the soil and the plant and animal life.

The soil forming factors are discussed in the paragraphs that follow.

#### ***Climate***

The climate of the survey area is mainly semi-arid and most of the annual precipitation falls in winter. Climate affects the kind and amount of native vegetation. In parts of this survey area temperature in winter is so low that the soils are frozen for long periods. During these periods many soil-forming processes stop. The average annual air temperature is normally 45° to 52° F at low elevations and decreases to less than 45° at higher elevations within the survey area. The upper few inches of the soil is frozen for some period during winter, and daily freezing and thawing are common on south-facing slopes. Summer temperatures are cool.



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The total precipitation and season of distribution are such that most soils become thoroughly dry in some part of the solum for at least 60 days in most years. The average annual precipitation is 10 to 14 inches in the eastern part of the survey area and about 14 to 30 inches in the forested areas at higher elevations. Precipitation is mainly in the period between October and June. Summer precipitation is spotty and is mostly lost by evaporation. Rainfall is sufficient to only slightly leach or moderately leach the soils.

#### ***Living organisms***

In well drained areas where the precipitation is 10 to 16 inches a year, the natural vegetation is mainly bluebunch wheatgrass, Sandberg bluegrass, Idaho fescue, big sagebrush, and bitterbrush. In these areas, the A horizon is about 10 inches thick and is more than 1 percent organic matter. As precipitation increases to more than 16 inches and elevation increases to more than 3,600 feet, conifer forests replace the grass and shrub vegetation.

Areas that are not well drained have native plants that differ from the types common in well drained areas. On the flood plains of streams, grasses, sedges, and rushes grow in various combinations. This vegetation supplies an abundance of organic matter, and soils in these areas commonly have an A horizon that is thicker than 10 inches.

Animals and insects that burrow in the soil influence soil formation but probably not as much as plants. Badger activity is common on sandy or loamy soils that are relatively free of stones.

#### ***Parent material***

The soils of the survey area formed in residuum from the weathering of bedrock and in colluvium on sloping uplands and plateaus; material transported by water and deposited as unconsolidated deposits of clay, silt, and gravel; pumice and ash from volcanic activity; and loess that has been transported by wind from other areas. Soils formed in residuum and colluvium contain minerals and weathered products that have similar composition to the original rock. Alluvial

and aeolian material has been mixed so that its original mineralogy is no longer distinct.

The size of particles, mineralogy, and thickness of the parent material have greatly influenced the nature of the soils. Some soil characteristics are inherited directly from the parent material. For example, the soils on uplands are generally shallow over bedrock and are stony. Soils that formed in material on alluvial fans and terraces generally are somewhat gravelly or cobbly and in places are high in content of pumice. Soils formed in loess are high in silt and are shallow to deep over bedrock.

Some of the oldest exposed geologic formations in the survey area are those of the Tertiary Period. (3). They are only minor in extent, and most of them have been covered by succeeding formations of the Quaternary Period consisting mostly of tuff and breccia beds. The material weathers readily resulting in soils that are high in content of clay. Sherar and Sinamox soils formed partly in residuum and colluvium weathered from breccia.

The Columbia River Basalt flow has preserved the major ridges adjacent to the Deschutes and Columbia Rivers. Tygh Ridge in the central part of the survey area is representative of the Columbia River Basalt. Bald, Bodell, Bindle, Bakeoven, and Licksillet soils formed partly in residuum and colluvium weathered from this basalt. The basalt is commonly more than 1,000 feet thick.

The Dalles Formation has been deposited over older formations in the western part of the survey area (5). It was built up slowly, as is evidenced by buried soils in the regolith. Cherryhill, Duart, Frailey, Hesslan, Maupin, Skyline, Tygh, Wapinitia, and Watama soils formed partly in residuum and colluvium weathered from materials in this geologic formation.

During recent geologic times a mantle of loess was laid down over the entire survey area, but now it is thickest on north-facing slopes, mostly as a result of preferential erosion. It is a nonstratified and unconsolidated deposit by the wind. It is composed dominantly of silt-sized particles of feldspar, quartz, calcite, and

mica, ordinarily with accessory clay and sand. Typically, loess is very smooth and floury.

The loess probably originated from glacial outwash left in the channel of the Columbia River during the Ice Age, or Pleistocene Epoch. The loess probably accumulated chiefly in warm periods when the glaciers melted, the sedimentation of outwash was at a maximum, and the ground surface was neither frozen nor blanketed with snow. Winds from the northeast that blew across the bare outwash evidently started sand grains moving in a jumping motion. The jumping grains bombarded the surface and kicked silt particles into the air stream. The silt and very fine sand particles were carried toward the southwest and gradually settled throughout a wide area. In this area, there is a relationship between the texture and thickness of the loess. Closer to the source, the deposits are coarser textured and thicker. In a southerly direction farther from the source, the deposits are finer textured and thinner.

Along road cuts in the survey area, the loess stands in vertical banks as much as 10 feet thick. This phenomenon, peculiar to loess and common wherever loess occurs, results when the individual plate-shaped particles are laid down flat, much like the pages of a book. On slopes, however, because of the uniform size of the particles, loess is susceptible to water erosion if not protected by vegetation.

Loess contains a wide variety of easily weatherable minerals and together with other favorable qualities generally results in naturally fertile soils. Anderly, Cantala, Condon, Dufur, Hermiston, Nansene, Pedigo, Walla Walla, Warden, Wato, and Wrentham soils formed mostly in loess.

At one or more times during the deposition of the loess, volcanic ash also was deposited in the survey area. Most likely it came from the now extinct volcanoes of the Cascade Mountains. All of the soils in the survey area probably contain some volcanic ash, which consists of sharp edged, sand to silt sized particles of silica, feldspar, glass, and other materials. The Bins, Bindle, Ketchly, and Wamic soils formed in material high in volcanic ash.

### **Relief**

Aspect, or the direction a slope faces, is one of the most important features of relief that has affected soil formation in this survey area. Soils that have south-facing slopes are warmer and drier than those that have north-facing slopes, have less natural vegetation and a lower content of organic matter, and have retained a thinner mantle of loess and volcanic ash against erosion.

Another important feature is slope gradient. Steep soils commonly have thinner and less distinct soil horizons than gently sloping soils, have a greater erosion hazard, and retain less water.

Most soils in the survey area are well drained. Wet soils are only on flood plains or in depressions on the upland plateaus.

### **Time**

The length of time that soil parent material has been subjected to weathering in combination with other

factors plays a significant role in soil formation. If other factors are equal, younger soils have less horizon differentiation than older soils. For example, Endersby and Hermiston soils formed in recent alluvium, and although leaching has been strong, no B horizon has formed. Licksillet and Sherar soils formed under less precipitation but over a longer period of time and have a distinct B horizon.

### **Morphology**

A soil is not easily studied in its natural position because only the surface is exposed. To see and study a soil, it is necessary to expose a vertical section, or profile. A profile generally consists of several layers, or horizons.

In the survey area, the differentiation of horizons is the result of one or more of the following: accumulation of organic matter in the A horizon, accumulation of silicate clay in the B horizon, retention of calcium, potassium, and magnesium to give high base saturation, accumulation or retention of calcium carbonate in lower horizons, and cementation by alkali soluble materials into a hardpan in well drained soils. Walla Walla soils, for example, reflect the accumulation of organic matters and retention of bases.

Organic matter has accumulated in the surface layer of all of the soils in the survey area to form an A horizon. The content of organic matter is lowest in Warden and Bakeoven soils and highest in Nansene and Wrentham soils. The removal of native vegetation from many soils and the subsequent reduction in organic matter under a summer-fallow system of farming have markedly changed the structure and water absorbing ability of the A horizon. Surface crusting, vesicular porosity, and massive or platy structure are common in the A horizon of soils that are cultivated.

Laboratory data on the content of clay confirms that the Cherryhill soils (table 17) have an argillic horizon. Ketchly, Sherar, Van Horn, and Wapinitia soils also have an argillic horizon, but no data are available on these soils. An argillic horizon results mainly from the translocation of silicate clay minerals and a greater formation of clay from primary minerals within the B horizon than within other horizons.

All of the soils in the survey area have moderate to high base saturation. Although data is not available for all soils, Warden soils probably have the highest base saturation and Bindle and Bins soils the lowest.

There is visible evidence of leaching of carbonates and salts in some soils in the survey area. Warden soils, which have been leached the least, have an accumulation of calcium carbonate below a depth of 21 inches. Bins and Bindle soils have been leached the most and generally contain no free carbonates.

Pedigo soils and wet spots in Hermiston soils have high sodium saturation. This probably has been caused by the sodium in the groundwater replacing other exchangeable cations.

### **Classification**

Soils are classified so that we can more easily remember their significant characteristics. Classification

enables us to assemble knowledge about the soils, to see their relationship to one another and to the whole environment, and to develop principles that help us to understand their behavior and their response to management. First through classification, and then through use of soil maps, we can apply our knowledge of soils to specific fields and other tracts of land.

The narrow categories of classification, such as those used in detailed soil surveys, allow us to organize and apply knowledge about soils in managing farms, fields, and woodland; in developing rural areas; in engineering work; and in many other ways. Soils are placed in broad classes to facilitate study and comparison in large areas.

The system of soil classification currently used was adopted by the National Cooperative Soil Survey in 1965. Readers interested in further details about the system should refer to the latest literature available (16).

The current system of classification has six categories. Beginning with the broadest, these categories are order, suborder, great group, subgroup, family, and series. In this system the differentiae used as a basis for classification are soil properties that can be observed in the field or that can be inferred either from other properties that are observable in the field, or from the combined data of soil science and other disciplines. The properties selected for the higher categories are the result of soil genesis or factors that affect soil genesis. In table 17 soils of Wasco County, Northern Part, are placed in a family or higher taxonomic class of the current system. Categories of the current system are defined briefly in the following paragraphs.

ORDER. Ten soil orders are recognized. The differentiae for the orders are based on the kind and degree of the dominant soil forming processes that have gone on.

SUBORDER. Each order is subdivided into suborders that are based primarily on properties that influence soil genesis and that are important to plant growth, or that were selected to reflect what seemed to be the most important variables within the orders. The names of suborders have two syllables.

GREAT GROUP. Soil suborders are separated into great groups on the basis of close similarities in kind, arrangement, and degree of expression of pedogenic horizons, soil moisture and temperature regimes, and in base status.

SUBGROUPS. Great groups are subdivided into three kinds of subgroups: the central (typic) concept of the great groups (not necessarily the most extensive subgroup) ; the intergrades, or transitional forms to other orders, suborders, or great groups; and extragrade subgroups that have some properties that are representative of the great groups but that do not indicate transitions to any other known kind of soil.

FAMILY. Families are established within a subgroup on the basis of similar physical and chemical properties that affect management. Among the properties considered in horizons of major biological activity below plow depth are particle-size distribution, mineral content, temperature regime, thickness of the soil penetrable by roots, consistence, moisture equivalent, soil slope, and permanent cracks.

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SERIES. The series consists of a group of soils that are formed from a particular kind of parent material and have horizons that, except for texture of the surface soil, are similar in differentiating characteristics and in arrangement in the soil profile. Among these characteristics are color, texture, structure, reaction, consistence, and mineral and chemical composition.

### ***Laboratory Data***

Physical and chemical characteristics of some representative soils in Wasco County, Northern Part, are given in table 18. The procedures used in making the analyses are described in Soil Survey Investigations Report No. 1. (15).

In preparation for laboratory analyses, soil samples were collected from pits. After air drying, the samples

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were crushed and passed through a 2-millimeter, round hole screen. The fraction greater than 2 millimeters in diameter is reported as weighted percentage of the total sample. Analyses were made on soil material less than 2 millimeters in diameter. Results are reported on an oven-dry basis.

The particle size distribution was determined by the pipette method. The amount of water and the bulk density at 1/3 bar tension were determined on plastic-coated clods in a porous-plate pressure cooker. Water held at 15-bar tension was measured on disturbed samples in a pressure membrane apparatus. Reaction is by glass electrode using soil-water ratios indicated. Organic carbon is by the Walkley-Black method. Total nitrogen is by the Kjeldahl method. Electrical conductivity is by method 3a, given in the U.S. Department of Agriculture Handbook "Diagnosis and Improvement of Saline and Alkali Soils" (12). The calcium carbonate equivalent was measured from the amount of carbon dioxide evolved on acidification of the sample. Extractable cations were leached with 1 N NH<sub>4</sub>OAc. Extractable sodium and potassium were determined by flame photometry; calcium by permanganate titra-

tion; and magnesium gravimetrically as pyrophosphate. Extractable acidity, or exchangeable hydrogen, was determined by the triethanolamine-barium chloride method. Cation-exchange capacity (CEC) is the sum of extractable cations and extractable acidity; base saturation is the sum of extractable calcium, magnesium, sodium, and potassium as percentage of the cation-exchange capacity.

The profile description for Chenoweth loam follows. The description for Cherryhill silt loam is on page 16, and for Walla Walla silt loam on page 32.

Chenoweth loam (S67-Ore-33-1 to 10) Wasco County, center of section 10, T. 1 N., R. 13 E.:

- Ap1-0 to 6 inches; very dark brown (10YR 2/2) very fine sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, very friable, slightly sticky, slightly plastic; many roots and pores; abrupt smooth boundary.
- Ap2-6 to 10 inches; very dark brown (10YR 2/2) very fine sandy loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to weak fine granular; slight( hard, friable, slightly sticky, slightly plastic; many roots and fine pores; clear smooth boundary.
- A3-10 to 17 inches; grayish brown (10YR 5/2) loam;

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weak fine granular structure; slightly hard, very friable, slightly sticky, slightly plastic; many roots and fine pores; few noncalcareous nodules as much as 1 inch in diameter, but mainly 1/2 inch in diameter; many earthworm casts; thin patchy clay films on peds and on pores; gradual smooth boundary.

B21-17 to 25 inches; dark brown (10YR 3/3) loam or light very fine sandy clay loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; very friable or friable, sticky, plastic; many roots and fine pores; very few thin clay films on peds and in pores; few earthworm casts; few noncalcareous nodules as much as 1 inch in diameter, but mainly about 1/2 inch in diameter; clay films nearly continuous on nodules; gradual wavy boundary.

B22-25 to 42 inches; dark brown (10YR 3/3) loam or light very fine sandy clay loam, brown (10YR 5/3) dry; weak coarse prismatic structure parting to weak medium subangular blocky; slightly hard, friable, sticky, plastic; many roots and fine pores; few thin clay films on peds and in pores; many noncalcareous very dark grayish brown nodules mainly about 1/2 inch in diameter; clear smooth boundary.

B3-42 to 50 inches; dark yellowish brown (10YR 3/4 and 4 / 4) loam or very fine sandy loam, brown (10YR 5/3) dry; massive and weak fine subangular blocky structure; soft, very friable, slightly sticky, slightly plastic; few nodules; many roots and fine pores; abrupt

smooth boundary.

C1-50 to 70 inches; dark yellowish brown (10YR 3/4) very fine sandy loam, light yellowish brown (10YR 6/4) dry; massive; soft, friable, very slightly sticky, very slightly plastic; some fine roots and fine pores; gradual wavy boundary.

C2-70 to 82 inches; dark yellowish brown (10YR 3/4) very fine sandy loam, pale brown (10YR 6/3) dry; massive; soft, friable, slightly sticky, slightly plastic; few fine roots and fine pores; abrupt wavy boundary.

## *General Nature of the Area*

This section provides general information about the physiography, climate, history, transportation, and water supply of Wasco County, Northern Part. Census figures were not used from the U.S. Census of Agriculture for this area because the survey area covers only a part of the county.

## **Physiography**

The survey area is partly on the Columbia Plateau physiographic province and partly on the Eastern Cas-



cade Mountain provinces. The Columbia Plateau is a lava-floored plain that has been uplifted since molten basalt flooded the area. That part of the Eastern Cascade province in the survey area is a high upland terrace of coarse alluvial and pyroclastic materials. This terrace is eroded, and wide nearly level ridgetops are between deep V-shaped canyons. Elevation ranges from 1,000 feet along the northern boundary to about 3,500 feet in the southwestern and western parts of the survey area. The Columbia River, which marks the northern boundary, has an average elevation of 97 feet. Escarpments and very steep slopes border the Columbia River and rise abruptly to the upland terraces.

Tygh Ridge, which is at an elevation of 3,150 feet, is 22 miles south of the Columbia River. North of this ridge, drainage is to the Columbia River. South of the ridge, drainage is to White River and then to the Deschutes River, which forms the eastern boundary of the survey area.

The Columbia River Watershed within the survey area, excluding drainage of the Deschutes River, covers about 338,629 acres. In some places narrow sandy terraces parallel the river; in others, vertical basalt escarpments rise from 800 to 1,000 feet. Except for a few acres of Riverwash, there are no large recent alluvial areas. Tributary streams, flowing directly to the river, have rather steep gradients and flow through deep, V-shaped canyons. Rock Creek, Mosier, Rowena, Mill, Three Mile, Five Mile, and Fifteen Mile Creeks terminate at the Columbia River.

The Juniper Flat and Wamic area, which is at an elevation of 1,600 to 3,400 feet, is south of Tygh Ridge. This upland plateau, which forms the southern boundary of the survey area, drains to the Deschutes River.

The Deschutes River and its main stem and tributaries have a watershed of 221,101 acres within the survey area. White River, south of Tygh Ridge, is one of its main perennial tributaries. Wapinitia and Nena Creeks terminate at the Deschutes River.

The elevation of the towns are The Dalles, 98 feet; Dufur, 1,319 feet; Friend, 2,450 feet; Mosier, 100 feet; and Maupin, 902 feet.

#### **Patterned Ground, or "Biscuit Scabland" (14)**

Patterned ground is the general term applied to biscuits or mounds, stone nets, and stone stripes that form distinct patterns on the ground surface (fig. 13). Patterned ground, locally called biscuit scabland, makes up about 35,000 acres. Theories of the origin of such landforms are numerous, and only one simplified explanation is given here.

A common kind of pattern that occurs under glacial influence, mainly in perennially frozen areas, indicates that frozen ground cracks at low temperatures and forms rectangular or polygonal patterns. Ice that forms in these nearly vertical cracks can develop into ice wedges. Commonly, these polygonal structures are the result of the contraction of a layer of homogeneous material, either soil or rock, that is perpendicular to the cooling surface. This is illustrated in the columnar



Figure 13: Area of biscuit scabland. The mounds, or biscuits, are Condon soils; surrounding the mounds is the very shallow Bakeoven soil.

jointing of basalt and in the formation of mud cracks.

The chief climatic significance of the soil patterns as landforms in the survey area is that frozen ground apparently existed in front of the continental glacier during glacial invasion. A regular pattern of polygonal fractures could form in ground frozen to a uniform depth as a result of contraction during periods of subfreezing temperature. Ice wedges could form in these if the temperature fluctuated but generally remained below freezing (6). Then as the climate became warmer and the front of the continental glacier retreated northward, the ice wedges began to melt. The runoff waters could have caused the erosion and modification of the polygons or mounds.

The biscuits are round or elongated, erosion-modified, polygonal mounds that are underlain by basalt at a depth of 2 to 3 feet. The soil in these mounds has a more weakly defined profile than adjacent soils, but otherwise it is similar to Condon soils. Frost heaving probably was the cause of mixing of various sized fragments of basalt in the soil and of mixing of genetically formed horizons. The soil in the mounds is lighter colored than the adjacent soils and is somewhat more rapidly drained. The removal of large amounts of mineral soil in the formation of the mounds is obvious from the scabland that surrounds the mounds.

The soils in the scabland formed mainly in remnants of material not removed during the thawing of the ice wedges and in material more recently washed from the mounds.

A less striking feature than the mounds are the stone nets, which in places encircle the mounds, and the stone polygons on the scabland. These stone nets and polygons consist of various sized fragments of basalt as much as 2 feet in diameter. Studies of similar features elsewhere suggest that these may have resulted from frost heaving along the original ice-wedged cracks (8).

Where slope is steep, the stone nets and polygons form sorted stripes, or rows, of rock that vary in length and width. The mounds occupy the gentle upper slopes of many of the minor ridges; the sorted stone polygons, the moderately steep intermediate slopes; and the sorted stripes, the steepest slopes on the lower part of the ridges. In places there are sorted stripes that are not associated with nets, polygons, or mounds (6).

## History

Wasco County, once the largest county in the United States, has been reduced to a fraction of its original size. At inception Wasco County encompassed about 130,000 square miles. It extended from the Cascade Mountains and from the Washington, Idaho, and Montana borders to the California, Nevada, and Utah borders. It now is in north-central Oregon between Hood River, Jefferson, and Sherman Counties, and the Columbia River. The county seat is The Dalles.

Wasco County was formed January 11, 1854, and maintained its original size until February 14, 1859,

By JOHN LUNDELL.

when Oregon gained statehood. Wasco County's eastern border was the Oregon-Idaho state line. Seventeen counties have been formed in Eastern Oregon out of old Wasco County. Baker County was the first in 1862, and Deschutes County petitioned away in 1916.

Indians living along the Columbia River were the first known inhabitants of the survey area, and fishing was their main livelihood. Indians from other tribes in the Pacific Northwest traveled annually to Winquatt (the Indian name for the geographical area now known as Petersburg, Thompsons Addition, the Dalles, and Chenoweth) to trade and barter for fish. The United States Government established the Warm Springs Indian Reservation in 1855, located partly in the southern part of Wasco County.

The Lewis and Clark Expedition came into the survey area on October 25, 1805. Their group camped at what they termed "Fort Rock," which is located near where Mill Creek enters the Columbia River. For about the next 25 years, the travelers in the area were interested in or associated with the fur trading industry. In 1820 the Hudson Bay Company established a temporary trading post at The Dalles. The region was explored by Peter Skene Ogden, Nathaniel Wyeth, and John C. Fremont.

From 1843 to 1848, wagon trains began arriving from the East over the Old Oregon Trail. At The Dalles they had two methods of reaching the Willamette Valley. One was to raft, boat, or float down the Columbia River. The other was to travel overland around Mt. Hood. A toll road was built around the south side of Mt. Hood in 1846. It began near Wamic in the central part of Wasco County. To get to the toll road some immigrant trains chose to leave the Columbia River just west of where the Deschutes River terminates and travel over the rolling hills to Fairbanks on Fifteen Mile Creek. They would then follow the creek up to Fifteen Mile Crossing (Dufur), over Tygh Ridge and down into Tygh Valley, and then up onto Wapinitia Flat to Wamic.

The Whitman Massacre occurred in 1847, and Oregon Territorial Governor Abernathy promptly dispatched a company of troops to The Dalles on December 8, 1847. Thus began what has to be considered the permanent establishment of a community in Wasco County. Dalles City was incorporated June 22, 1857. The military used the remains of the Methodist Mission buildings as quarters. The military maintained their post at Fort Dalles until the end of the Yakima Indian War in 1858 and then finally abandoned it in 1867.

Settlers started to locate in the rural areas of Wasco County along the numerous streams that flowed north and east from the Mt. Hood drainage system.

Discovery of gold in the early 1860's in the eastern and central parts of Oregon further hastened the settlement of Wasco County. Laborers were imported to help with the tedious digging task. Wagon stops were located out of The Dalles at half-day travel intervals. The main travel route went south across Three, Five, Eight, and Fifteen Mile Creeks, up over Tygh Ridge, and down into the Deschutes Canyon at Sherars Bridge. Crossing at the Deschutes River was a pleasant respite

from the hot, dry, dusty trail. On the trail out of the canyon were Bakeoven, Shaniko, and Antelope. So much gold was coming out of the John Day-Canyon City Country that the U.S. Government started construction of a mint at The Dalles. However, the precious metal source dwindled before coins could be minted.

Major transportation along the Columbia River in the Pioneer Period was confined to steamboats. The sternwheelers paddled up and down the river in front of The Dalles from the 1850's to about 1915. Scows were used to transport lumber from sawmills down the Columbia River, such as the one at Mosier, up to The Dalles. Completion of The Dalles-Celilo Canal in 1915 greatly increased water traffic to the Inland Empire Region.

The Dalles-Celilo Portage Railroad started in 1863. In 1882 The Dalles was connected to Portland by rail and to Wallula in 1883. The first branch railroad to the southern part of Wasco County was started in 1898, and it extended from Biggs in Sherman County to Shaniko. In 1905 John Heinrich built the Great Southern Railroad to Dufur and extended it into Friend in 1913. The Great Southern Railroad opened up the small communities and whistletops of Petersburg, Fairbanks, Fulton, Brookhouse, Freebridge, Neabeck, Emerson, Wrentham, Rice, Boyd, Dufur, and Friend to regular rail travel. In 1909 the Union Pacific Railroad and the Spokane, Portland & Seattle fought their way to Central Oregon up the Deschutes River. Maupin became an important part of Wasco County's economy because most goods on the Wapinitia Flat are funneled through Maupin to the Oregon Trunk Railroad.

Automobiles and modern highways have aided residents in getting to and from the market places. The routes used are virtually the same. Only the mode and speed has changed.

Farming became big business in Wasco County in the 1860's. Sheep and cattle raised in the central and southern parts of the county contributed to the stability of the economy. Shaniko was once one of the world's largest wool shipping points. Wool buyers from all over the world came to The Dalles and used the famed Umatilla House as their headquarters. Wheat and other grains gradually gained acreage in the eastern and northern parts of the county. Irrigation made possible several cuttings of alfalfa each year, which are either used by the grower or sold to users in the Pacific Northwest. The fruit industry of cherries, peaches, apricots, and apples find world markets. Large apple orchards at Dufur and Ortley failed miserably.

Attempts to diversify the economy of Wasco County have been initiated primarily by the construction of The Dalles Dam. Until the 1950's the economy was virtually stagnant. A major aluminum plant using electrical power was the first attempt at change. The economy is farm oriented, and goods and services concentrate on that segment of the economy.

## Climate

The survey area has very light annual total precipi-

By GILBERT L. STERNES, climatologist for Oregon, National Weather Service, U.S. Department of Commerce.

tation and somewhat extreme temperatures in both summer and winter. Records used in evaluating the temperature and precipitation were from Friend and Dufur for the Columbia Plateau area and from The Dalles located at the eastern end of the Columbia Gorge on the Columbia River flood plain.

## Temperature

Marine air moving up through the Columbia Gorge and spreading into the inland Columbia Basin has a significant moderating effect on the more extreme temperatures of both summer and winter. The occasional low winter temperatures are the result of strong invasions of very cold continental air from the northeast. Excessively warm temperatures are similarly the result of occasional high pressure during the summer stagnating either over the inland Columbia or Great Basins.

Temperatures have ranged from -30° to 115° F above, both recorded at The Dalles. In most years temperature is not more than 107° or lower than -3° (table 19).

The dates of low temperatures in spring or before which they will occur in fall are given in table 20. These temperatures are significant to various crops. The number of days between the average spring and fall dates of 32° temperature is often referred to as the growing season (table 21).

## Precipitation

The average annual precipitation ranges from nearly 10 inches on the eastern edge of the survey area to about 30 inches on the higher slopes of the western part. Between 70 and 80 percent of the annual precipitation occurs in November to March. Only 5 to 10 percent occurs in June to August. The rest is fairly evenly divided between April and May and September and October. While most of the precipitation is in the form of rain, there is substantial snowfall almost every winter, particularly in the higher reaches of the western part of the survey area. The greatest 3-day total ever recorded in Oregon, other than in high mountain areas, was 54 inches at The Dalles. Measurable precipitation can be expected on about 75 days a year.

In table 22 is a summary of certain monthly and annual precipitation data.

## Sunshine and cloudiness

There are about 100 to 120 clear, 80 to 90 partly cloudy, and 165 to 185 cloudy days a year. Actual sunshine records have never been made in the survey area, but in a study in which records of cloudiness in the area and of sunshine at surrounding points were analyzed, it is estimated that the sun shines about 20 to 30 percent of the time in December and January; 55 to 65 percent in April, May, and June; 75 to 85 percent in July, August, and early in September. Then it gradually decreases to the winter average.

## Relative humidity

In the early morning hours when the air temperature is the lowest, relative humidity of 90 to 100 percent occurs in the summer and is quite frequent almost

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any time of the day late in fall and in winter. In contrast, during the warmest part of the day in summer, it is not unusual to have a relative humidity of 10 to 20 percent. Occasionally it is even lower, although the average is 35 percent.

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## Glossary

**Alluvium.** Material, such as sand, silt, or clay, deposited on land by streams.



**Area reclaim.** An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

**Available water capacity.** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. In this survey, the range in inches of water is given for each series. This amount is based on the minimum and maximum depths of profiles (to a maximum of 60 inches) and takes into account the different amounts of water held in the ranges of texture given for the profile.

**Base saturation.** The degree to which material having base exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the exchange capacity.

**Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

**Colluvium.** Soil material, rock fragments, or both moved by creep, slide, or local wash and deposited at the bases of steep slopes.

**Concretions.** Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxides are common compounds in concretions.

**Consistence, soil.** The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are-

*Loose.*-Noncoherent when dry or moist; does not hold together in a mass.

*Friable.*-When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

*Firm.*-When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

*Plastic.*-When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.

*Sticky.*-When wet, adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.

*Hard.*-When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

*Soft.*-When dry, breaks into powder or individual grains under very slight pressure.

*Cemented.*-Hard; little affected by moistening.

**Crop year.** The year in which a crop is harvested. It contrasts with the fallow year, the year in which no crop is grown and the soil accumulates moisture from the crop year.

**Cross-slope farming.** Plowing, cultivating, planting, and harvesting across the general slope, but not on the contour.

**Cutbanks cave.** Unstable walls of cuts made by earthmoving equipment. The soil sloughs easily.

**Depth to rock.** Bedrock at a depth that adversely affects the specified use.

**Diagnostic horizon.** A combination of specific soil characteristics that indicate certain classes of soils. Those at the surface are called epipedons; those below the surface, diagnostic subsurface horizons.

**Drainage class (natural).** Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

*Excessively drained.*-Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related to wetness.

*Somewhat excessively drained.*-Water is removed from the soil rapidly. Many somewhat excessively drained soils are

sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.

*Well drained.*-Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well drained soils are commonly medium textured. They are mainly free of mottling.

*Moderately well drained.*-Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically for long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum, or periodically receive high rainfall, or both.

*Somewhat poorly drained.* Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.

*Poorly drained.*-Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough during the growing season that most mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, nearly continuous rainfall, or a combination of these.

*Very poorly drained.*-Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients, as for example in "hillpeats" and "climatic moors."

**Dryfarming.** Producing crops that require some tillage in a subhumid or semiarid region, without irrigation. Dryfarming usually involves using periods of fallow during which enough moisture accumulates in the soil to allow production of a cultivated crop.

**Duripan.** A subsurface silica-cemented horizon.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Eolian soil material.** Earthy parent material accumulated throw wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

**Erosion.** The wearing away of the land surface by running water, wind, ice, or other geologic agents and by such processes as gravitational creep.

*Erosion (geologic).* Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

*Erosion (accelerated).* Erosion much more rapid than geologic erosion, mainly as a result of the activities of man or other animals or of a catastrophe in nature, for example, fire, that exposes a bare surface.

**Excess fines.** Excess silt and clay. The soil does not provide a source of gravel or sand for construction purposes.

**Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grains are grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

**Favorable.** Favorable soil features for the specified use.

**Frost action.** Freezing and thawing of soil moisture. Frost action can damage structures and plant roots.

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**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gravel.** Rounded or angular fragments of rocks up to 3 inches (2 millimeters to 7.5 centimeters) in diameter. An individual piece is a pebble.

**Horizon, soil.** A layer of soil, approximately parallel to the Surface, having distinct characteristics produced by soil-forming processes. The major horizons of mineral soil are as follows

*O horizon.*-An organic layer, fresh and decaying plant residue, at the surface of a mineral soil.

*A horizon.*- The mineral horizon, formed or forming at or near the surface, in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon most of which was originally part of a B horizon.

*A2 horizon.*-A mineral horizon, mainly a residual concentration of sand and silt high in content of resistant minerals as a result of the loss of silicate clay, iron, aluminum, or a combination of these.

*B horizon.*-The mineral horizon below an A horizon. The B horizon is in part a layer of change from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics caused (1) by accumulation of clay, sesquioxides, humus, or a combination of these; (2) by prismatic or blocky structure; (3) by redder or browner colors than those in the A horizon; or (4) by a combination of these. The combined A and B horizons are generally called the solum, or true soil. If a soil lacks a B horizon, the A horizon alone is the solum.

*C horizon.*-The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the A or B horizon: The material of a C horizon may be either like or unlike that from which the solum is presumed to have formed. If the material is known to differ from that in the solum the Roman numeral II precedes the letter C.

*R layer.*-Consolidated rock beneath the soil. The rock commonly underlies a C horizon, but can be directly below an A or a B horizon.

**Illuviation.** The accumulation of material in a soil horizon through the deposition of suspended material and organic matter removed from horizons above. Since part of the fine clay in the B horizon (or subsoil) of many soils has moved into the B horizon from the A horizon above, the B horizon is called an illuvial horizon.

**Large stones.** Rock fragments 10 inches (25 centimeters) or more across. Large stones adversely affect the specified use.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess.** Fine grained material, dominantly of silt-sized particles, deposited by wind.

**Low strength.** Inadequate strength for supporting loads.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mottling, soil.** Irregular spots of different colors that vary in number and size. Mottling generally indicates poor aeration and impeded drainage. Descriptive terms are as follows: abundance-few, common, and many; size-fine, medium, and coarse; and contrast-faint, distinct, and prominent. The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).

**Munsell notation.** A designation of color by degrees of the three single variables-hue, value, and chroma. For example, a notation of 10YR 6/4 is a color of 10YR hue, value of 6, and chroma of 4.

**Nutrient, plant.** Any element taken in by a plant, essential to its growth, and used by it in the production of food and tissue. Plant nutrients are nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, zinc, and perhaps other elements obtained from the soil; and carbon, hydrogen, and oxygen obtained largely from the air and water.

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Percs slowly.** The slow movement of water through the soil adversely affecting the specified use.

**Permeability.** The quality that enables the soil to transmit water or air, measured as the number of inches per hour that water moves through the soil. Terms describing permeability are very slow (less than 0.06 inch), slow (0.06 to 0.2 inch), moderately slow (0.2 to 0.6 inch), moderate (0.6 to 2.0 inches), moderately rapid (2.0 to 6.0 inches), rapid (6.0 to 20 inches), and very rapid (more than 20 inches).

**Piping.** Moving water forms subsurface tunnels or pipelike cavities in the soil.

In the original manuscript, there was a table in this space.  
All tables have been updated and are available as a separate document.

**Reaction, soil.** The degree of acidity or alkalinity of a soil, expressed in H values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degree of acidity or alkalinity is expressed as

	pH		pH
Extremely acid	Below 4.5	Neutral	6.6 to 7.3
Very strongly acid	4.5 to 5.0	Mildly alkaline	7.4 to 7.8
Strongly acid	5.1 to 5.5	Moderately alkaline	7.9 to 8.4
Medium acid	5.6 to 6.0	Strongly alkaline	8.5 to 9.0
Slightly acid	6.1 to 6.5	Very strongly alkaline	9.1 and higher

**Rooting depth.** Shallow root zone. The soil is shallow over 4 layer that greatly restricts roots.

**Runoff.** The precipitation discharged in stream channels from a drainage area. The water that flows off the land surface without sinking in is called surface runoff; that which enters the ground before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeter in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay, and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

**Seepage.** The rapid movement of water through the soil. Seepage adversely affects the specified use.

**Shrink-swell.** The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Slope, soil.** Amount of deviation of a surface from the horizontal, usually expressed in percent. A 5-foot fall or rise per 100 feet of horizontal distance is a slope of 5 percent. The

slope classes used in this survey are: 0 to 7 percent, nearly level or gently sloping; 7 to 12 percent, moderately sloping; 12 to 20 percent, moderately steep; 20 to 45 percent, steep; and 45 to 70 percent, very steep

**Small stones.** Rock fragments 3 to 10 inches (7.5 to 25 centimeters) in diameter. Small stones adversely affect the specified use.

**Soil depth.** The depth to which ant roots penetrate; the depth to the underlying bedrock, hardpan, or other restrictive layer. The depth classes used in this survey area are: 4 to 20 inches, shallow; 20 to 40 inches, moderately deep; more than 40 inches deep.

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in mature soil consists of the A and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and other plant and animal life characteristics of the soil are largely confined to the solum.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates that are separated from adjoining aggregates. The principal forms of soil structure are-platy (laminated), prismatic (vertical axis of aggregates longer than horizontal), columnar (prisms with rounded tops), blocky (angular or subangular), and granular. Structureless soils are either single grained (each grain by itself, as in dune sand) or massive (the particles adhering without any regular cleavage, as in many hardpans).

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.

**Surface soil.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

**Thin layer.** Otherwise suitable soil material too thin for the specified use.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Water-supplying capacity.** Water stored in the soil at the beginning of plant growth in the spring, plus rainfall not in excess of evapotranspiration during the growing season, less runoff.

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All tables have been updated and are available as a separate document.

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slope classes used in this survey are: 0 to 7 percent, nearly level or gently sloping; 7 to 12 percent, moderately sloping; 12 to 20 percent, moderately steep; 20 to 45 percent, steep; and 45 to 70 percent, very steep

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**Thin layer.** Otherwise suitable soil material too thin for the specified use.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

**Water-supplying capacity.** Water stored in the soil at the beginning of plant growth in the spring, plus rainfall not in excess of evapotranspiration during the growing season, less runoff.

## ATTACHMENT D – EXHIBIT 13

“Guide for Using Soil Survey Single Phase Interpretation Sheets in Oregon”



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**

GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.



## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty

Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.



Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:



<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0

Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low	.00, .02, .05, .10, .15, .17, .20
Moderate	.24, .28, .32, .37
High	.43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.



A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	

Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.



These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.



#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.

Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.

The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.



Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.



Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:



Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.

## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.



selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other



important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.

XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.



FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.

## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982

## ATTACHMENT D – EXHIBIT 14

“Soil Survey Single Phase Interpretation Sheets in Oregon”



## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

POST-FREE PERIOD IS 100 TO 150 DAYS.													
ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)		USDA TEXTURE	UNIFIED	AASHTO		PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY		
						(PCT)					INDEX		
0-7 IL			ML CL-ML	A-4		0	195-100	95-100	90-95	55-75	20-25	INP-5	
7-28 IL, SIL			ML CL-ML	A-4		0	195-100	95-100	90-95	55-75	20-25	INP-5	
28-44 IL, SCL			ML	A-4		0	195-100	95-100	90-95	55-75	30-35	5-10	
44 IUB													
CORROSIVITY													
DEPTH (IN.)		CLAY (PCT)	MOIST BULK DENSITY (G/CM3)	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND GROUP	ORGANIC MATTER (PCT)	STEEL CONCRETE	
0-7		115-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	1-2	MODERATE	
7-28		118-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43			LOW	
28-44		120-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43				
44													
FLOODING													
HIGH WATER TABLE													
CEMENTED PAN													
BEDROCK													
SUBSIDENCE													
HYDROLYTIC													
INITIAL FROST													
ACTION													
FREQUENCY		DURATION		MONTHS		(FT)		(IN)		(IN)		(IN)	
NONE						26.0		-		140-60		HARD	

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY			ROADFILL	FAIR-AREA RECLAIM, THIN LAYER		
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK			GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE			TOPSOIL	FAIR-SLOPE		
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE			EMBANKMENTS, DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE			EXCAVATED PONDS, AQUIFER FED	SEVERE-NO WATER		
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE			DRAINAGE	DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE			GRASSED WATERWAYS	SLOPE, ERODES EASILY		

MODERATE-SLOPE, DUSTY		RECREATIONAL DEVELOPMENT		SEVERE-SLOPE	
CAMP AREAS			PLAYGROUNDS		
MODERATE-SLOPE, DUSTY				SEVERE-ERODES EASILY	
PICNIC AREAS		PATHS AND TRAILS			
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)					
CAPABILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)			
4E	35	1.5			
Severe limitations (e) erosion					
WOODLAND SUITABILITY					
ORO SYM	EROSION EQUIP. HAZARD	SEEDLING WINDTH. LIMIT	PLANT COMPET. HAZARD	POTENTIAL PRODUCTIVITY COMMON TREES	TREES TO PLANT
14A	MODERATE	SLIGHT	MODERATE	SEVERE	PONDEROSA PINE OREGON WHITE OAK
<p>Handwritten notes:</p> <p>1.2 cu. yd. per ft. of material = 57.2 43/100</p> <p>A = slight erosion limitations</p> <p>Gr. Avg = 41 43/100</p>					
SPECIES		WINDBREAKS	SPECIES	SPECIES	SPECIES
NONE					
WILDLIFE HABITAT SUITABILITY					
POTENTIAL FOR HABITAT ELEMENTS		POTENTIAL AS HABITAT FOR:			
GRAIN & GRASS SEED	WILD HERB. GOOD	HARDWOOD TREES	CONIFER PLANTS	SHALLOW WATER WILDLIFE	WETLAND WILDLIFE
FAIR	GOOD	FAIR	FAIR	POOR	POOR
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)					
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (BY WEIGHT)			
IDAH0 FESCUE	FE10	45			
BLUEBUNCH WHEATGRASS	AGSP	10			
SANDBERG BLUEGRASS	POSE	5			
NARROWLEAF BALSAMROOT	BASA3	2			
ANTELOPE BITTERBRUSH	PUTR2	10			
OREGON WHITE OAK	QUGA4	5			
PONDEROSA PINE	PIPO	5			
POTENTIAL PRODUCTION (LBS./AC. DRY WT):		950			
FAVORABLE YEARS		800			
NORMAL YEARS		450			
UNFAVORABLE YEARS					
FOOTNOTES					

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES															
DEPTH: (IN.)	USDA TEXTURE		UNIFIED	AASHTO	FRACTURE PERCENT OF MATERIAL LESS 1/3 IN. THAN 3" PASSING SIEVE NO. (PCT)				LIQUID LIMIT	PLAS- TICITY					
						4	10	40	200		INDEX				
0-7 IL			ML, CL-ML	1A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL			ML, CL-ML	1A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL			ML	1A-4	0	195-100	95-100	90-95	55-75	30-35	5-10				
44 UUB															
DEPTH: (IN.)	CLAY (PCT)	MOIST DENSITY	BULK (G/CM3)	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS (K)	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE			
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	1-2	MODERATE			
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43			LOW			
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43						
44															
FLOODING															
HIGH WATER TABLE				CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL					
FREQUENCY		DURATION		MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	INITIAL (IN)	TOTAL (IN)	GRP (IN)	FROST ACTION
NONE					26.0			-		40-60	HARD	-			MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE		ROADFILL	FAIR-AREA RECLAIM	THIN LAYER	SLOPE
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE		GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE			POND RESERVOIR AREA	SEVERE-SLOPE		
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER		
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			DRAINAGE	DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			GRASSED WATERWAYS	SLOPE, ERODES EASILY		

SEVERE-SLOPE		RECREATIONAL DEVELOPMENT				SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS					
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS				SEVERE-ERODES EASILY	
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)							
CAPABILITY	WHEAT	GRASS HAY					
(BU)	(BU)	(TONS)					
INIRR	INIRR	INIRR	INIRR	INIRR	INIRR	INIRR	INIRR
4E	35	1.5					
WOODLAND SUITABILITY							
ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY		
	EROSION	EQUIP.	SEEDLING	WINDTH.	PLANT	COMMON TREES	TREES TO PLANT
	HAZARD	LIMIT	MORTY.	HAZARD	COMPT.	ISITE	INDEX
4A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	170 PONDEROSA PINE
WILDLIFE HABITAT SUITABILITY							
SPECIES		INT	SPECIES		INT	SPECIES	
NONE							
POTENTIAL FOR HABITAT ELEMENTS							
GRAIN	SPASS	WILD	HARDWD	CONIFER	SHRUBS	WETLAND	SMALLOW
SEED	LEGUME	HERB.	TREES	PLANTS	PLANTS	WATER	WILDLF
POOR	FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)							
COMMON PLANT NAME	PLANT SYMBOL	PERCENTAGE COMPOSITION (DRY WEIGHT)					
IDAH0 FESCUE	FEID	45					
SANDBERG BLUEGRASS	POSE	5					
BLUEBUNCH WHEATGRASS	AGSP	10					
NARROWLEAF BALSAMROOT	BASA3	2					
ANTELOPE BITTERBRUSH	PUTR2	10					
OREGON WHITE OAK	QUGA4	5					
PONDEROSA PINE	PIPO	5					
POTENTIAL PRODUCTION (LBS./AC. DRY WT):							
FAVORABLE YEARS		950					
NORMAL YEARS		800					
UNFAVORABLE YEARS		450					
FOOTNOTES							
* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.							



## SOIL INTERPRETATIONS RECORD

510\* WAMIC-SKYLINE COMPLEX, 2 TO 20 PERCENT SLOPES  
SKYLINE PART

THE SKYLINE SERIES CONSISTS OF SHALLOW WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS MIXED WITH COLLUVIUM ON MOUNTAINOUS AREAS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN VERY COBBLY LOAM AND COBBLY LOAM 9 INCHES THICK. THE SUBSOIL IS DARK BROWN GRAVELLY LOAM ABOUT 5 INCHES THICK. DEPTH TO BEDROCK IS 12 TO 20 INCHES. ELEVATION IS 500 TO 3500 FEET. THE MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. THE MEAN ANNUAL AIR TEMP IS 47 TO 49 DEGREES F. THE FROST-FREE PERIOD IS 110 TO 140 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.):	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLASTICITY INDEX				
0-9	ICBV-L	IGM	1A-2, A-4	10-50	15-65	50-60	40-55	30-45	25-30				
9-14	IGR-L	IML, SM, GM	1A-4, A-2	5-15	15-80	60-75	50-70	35-55	25-30				
14	IWB												

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-DEPTH TO ROCK			ROADFILL			POOR-AREA RECLAIM
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES			SAND			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, LARGE STONES			GRAVEL			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK			TOPSOIL			POOR-AREA RECLAIM, SMALL STONES
DAILY COVER FOR LANDFILL	POOR-AREA RECLAIM, SMALL STONES						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK			EMBANKMENTS			SEVERE-PIPING, LARGE STONES
				DIKES AND LEVEES			
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE, DEPTH TO ROCK			EXCAVATED PONDS			SEVERE-NO WATER
				AQUIFER FED			
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK			DRAINAGE			DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION			LARGE STONES, DEPTH TO ROCK, SLOPE
LOCAL ROADS AND STREETS	MODERATE-DEPTH TO ROCK, SLOPE, FROST ACTION			TERRACES AND DIVERSIONS			SLOPE, LARGE STONES, DEPTH TO ROCK
LAVNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-LARGE STONES, THIN LAYER			GRASSED WATERWAYS			LARGE STONES, SLOPE, DEPTH TO ROCK

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SOIL INTERPRETATIONS RECORD

10E- BODELL COBBLY LOAM, 5 TO 45 PERCENT SLOPES

THE BODELL SERIES CONSISTS OF SHALLOW WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS MIXED WITH COLLUVIUM ON MOUNTAINOUS AREAS. TYPICALLY, THE SURFACE LAYER IS DARK BROWN COBBLY LOAM ABOUT 5 INCHES THICK. THE SUBSOIL IS DARK BROWN VERY COBBLY LOAM AND VERY COBBLY CLAY LOAM ABOUT 13 INCHES THICK. DEPTH TO BEDROCK IS 12 TO 20 INCHES. ELEVATION IS 200 TO 2500 FEET. MEAN ANNUAL PRECIP. IS 20 TO 30 INCHES. MEAN ANNUAL AIR TEMP. IS 48 TO 51 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 140 DAYS.

DEPTH (IN.)		ESTIMATED SOIL PROPERTIES										
USDA TEXTURE		UNIFIED		AASHTO		IFRACTIPERCENT OF MATERIAL LESS 103 INI THAN 3" PASSING SIEVE NO.				IL	LIMIT	IPLAS-
0-5	CB-L					(PCT)	4	10	40	200		ITICITY
5-18	CB-L, CB-CL, CBV-L	1ML, SM		A-4		120-30	70-85	70-80	50-70	35-55	25-30	INP-5
18	UWB	1GM		A-4		145-70	155-65	50-60	45-55	35-50	25-35	INP-10
DEPTH	CLAY	MOIST BULK	PERMEA-	AVAILABLE	SOIL	SALINITY	SHRINK-	EROSION	WIND	ORGANIC	CORROSIVITY	
(IN.)	(PCT)	DENSITY	BILITY	WATER CAPACITY	REACTION	(MMHOS/CM)	SWELL	FACTORS	EROD.	MATTER	STEEL	CONCRETE
		(G/CM3)	(IN/HR)	(IN/IN)	(PH)		POTENTIAL	K	T	GROUP	(PCT)	
0-5	18-27	1.10-1.20	0.6-2.0	0.06-0.14	6.6-7.3	-	LOW	1.17	1	-	1-5	MODERATE
5-18	18-30	1.10-1.30	0.6-2.0	0.06-0.11	6.6-7.3	-	LOW	1.10				LOW
18												
FLOODING												
			HIGH WATER TABLE			CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDIPOTEN'L
FREQUENCY	DURATION	MONTHS	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			(FT)			(IN)		(IN)		(IN)	(IN)	ACTION
			26.0			-		12-20	HARD	-		MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK ABSORPTION FIELDS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		ROADFILL	POOR-AREA RECLAIM, LARGE STONES, SLOPE			
SEWAGE LAGOON AREAS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		SAND	IMPROBABLE-EXCESS FINES, LARGE STONES			
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		GRAVEL	IMPROBABLE-EXCESS FINES, LARGE STONES			
SANITARY LANDFILL (AREA)	SEVERE-DEPTH TO ROCK, SLOPE		TOPSOIL	POOR-AREA RECLAIM, LARGE STONES, SLOPE			
DAILY COVER FOR LANDFILL	POOR-AREA RECLAIM, LARGE STONES, SLOPE		POND RESERVOIR AREA	SEVERE-DEPTH TO ROCK, SLOPE			

BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-DEPTH TO ROCK, LARGE STONES, SLOPE		EMBANKMENTS, DIKES AND LEVEES	SEVERE-LARGE STONES			
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE, DEPTH TO ROCK, LARGE STONES		EXCAVATED PONDS, AQUIFER FED	SEVERE-NO WATER			
DWELLINGS WITH BASEMENTS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		DRAINAGE	DEEP TO WATER			
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE, DEPTH TO ROCK, LARGE STONES		IRRIGATION	LARGE STONES, DROUGHTY, DEPTH TO ROCK			
LOCAL ROADS AND STREETS	SEVERE-DEPTH TO ROCK, SLOPE, LARGE STONES		TERRACES AND DIVERSIONS	SLOPE, LARGE STONES, DEPTH TO ROCK			
LAUNDS	SEVERE-THIN LAYER		GRASSED WATERWAYS	LARGE STONES, SLOPE, DROUGHTY			



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## ATTACHMENT D – EXHIBIT 15

A copy of the “Applicant Site Map”, “Aerial Photo”, and ALL MAPS created for this Staff Report.



# Aerial Photo





**Labels**  
Not to Scale

- = Septic
- = Water
- = Power
- = Tel/Com



Backup Drain Field

Septic Drain Field

Lean To

Pond

Log Cabin

Barn

Barn

Transformer

Septic Drain Field

Former Bird Sanctuary

Transformer

Power Pole

Pump House  
Well

Septic Drain Field

Road = 20' Wide

Old Homestead

Old Barn

Pond (Seasonal)

Trailer Site

Hand Dug Spring

Trailer Site

Well

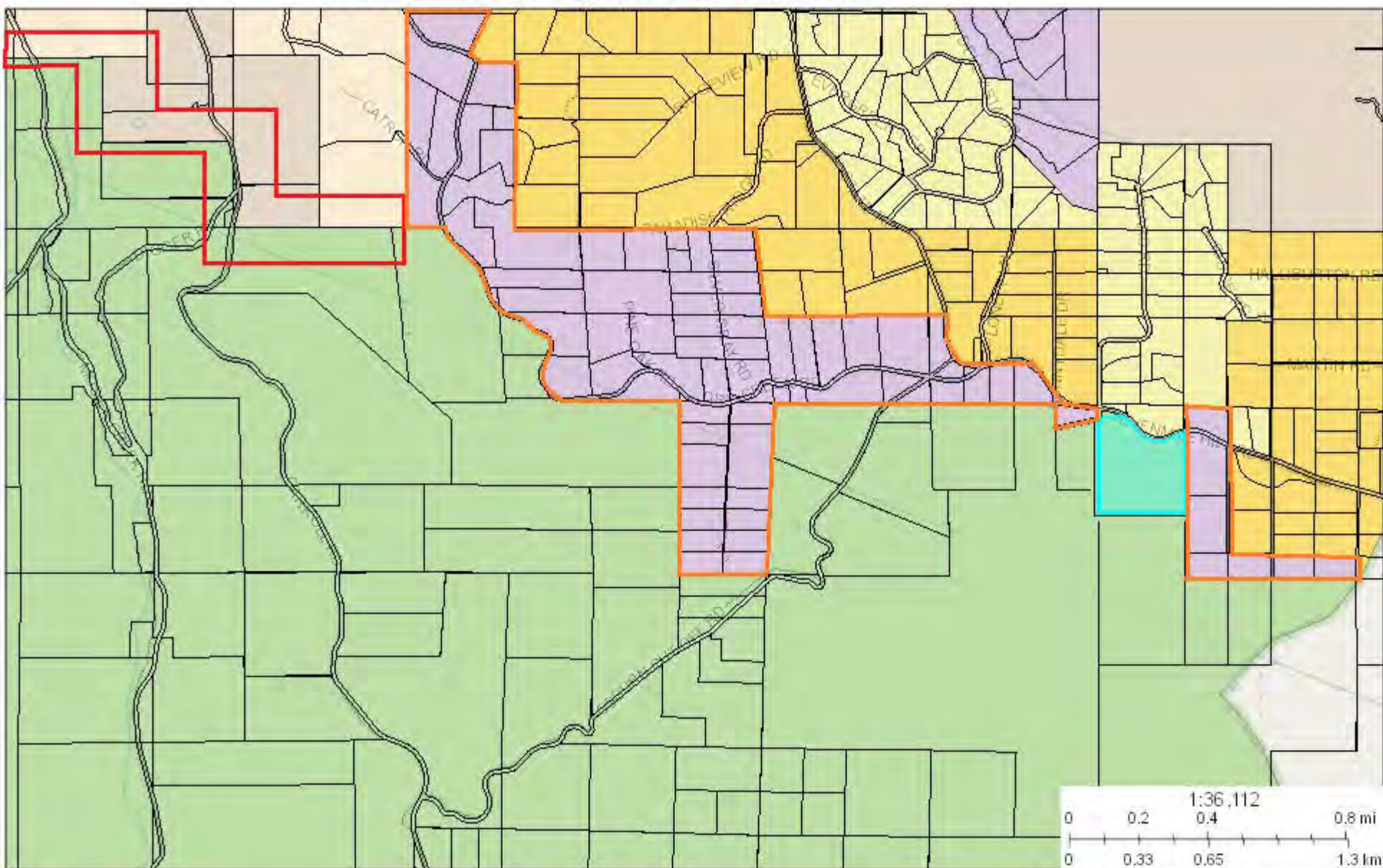
Trailer Site







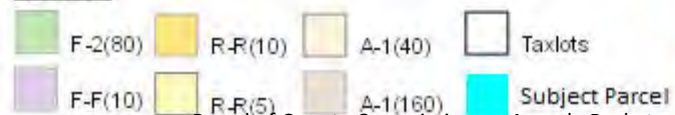
# Border between F-2(80) & Residential Lands



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11/22/2021, 12:02:08 PM

## WC-Zone



Border between lands zoned for resource use

Border between lands zoned for resource use and residential use



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary information sources to ascertain the usability of the information.

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PC21-0587



# Physical Development Map

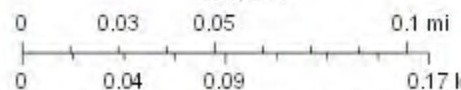


**Subject Parcel**



**Developed Areas**

1:4,514



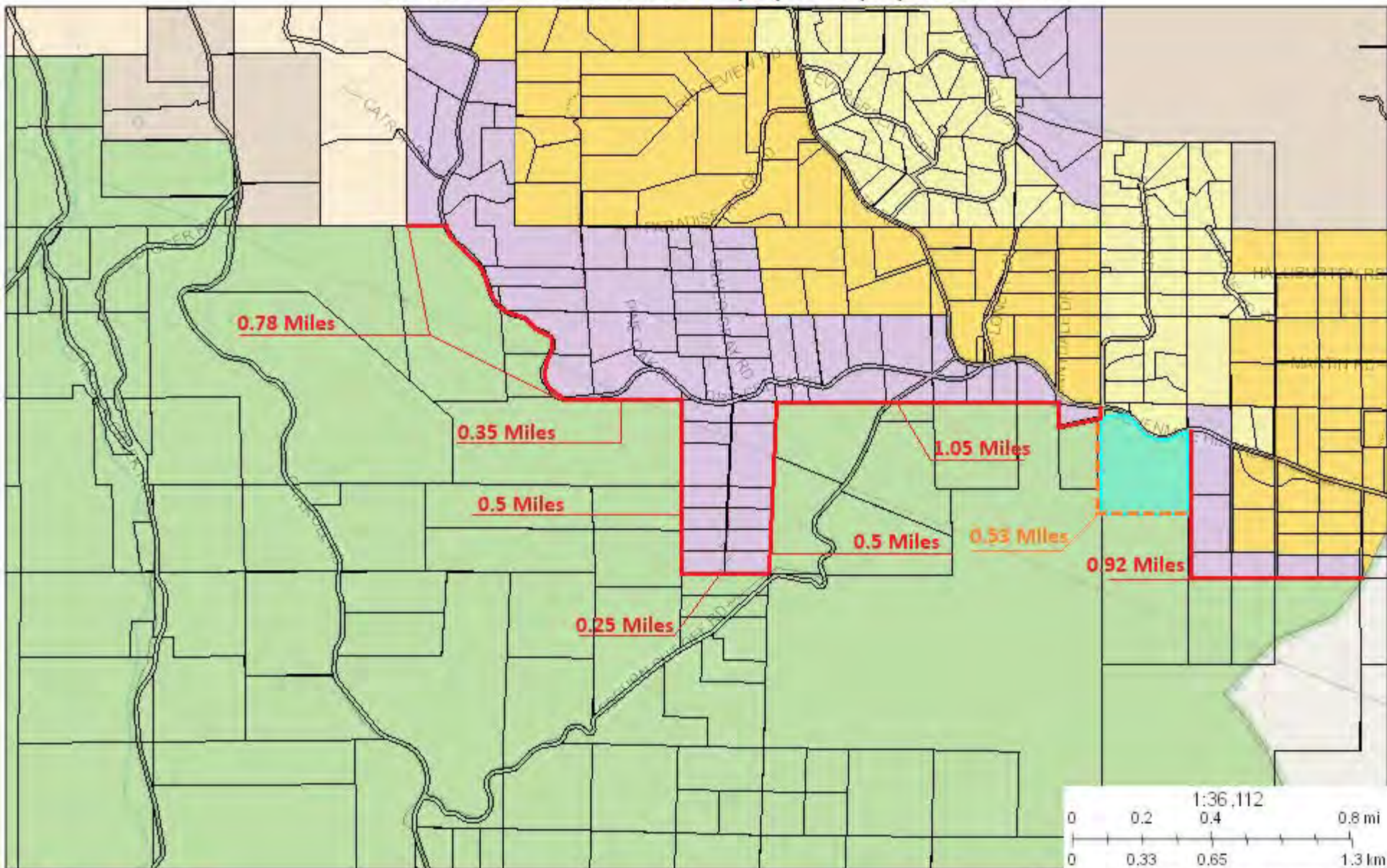
© OpenStreetMap (and) contributors, CC-BY-SA, Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team, Wasco County GIS, Lake County Assessors, Wasco County GIS  
Wasco County Planning



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should view or consult the primary data and information sources to ascertain the usability of the information.

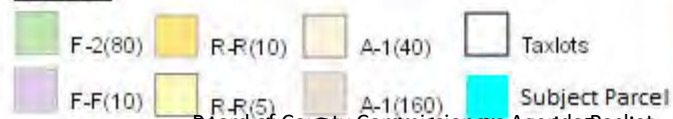


# Border Distance between F-F(10) & F-2(80) Zoned Lands



11/22/2021, 12:02:08 PM

## WC-Zone



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4.35 Miles F-F(10) & F-2(80) Border

0.53 Miles (subject parcel) property line

If rezoned, F-F(10) & F-2(80) Border would increase to approximately 4.88 Miles.

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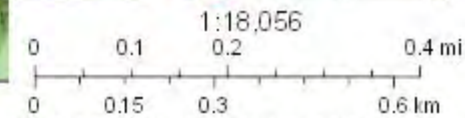
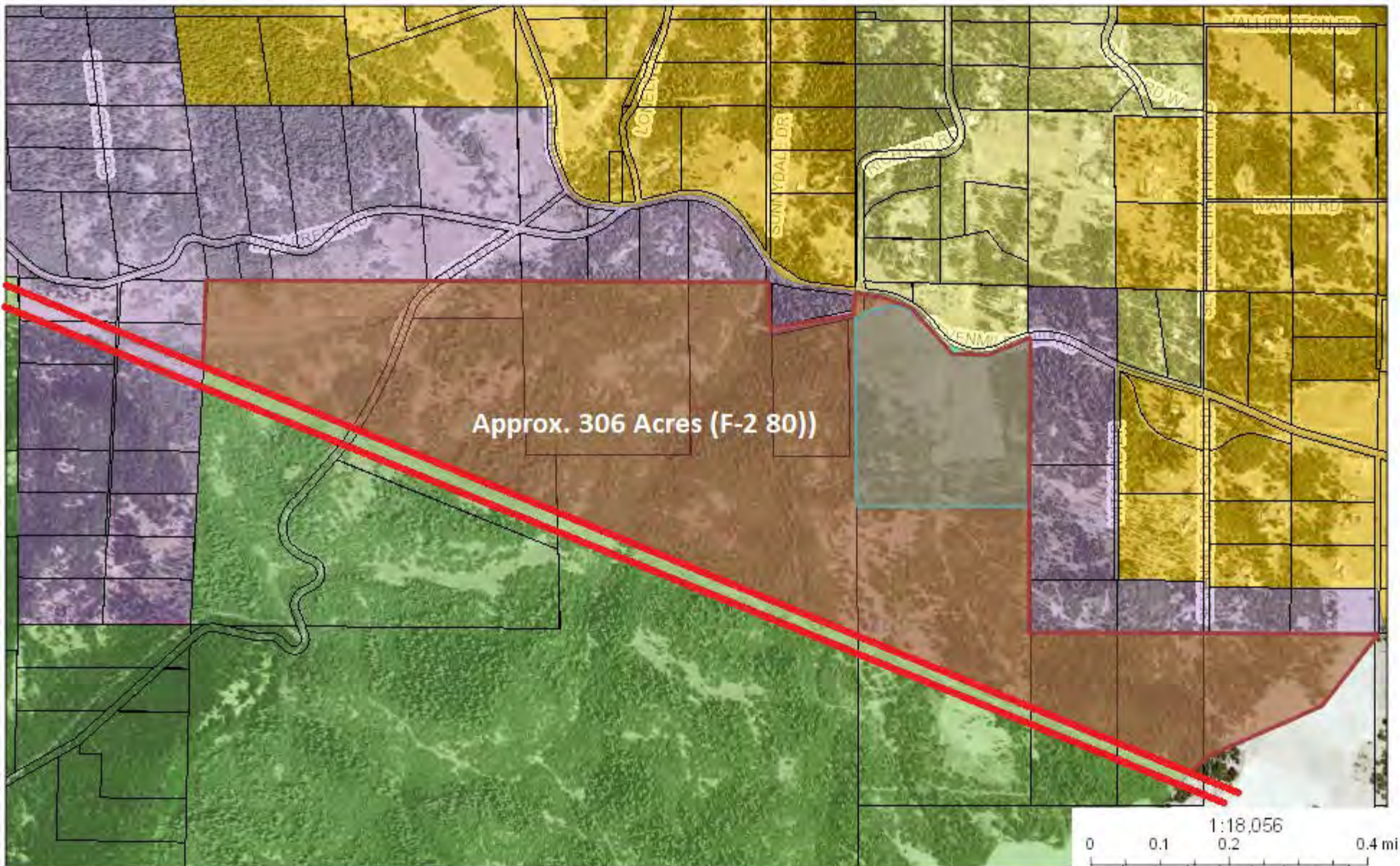


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PC01-519



# Forest Lands North of the BPA Line



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11/22/2021, 2:09:44 PM

## WC-Zone

F-2(80) R-R(10) A-1(40) Taxlots Forest Lands North of BPA Line (Approx. 306 acres).

F-F(10) F-2(10) Subject Parcel

BPA-Line

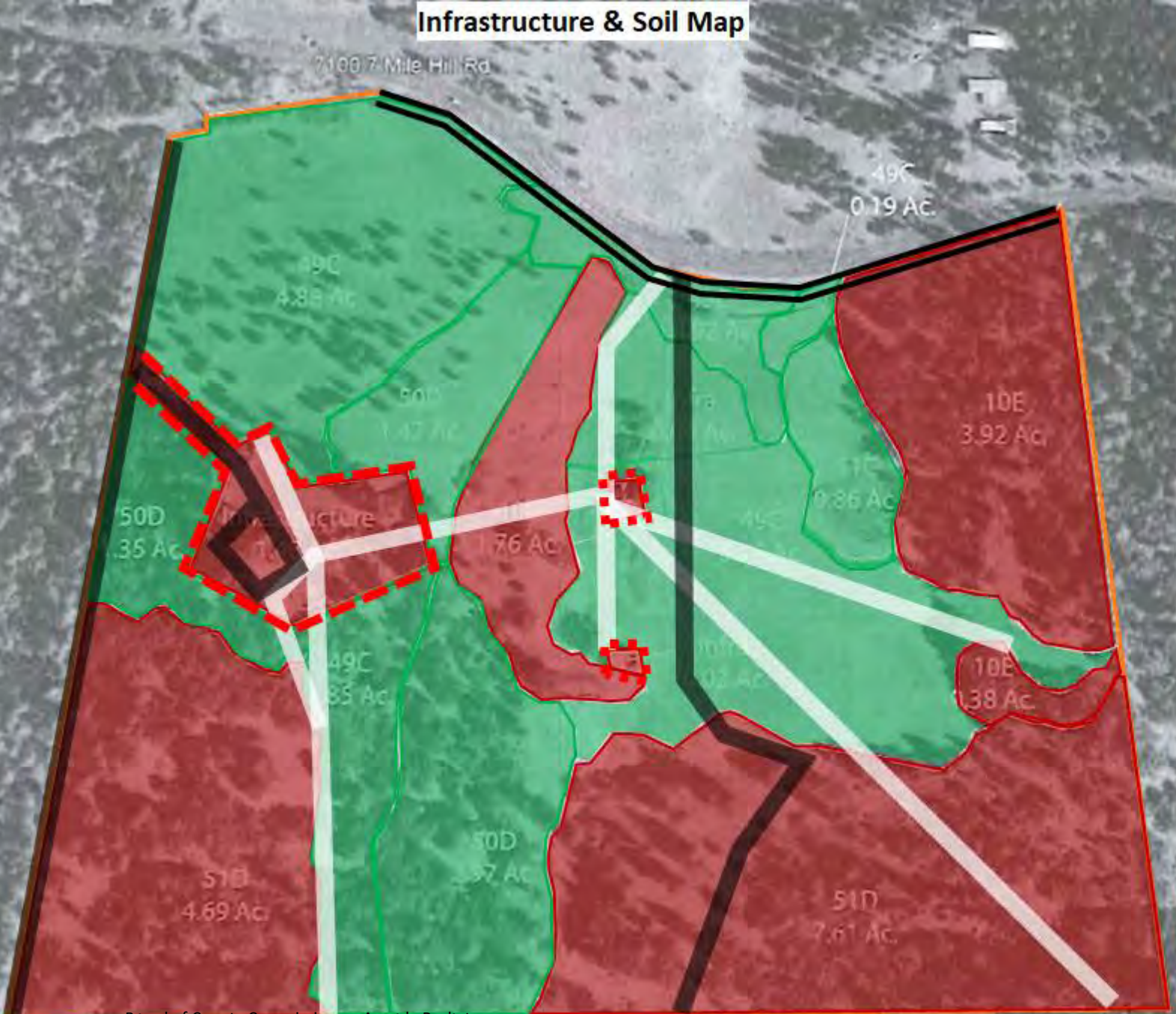
Planning Commission Agenda Packet  
March 16, 2022  
December 7, 2021




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PC1-520



# Infrastructure & Soil Map



-  Subject Parcel
-  Generally Unsuitable Soils (Class 7 & 8)  
Total = 20.79 Acres
-  Generally Suitable Soils (Class 4 & 6)  
Total = 19.34 Acres

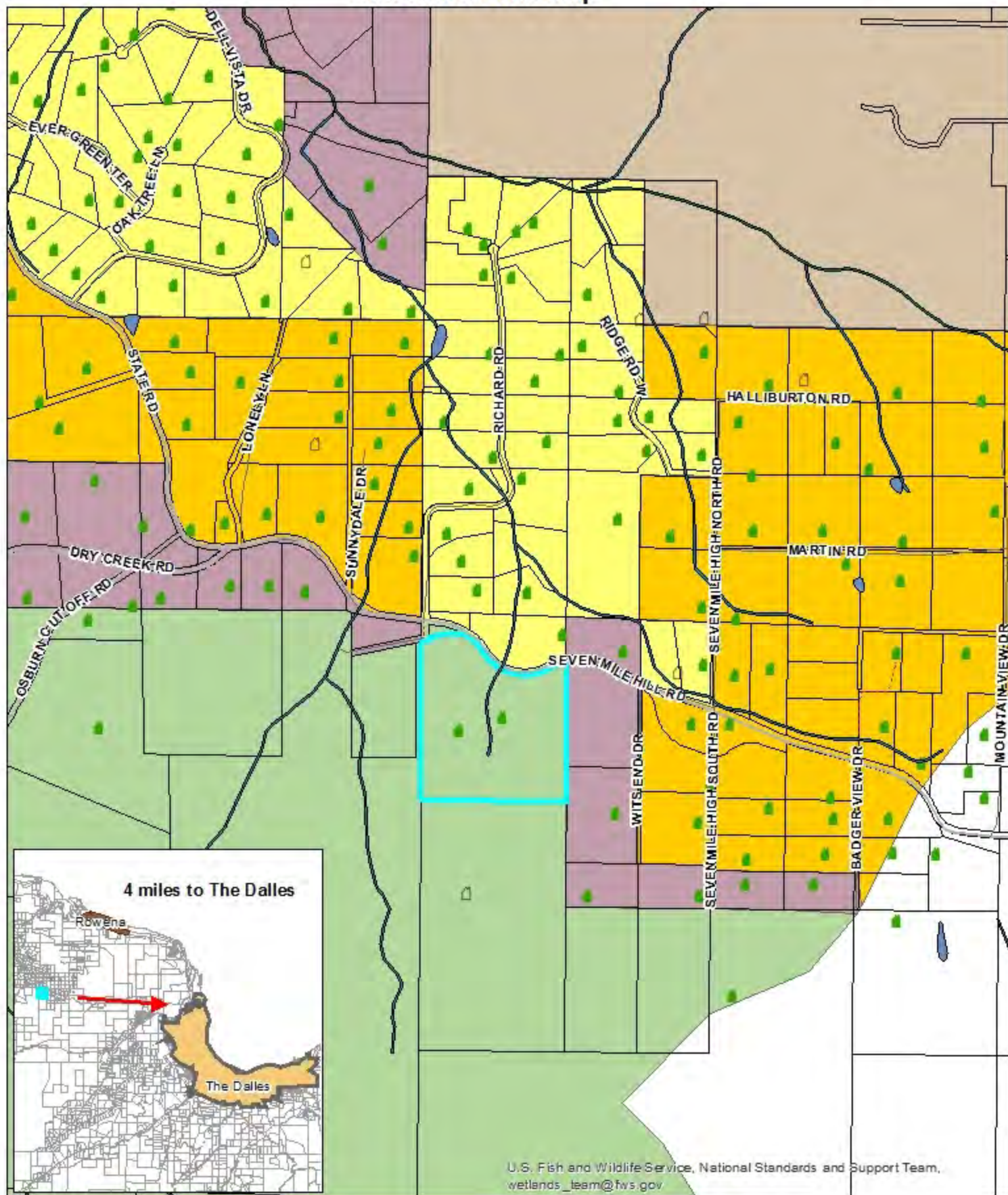
-  Power Line Maintenance Easement
  -  Access Fire Fuel Break Areas
  -  Public Road Maintenance Area
  -  Fire Fuel Break for Physical Development & Infrastructure Soil Mapping Unit Area
- 18% Physically Developed  
51.8% Mapped Soils = Generally Unsuitable



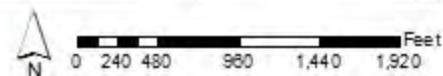
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# Location & Zone Map



- |          |         |                   |                 |
|----------|---------|-------------------|-----------------|
| A-1(160) | R-R(10) | Riverine          | Wilson Property |
| F-2(80)  | R-R(5)  | Freshwater Pond   | Taxlots         |
| F-F(10)  |         | Unknown Addresses |                 |



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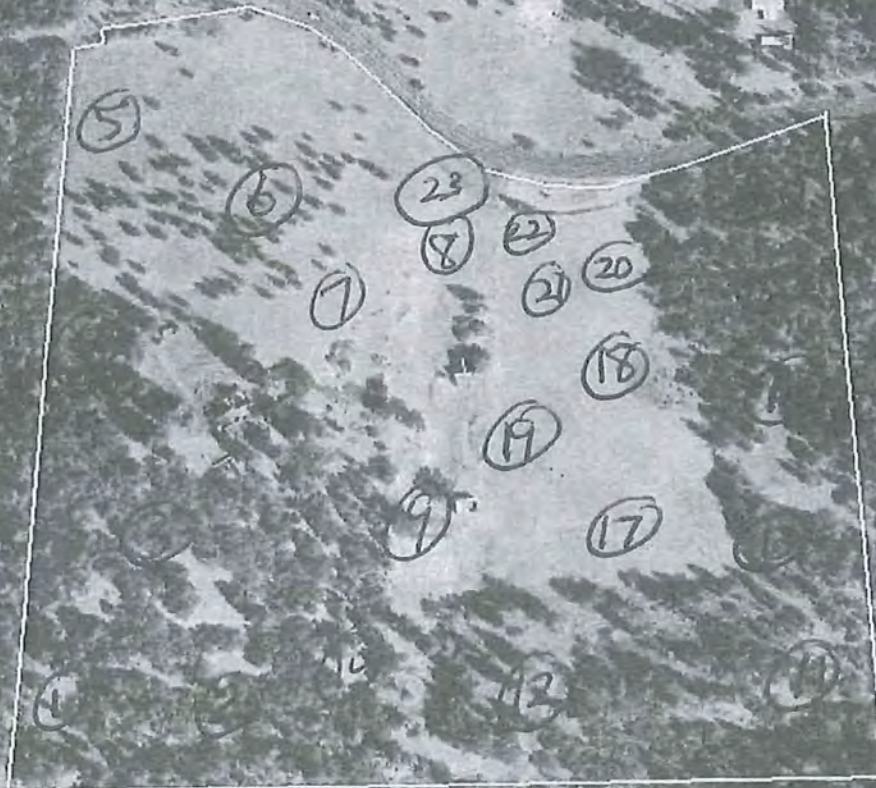


Wilson

T2N R12E Sec. 23C TL# 4400

Site Condition Map

7100 7 Mile Hill Rd





7100 7 Mile Hill Rd

49C  
0.19 Ac.

49C  
4.88 Ac.

49C  
0.92 Ac.

50D  
1.42 Ac.

Infra.  
0.06 Ac.

10E  
3.92 Ac.

50D  
1.35 Ac.

Infrastructure  
1.48 Ac.

10E  
1.76 Ac.

49C  
5.76 Ac.

51C  
0.86 Ac.

49C  
1.85 Ac.

Infra.  
0.03 Ac.

10E  
0.38 Ac.

51D  
4.69 Ac.

50D  
2.97 Ac.

51D  
7.61 Ac.



## Soil Suitability Map



Subject Parcel



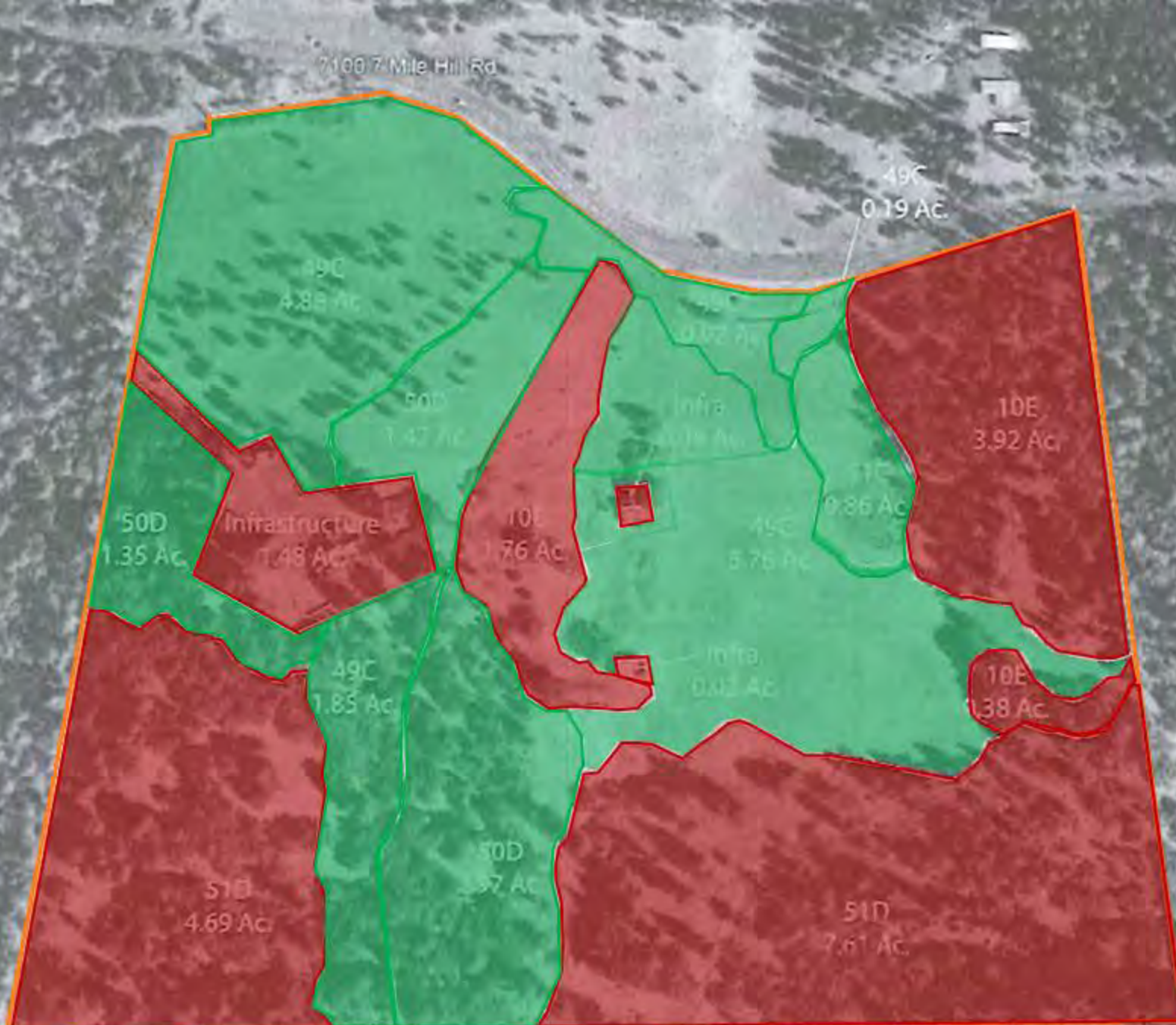
Generally Unsuitable Soils (Class 7 & 8)

- 51D Skyline = 12.30 Acres
- 10E Bodell = 6.06 Acres
- Infrastructure = 1.57 Acres
- Total = 20.79 Acres (51.8% of parcel)



Generally Suitable Soils (Class 4 & 6)

- 50D Wamic = 15.74 Acres
- 49C Wamic = 12.68 Acres
- 49 C Wamic (Wet) = 0.92 Acres
- Total = 19.34 Acres (48.2% of parcel)



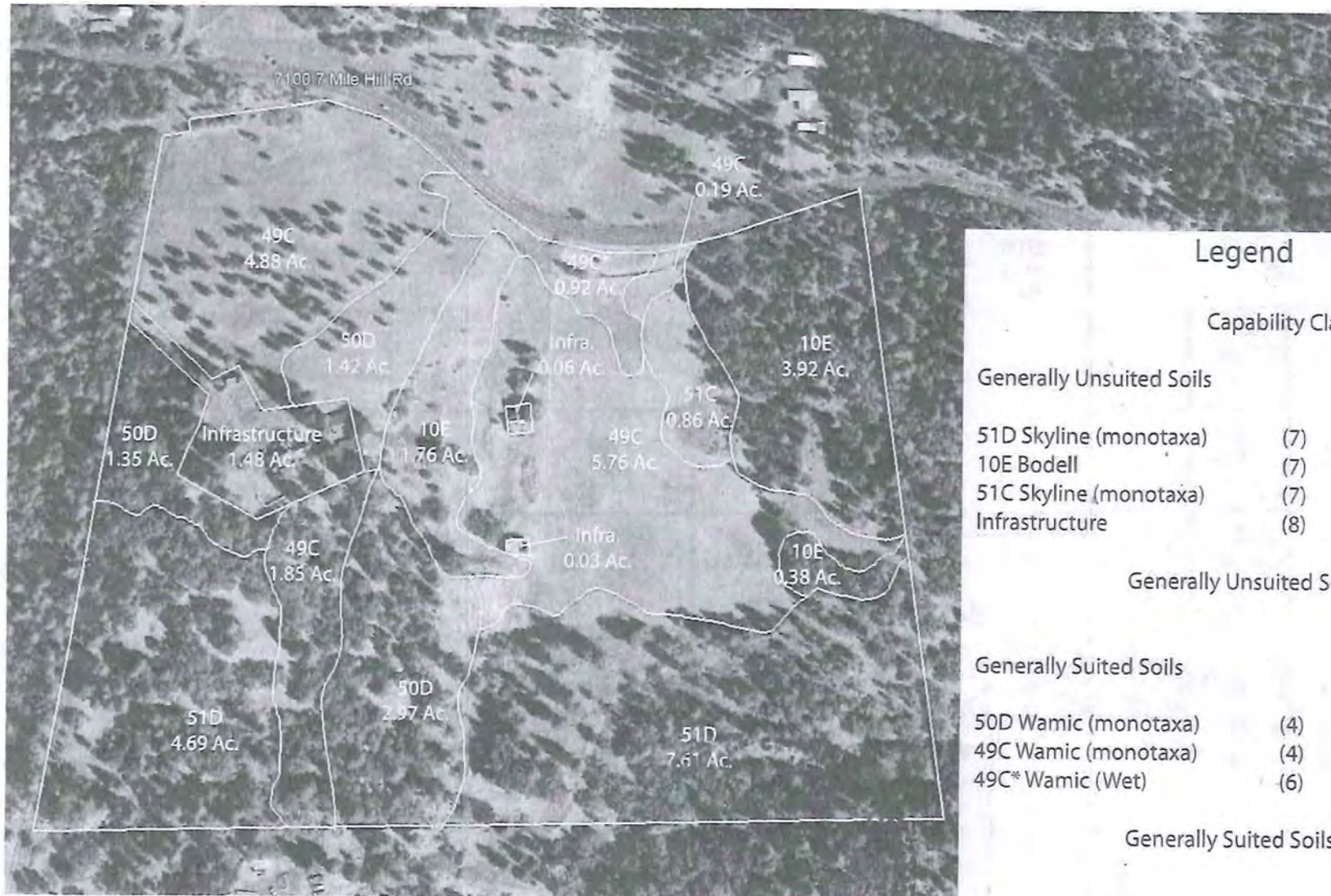
This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



# Wilson Property

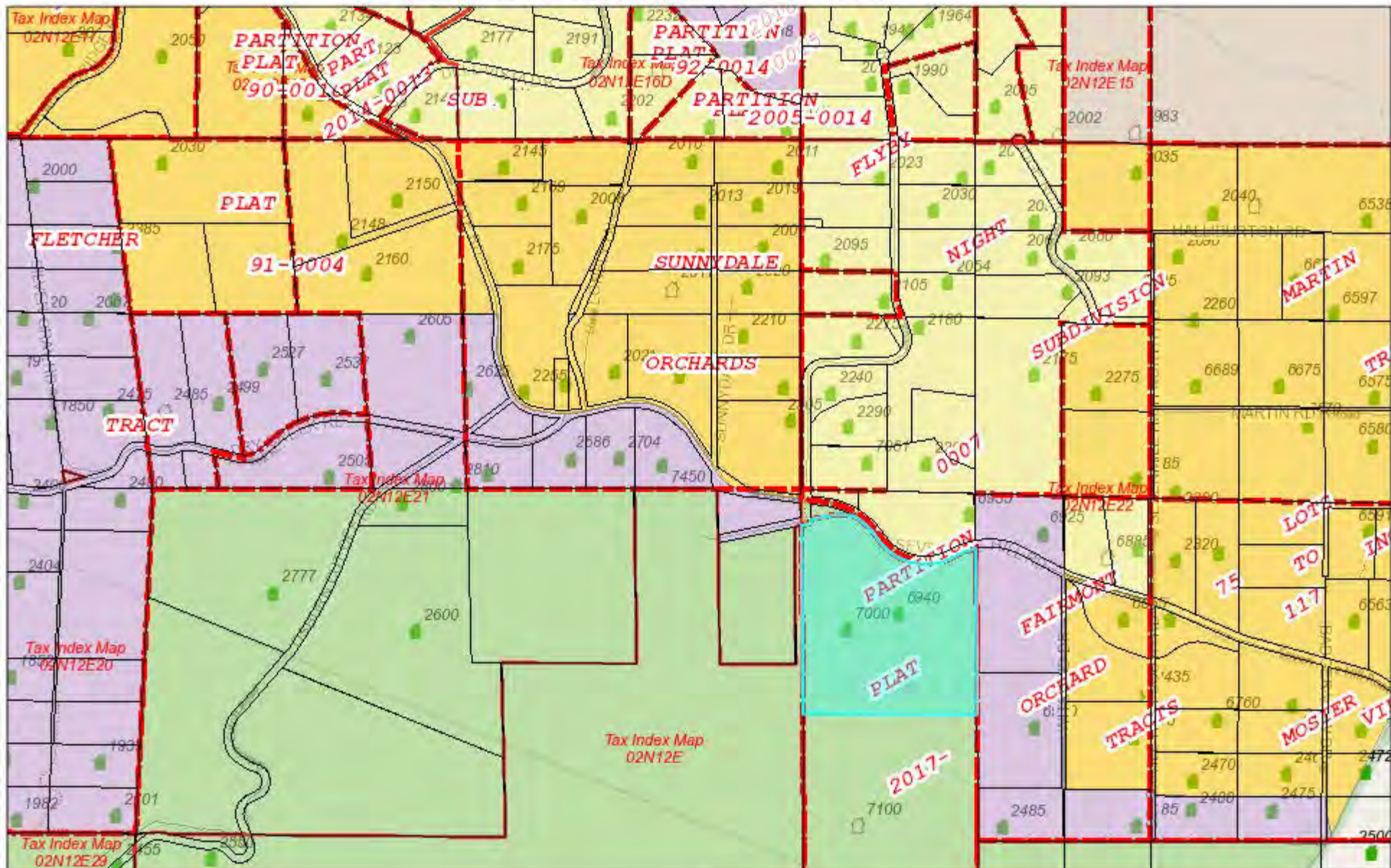
Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey





### Subdivision & Registered Addresses Map



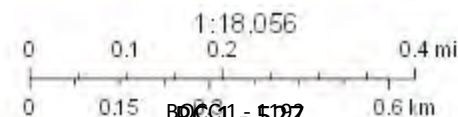
11/21/2021, 4:24:47 PM



Board of County Commissioners Agenda Packet  
March 16, 2022  
December 7, 2021



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# Wetland Map




Statewide Wetlands Inventory

 Riverine

National Hydrography Dataset

 Waterbody - Large Scale (Pond)

 Flowline - **Board of County Commissioners Agenda Packet**  
March 16, 2022  
December 7, 2021

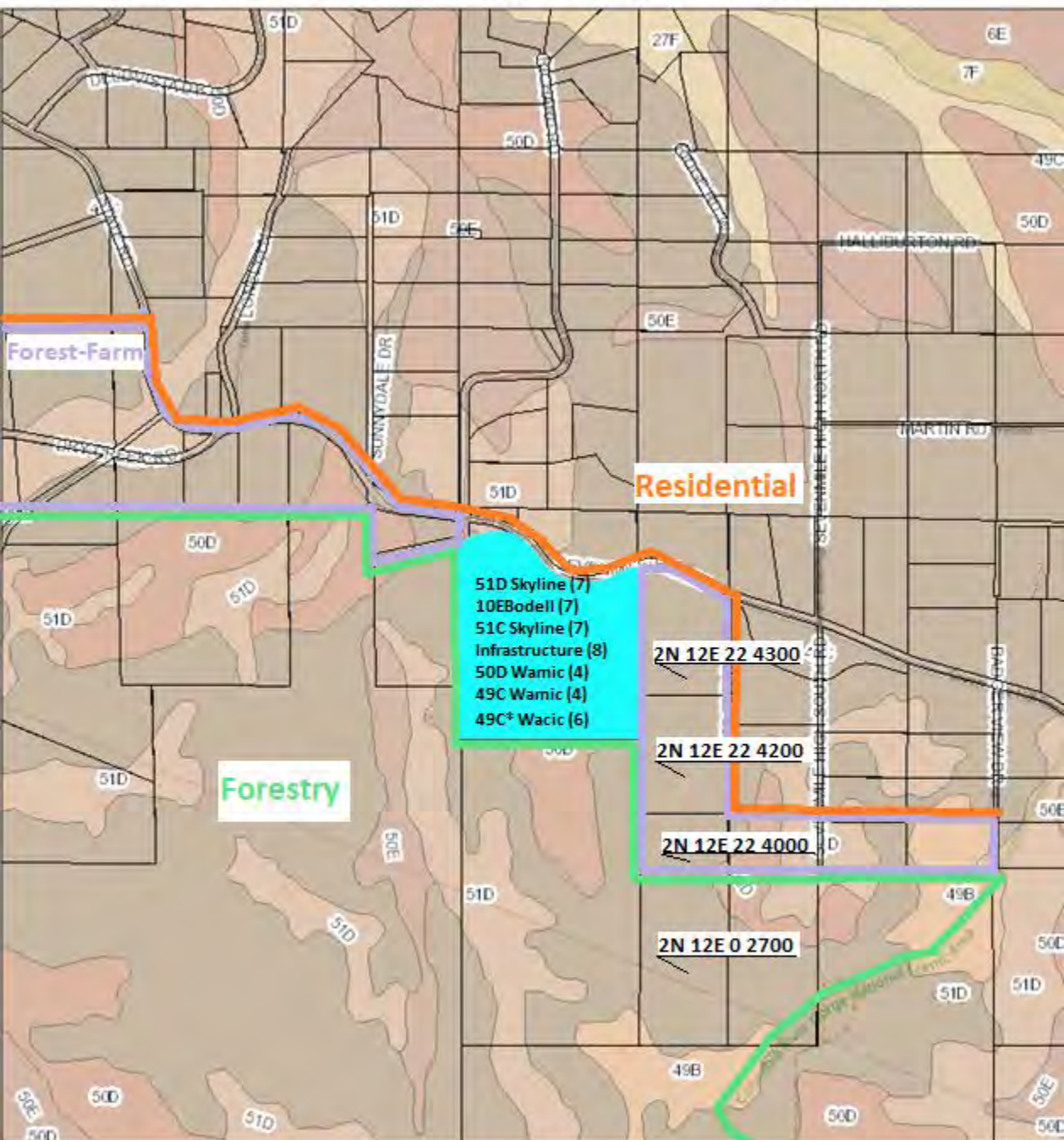
© OpenStreetMap (and) contributors, CC-BY-SA, USGS TNM - National Hydrography Dataset, Data Retrieved October, 2021., Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team, Wasco County GIS, Lane County, Assessor's, Wasco County GIS



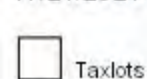
This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



### Adjacent Property Soil Mapping Units & Designation

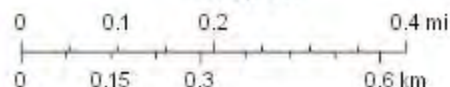


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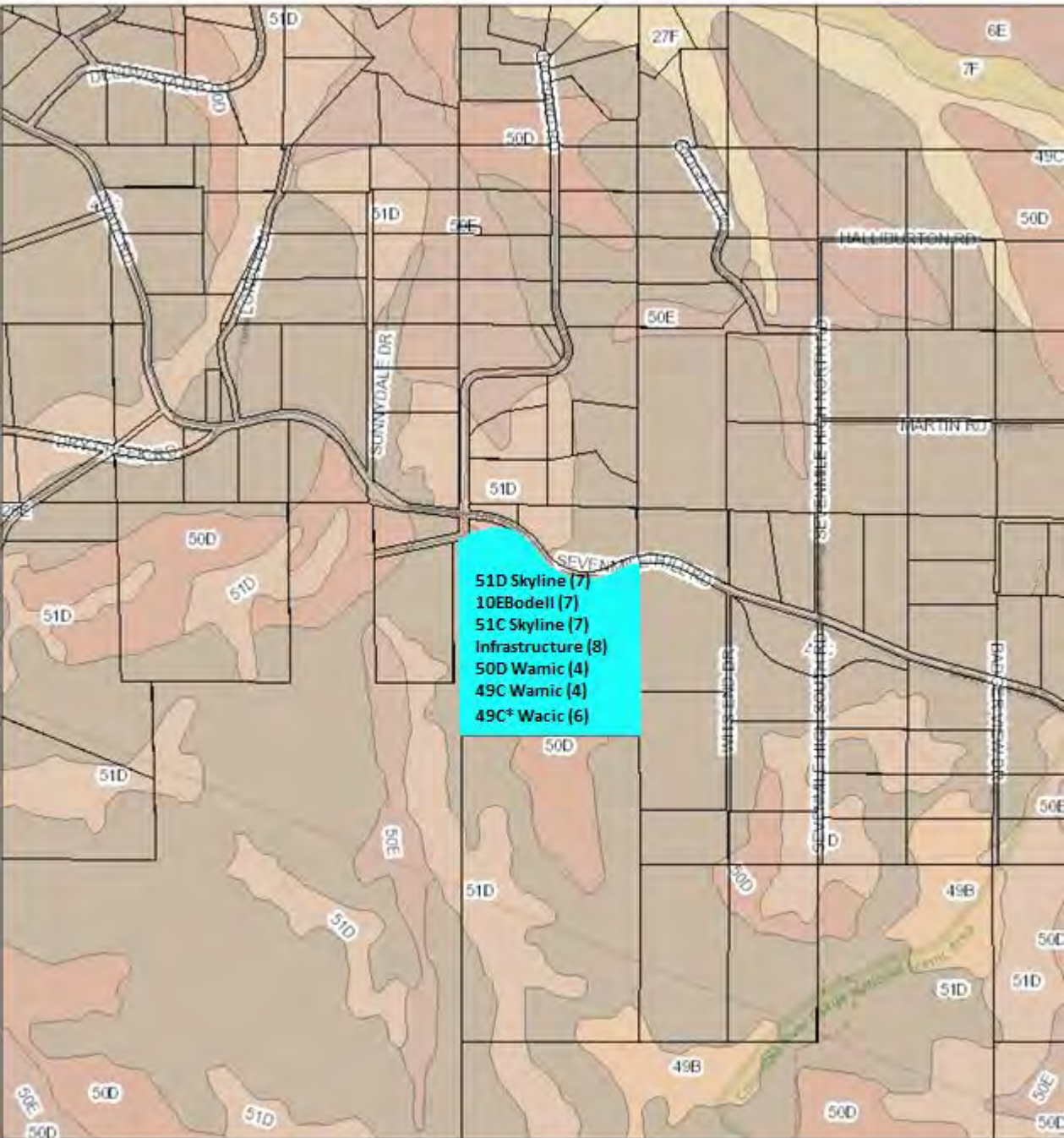
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Board of County Commissioners Agenda Packet  
Planning Commission Agenda Packet  
March 16, 2022  
December 7, 2021

# Adjacent Property Soil Mapping Units



11/21/2021, 3:10:13 PM

□ Taxlots

■ Subject Parcel

Board of County Commissioners agenda Packet  
 March 16, 2022  
 December 7, 2021

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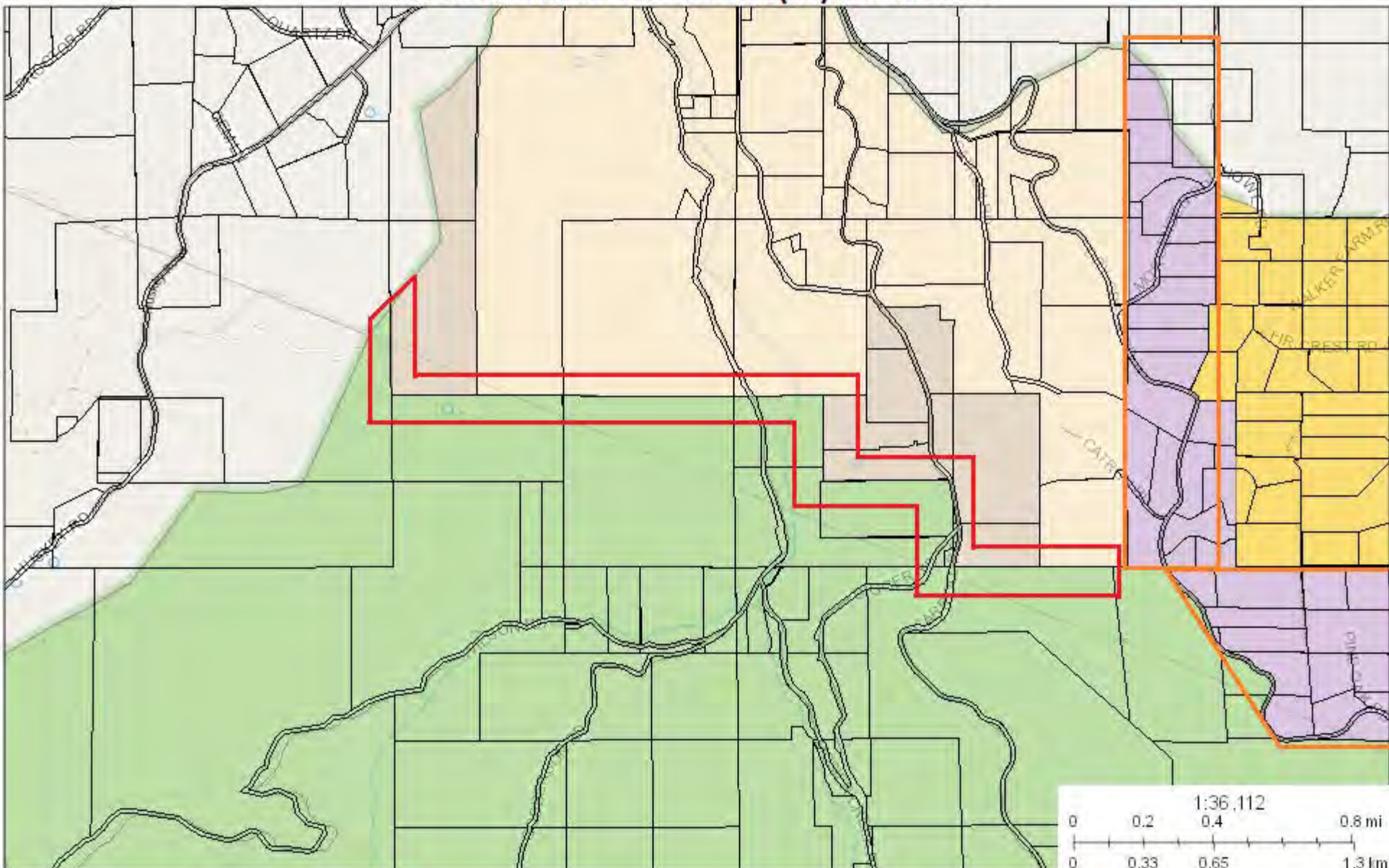
1:18,056

0 0.1 0.2 0.4 mi  
 0 0.15 0.3 0.6 km

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 Lane County, Assessor, Wasco County GIS



# Border between EFU A-1 & F-2(80) Zoned Lands



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WC-Zone



Border between lands zoned for resource use



Border between lands zoned for resource use and residential use

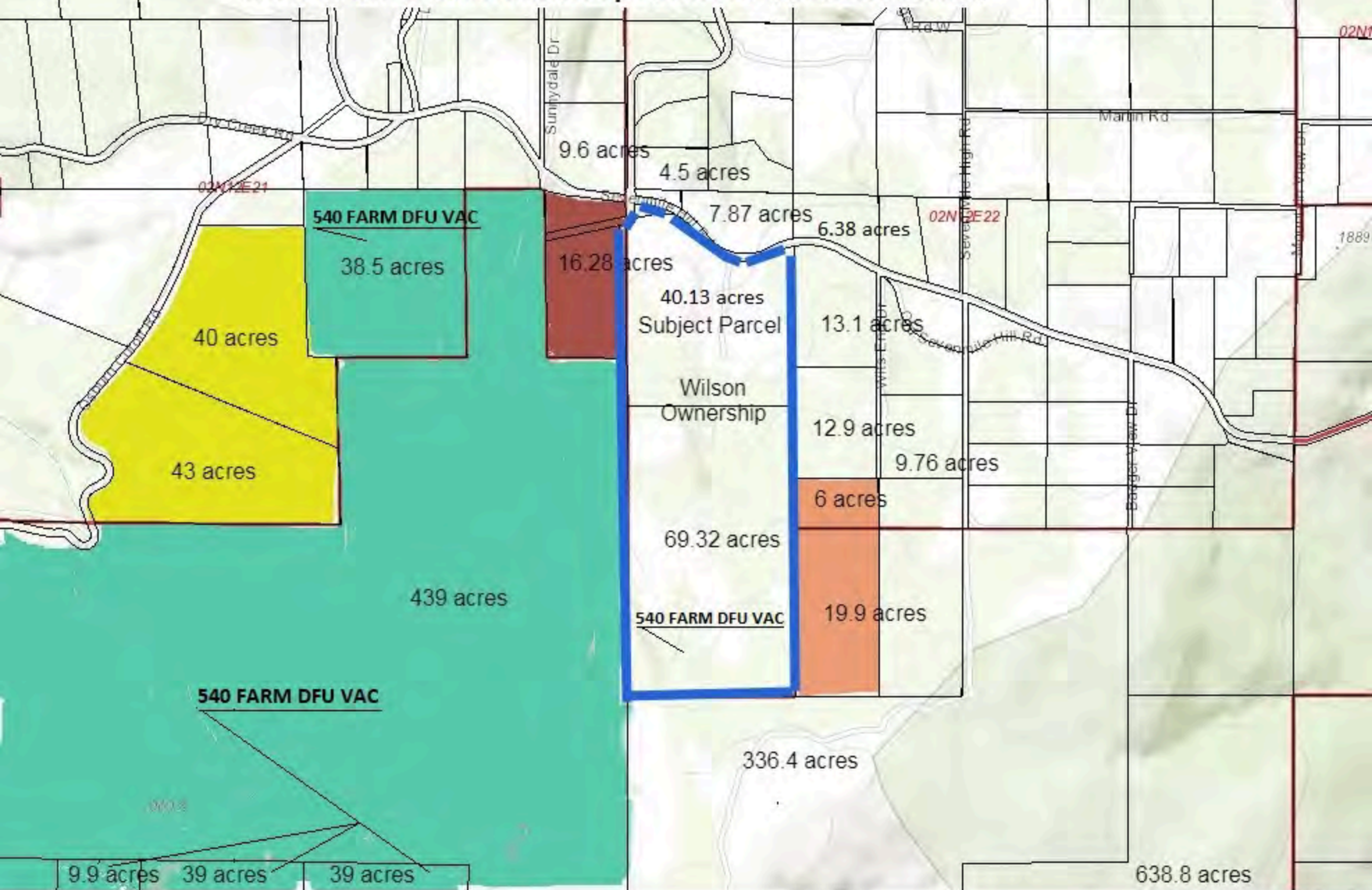
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# South Resource Zone Ownership Pattern & Tax Deferral Status



Contiguous Ownership



Not colored = No contiguous ownership

540 FARM DFU VAC = In tax deferral

11-24-2021

Board of County Commissioners Agenda Packet  
F-F(10-21-2020)  
December 7, 2021

WC-Assessor, WC-GIS



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PPC01-532

## ATTACHMENT D – EXHIBIT 16

All created diagrams for this Staff Report.



# Legend

Capability Class      Acreage

## Generally Unsuitable Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsuitable Soils = 20.79 Acres

## Generally Suitable Soils

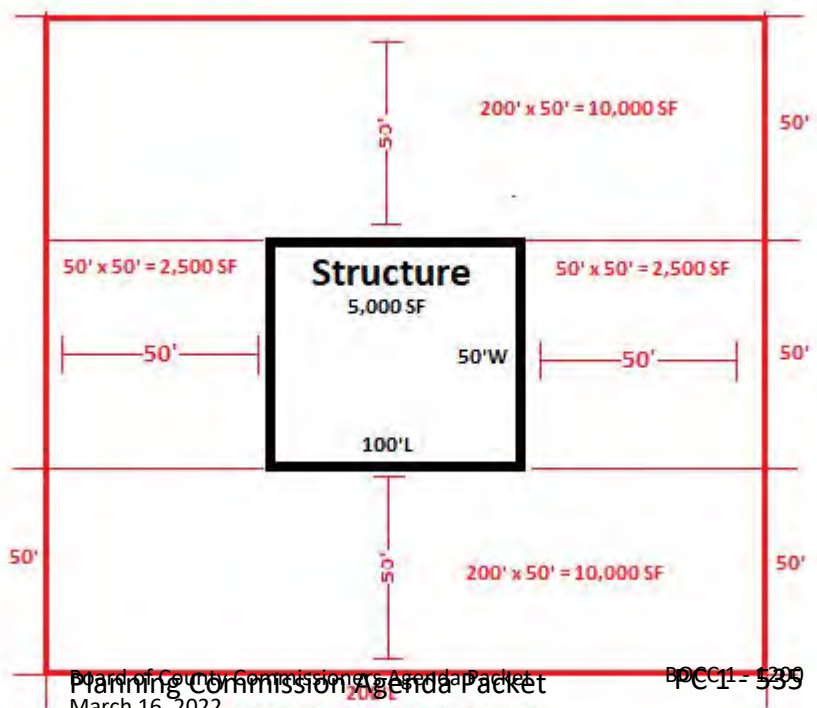
50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Suitable Soils = 19.34 Acres

Total Acres: 40.13 Acres

Percentage of Generally Unsuitable Soils: 51.8%

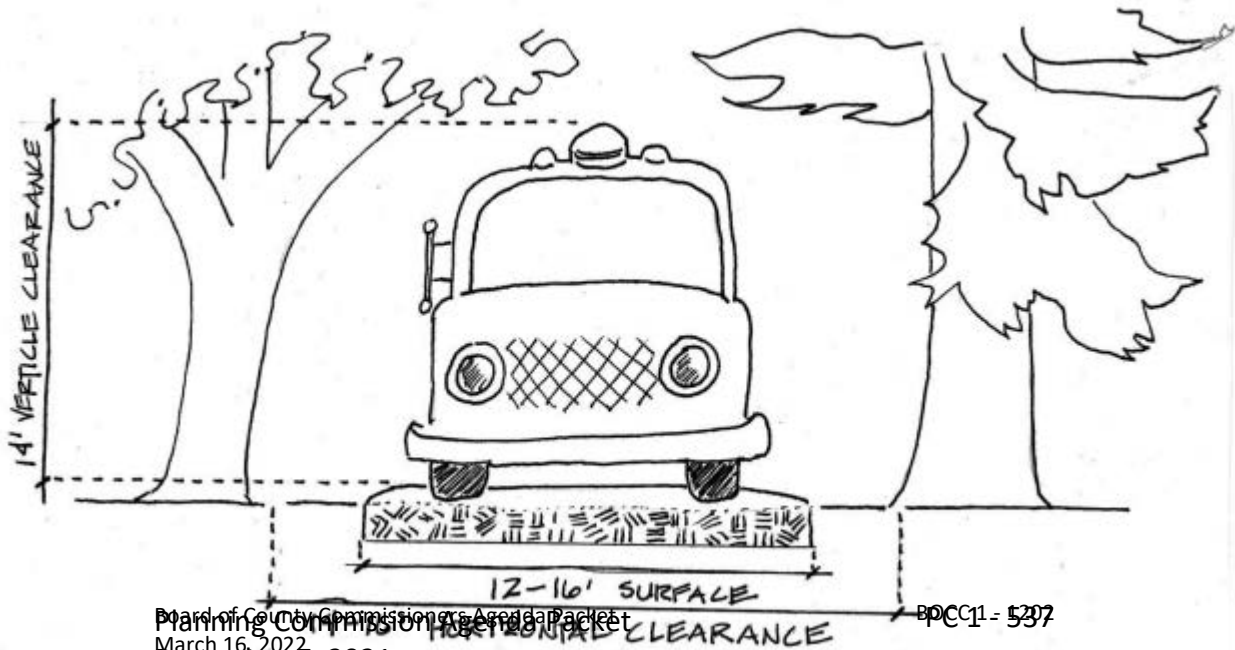
25,000 Square Feet (Approximate Total Fire Fuel Break Buffer Area)

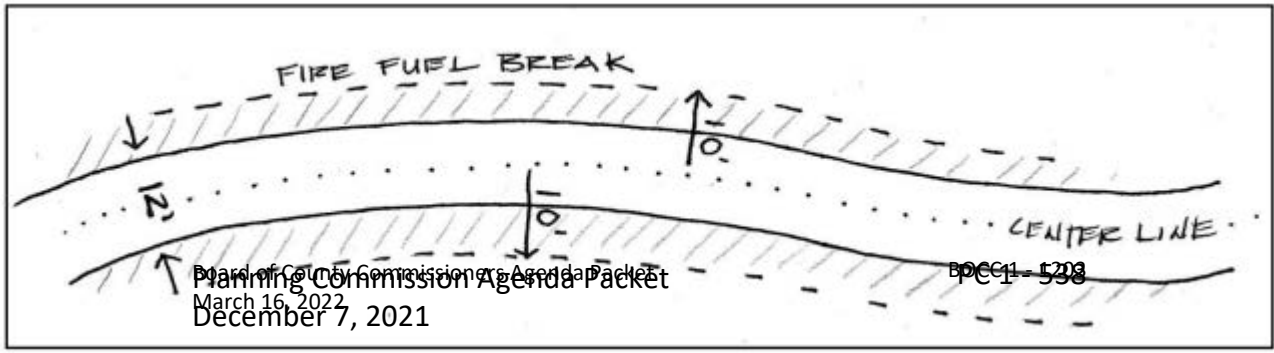


Is your building surrounded by a 50-foot wide fire fuel break?





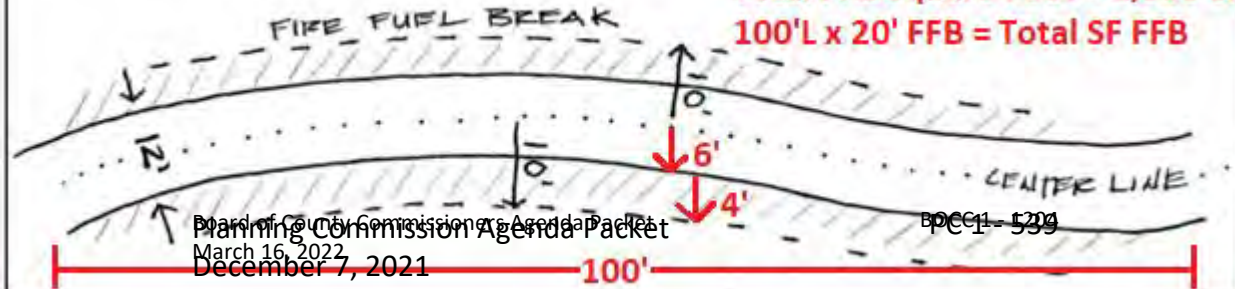




Board of County Commissioners Agenda Packet  
Planning Commission Agenda Packet  
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BOCC11-5203  
PC11-538

Total FFB Square Feet = 2,000 SF  
100'L x 20' FFB = Total SF FFB



Board of County Commissioners Agenda Packet  
Planning Commission Agenda Packet  
March 16, 2022  
December 7, 2021

BOCC11-5204  
PCC11-5399

## ATTACHMENT D – EXHIBIT 17

Pertinent deeds and minor partitions for this Staff Report.

BOOK 114 PAGE 176

KNOW ALL MEN BY THESE PRESENTS, That We, Wm. M. Howell and Lila

C. Howell, husband and wife,

in consideration of Ten and no/100ths Dollars,

and other good and valuable considerations

to us paid by C. J. Marshall and Sarah Marshall, husband and wife,

do hereby remise, release and forever QUITCLAIM unto the said C. J. Marshall and Sarah Marshall, and not as tenants in community property husband and wife, as tenants by the entirety/ and unto their heirs and assigns

all our right, title and interest in and to the following described parcel of real estate, together with the tenements, hereditaments and appurtenances, situate in \_\_\_\_\_, County of

Wasco, State of Oregon, to-wit:

North half of Northwest Quarter (N $\frac{1}{2}$ NW $\frac{1}{4}$ ) of Section Twenty-seven, Township Two North, Range 12 East of the Willamette Meridian. Also Tracts Two(2), Three (3), Five (5) and Six (6) of Fairmont Orchard Tracts. ALSO the West half of the Southwest Quarter (W $\frac{1}{2}$ SW $\frac{1}{4}$ ) Section 22, Township 2 North Range 12 East of the Willamette Meridian, SAVE AND EXCEPT therefrom all that part of Tract "C", Fairmont Orchard Tracts, lying West of that certain spring situated in said Tract "C", the East line thereof to run parallel with the West boundary line of said Tract "C".

Subject to enough water for household purposes for Iva E. McConnell, her successors or assigns to serve the Westerly part of said Tract "C", not hereby conveyed.

This deed is given for the purpose of correcting a mistake in the description of property as described in deed executed between the parties hereto and recorded in Book 109, Deed Records of Wasco County, Oregon, at Page 185.

TO HAVE AND TO HOLD the same to the said C. J. Marshall and Sarah Marshall, as tenants by the entirety husband and wife / and to their heirs and assigns forever.

IN WITNESS WHEREOF, we have hereunto set our hand and seals this 5<sup>th</sup>

day of August A. D. 1948

Executed in the presence of

(SEAL)

(SEAL)

(SEAL)

(SEAL)



STATE OF OREGON,

County of Clackamas

38.

BE IT REMEMBERED, That on this 5th day of August A. D. 1948

before me, the undersigned, a notary public

in and for said County and State, personally appeared the within named Wm. M. Howell and

Lila C. Howell, husband and wife,

who are known

to me to be the identical individual as described in and who executed the within instrument and acknowl-

edged to me that they executed the same freely and voluntarily.

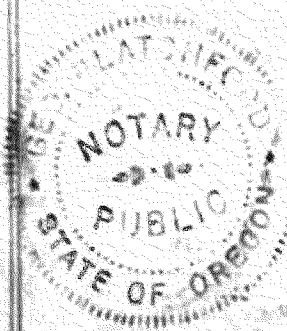
IN TESTIMONY WHEREOF, I have hereunto set my hand and

official seal the day and year last above written.

*Geo. Blatzford*  
Notary Public for Oregon.

My Commission expires Sept. 18, 1949

MY COMMISSION EXPIRES SEPT. 18, 1949



69400

# QUITCLAIM DEED

Wm. M. Howell and Lila C.  
Howell, husband and wife,

TO

C. J. Marshall and Sarah  
Marshall, husband and wife.

STATE OF OREGON, ss  
County of Wasco,

I, D. V. BOLTON, County Clerk and ex officio  
Recorder of Conveyances, in and for said county, do  
hereby certify that the within instrument of writing  
was received for record and recorded in the record  
of

DEEDS

of said county at

FILED  
COUNTY CLERK'S OFFICE

1948 AUG 13 PM 1 50

D. V. BOLTON  
COUNTY CLERK

In Book

On Page

114



Witness my hand and seal of office at  
Wasco, Oregon, this 13th day of August, 1948.

By *[Signature]* Deputy

Return to

Street

City

*The Dalles, Or.*

*PLANNING AND ECONOMIC DEVELOPMENT OFFICE*  
WASCO COUNTY

2705 EAST SECOND STREET

THE DALLES, OREGON 97058

KIMBERLY J. JACOBSEN, Director

PHONE: (503) 298-5169

FAX: (503) 296-3769

June 30, 1992

Harry Ketchum  
Ketchum Realty  
700 East 3rd St.  
The Dalles, OR 97058

RE: Lot-of-Record Status of Property Described as Township 2 North, Range 12 East,  
Tax Lot 11691

Dear Harry:

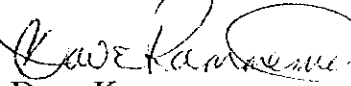
This letter is to confirm this offices recent decision that the above described tax lot is considered a lot-of-record as defined by the Wasco County Land Use and Development Ordinance.

Upon review of the minor partition which resulted in the creation of this parcel, it was discovered the subject parcel in question was an isolated parcel, not a parcel of the partition. However, since this oversight was not identified and corrected at the time of application, November 1984, it is current office policy to recognize the result of this oversight.

As such, this parcel shall be afforded all the rights of any other lot-of-record in the applicable zone.

If you have any questions or if I can be of further assistance please feel free to call me at 298-5169

Best regards,



Dave Kammerman  
Planner

cc: Kimberly Jacobsen, Planning Director  
file #MIP-84-118-WAF24-A

# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

DANIEL C. DUROW, Director of Planning

PHONE: (503) 298-5169

November 14, 1984

Garth Davis, P.R.  
Earl L. Davis EST  
c/o 508 Washington St.  
The Dalles, OR 97058

*PIP-84-118-1 AF24*

Dear Mr. Davis:

This letter will serve as your official notification that your minor partition has been accepted by the Planning Office. This partition applies to property located in Township 2 North, Range 12 East, Section(s) 21 & 28 Tax Lot(s) 11600, 11690, and is zoned "F-2 (40)" Forest zone.

We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on November 14, 1984.

Sincerely,



Dan Durow

Director of Planning

Encl. (Copy-Minor Part. Plan)

dm



Parcel #1

PARCEL ONE

The Southwest quarter, Section 21, Township 2 North, Range 12 East of the Willamette Meridian in Wasco County, Oregon, excepting therefrom the following: Beginning at the Northeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon; thence South along the East line of the Southwest quarter 285 feet; thence West, parallel with the North line of said Southwest quarter, a distance of 700 feet, more or less to the center line of Cutoff County Road; thence Northeasterly along said center line, to the intersection of the North line of said Southwest quarter; thence East along said North line 550 feet, more or less to the point of beginning.

PARCEL TWO

Beginning at the Southeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, thence East along the South boundary of said Section a distance of 227.7 feet; thence North and parallel to the East line of said Section, 1,320 feet more or less to the South line of the Northwest quarter of the Southeast quarter of said Section; thence West and parallel to the South line of said Section, 227.7 feet to the East line of said Section; thence South along the East line of said Section to the point of beginning.

Subject to all encumbrances of record including but not limited to Federal tax liens and real property taxes.



PARCEL #2

PARCEL I

The South half of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, EXCEPTING THEREFROM the following described property: Commencing at the Southeast corner of the Southwest quarter of said Section 21, thence East along the South line of said Section a distance of 227.7 feet to a point; thence North and parallel to the West line of said Section a distance of 1,320 feet more or less to the South line of the Northwest quarter of the Southeast quarter of said Section; thence West along the South line of the Northwest quarter of the Southeast quarter of said Section to the East line of the Southwest quarter of said Section; thence South along said East line to the point of beginning.

PARCEL II

The Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, EXCEPTING THEREFROM two parcels as conveyed by Warranty Deed Earl L. Davis, et al to Earl L. Davis et ux., dated May 9, 1980, recorded May 13, 1980, Wasco County, Oregon, Microfilm No. 80-1353, said two tracts being more particularly described as follows:

Tract 1

That portion of the East half of the Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying South of the Southerly right of way of the existing 60 foot wide county road, excepting therefrom the East 50 feet thereof.

Tract 2

A tract of land in the Northeast quarter of the Southeast quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, more particularly described as follows: The East one-half of the Northeast one-quarter of the Southeast one-quarter lying North of the Northerly right-of-way of the existing 60 foot wide county road.

TOGETHER WITH a tract of land in the West one-half of the Northeast one-quarter of the Southeast one-quarter of said Section 21, Township 2 North, Range 12 East of the Willamette Meridian, lying Northerly and Easterly of the easterly right-of-way of the existing 60 foot wide county road.

PARCEL III

The North half and the Northeast quarter of the Southeast quarter of Section 28, Township 2 North, Range 12 East of the Willamette Meridian.

PARCEL IV

Lot 13, SUNNYDALE ORCHARDS, Wasco County, Oregon

All in the County of Wasco and State of Oregon.  
SUBJECT TO all easements and encumbrances of record.

<b>RECEIPT</b>				Date <u>11-13</u> 19 <u>84</u> 6132	
Received From <u>John J. Davis</u>					
Address <u>508 Wagon St. The Dalles, Id.</u>					
For <u>Attorney Partition - Davis Estate</u>				Dollars \$ <u>20.00</u>	
ACCOUNT			HOW PAID		
AMT. OF ACCOUNT			CASH		
AMT. PAID			CHECK		
BALANCE DUE			MONEY ORDER		
			By <u>Wesley L. Fleming</u>		
			<u>Lindell</u>		

REC-1001®

## APPLICATION FOR MINOR PARTITION

## APPLICANT:

Earl L. Davis Estate - Garth Davis P.R. 296-5474  
 (Last Name) (First) (Middle) (Telephone)  
508 Wash. St. The Dalles OR 97058  
 (Street or P.O. Box) (City or Town) (State) (Zip)

## LOCATION OF SUBJECT PROPERTY:

Township: 2N Range: 12 Section: 21+28 Tax Lot: 11600 11690 S  
 Legal Owner: Earl L. Davis Beulah Lundell Elna Klepper Dora E. Findley  
 (If not legal owner, state interest in property)

## Size of Parcel:

600 acres  
 (Total contiguous acreage owned by the applicant)

## Existing Zoning:

FZ-40

## Minimum Lot Size:

10 ac.

## Existing Land Use:

Pastureland

## Approximate acreage of proposed parcels being partitioned (up to 3 parcels):

PARCEL #1 160 Acres

Dimensions: Width: ~2700'

Depth: ~3000'

(not square)

Name of Road providing public access:

Osborn Cutoff County Road

PARCEL #2 440 Acres

Dimensions: Width: 1 mile

Depth: ~6550'

(not square)

Name of Road providing public access:

Osborne Cutoff Rd.

PARCEL #3 \_\_\_\_\_ Acres

Dimensions: Width: \_\_\_\_\_

Depth: \_\_\_\_\_

Name of Road providing public access: \_\_\_\_\_

Suitability Statement, if applicable: (See Brochure, #7, "Information Required on Tentative Plan")

Not Applicable No investigation has been made of the suitability of any given parcel by an authorized representative of the DEQ; no warranty is made that any parcel will be usable for subsurface sewage disposal.

ACCEPTED BY  
 DIRECTOR OF PLANNING

RECEIVED

NOV 13 1984

KNOW ALL MEN BY THESE PRESENTS, That Henry Streiff and Clara O. Streiff, husband and wife, grantor, in consideration of Ten dollars, (\$10.00) Dollars, to them paid by Melvin C. Doyle and Maxine Doyle, husband and wife, grantees, do hereby grant, bargain, sell and convey unto the said grantees, their heirs and assigns, all the following real property, with the tenements, hereditaments and appurtenances, situated in the County of Wasco and State of Oregon, bounded and described as follows, to-wit:

The Northwest quarter of the Southeast quarter, (NW $\frac{1}{4}$ SE $\frac{1}{4}$ ) of Sec. Twenty one (21) Township Two North (2N) Range Twelve (12) East of the Williamette Meridian, Wasco County, State of Oregon, containing in all forty acres more or less.

The consideration for this deed is less than \$100.00

To Have and to Hold the above described and granted premises unto the said grantee, their heirs and assigns forever.

And we the grantor, do covenant that we are lawfully seized in fee simple of the above granted premises free from all encumbrances,

and that we will and our heirs, executors and administrators, shall warrant and forever defend the above granted premises, and every part and parcel thereof, against the lawful claims and demands of all persons whomsoever.

Witness our hands and seal, this 25th day of September, 1961

Clara O. Streiff (SEAL)  
Henry Streiff (SEAL)  
(SEAL)

STATE OF OREGON,

County of Wasco,

ss.

On this 25th day of September, 1961,

before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Henry Streiff and Clara O. Streiff, husband and wife, who are

known to me to be the identical individual, described in and who executed the within instrument, and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

John M. Stapleton  
Notary Public for Oregon.

My commission expires Feb. 2nd 1962.

WARRANTY DEED

Henry Streiff et Ux.

Grantors.

TO

Melvin C. Doyle et Ux.

Grantees.

AFTER RECORDING RETURN TO

STATE OF OREGON,  
County of Wasco,

I, D. V. BOLTON, County Clerk and ex officio Recorder of Conveyances, in and for said county, do hereby certify that the within instrument of writing was received for record and recorded in the records of

DEEDS of said county at 1961 SEP 29 PM 4 01

In Book 144 On Page

Witness my hand and seal of office affixed at the date of recording

D. V. BOLTON, County Clerk

By Deputy

Return to Melvin C. Doyle

Street 229 S. E. 1st St.

City The Dalles, Oregon



# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

PHONE: (503) 298-5169

March 12, 1985

Forrester Brokers, Inc.  
By: Karl A. Johnson  
1096 Canyon Way W.  
The Dalles, OR 97058

*MIP-85-103-WFF#4*

Dear Karl:

This letter will serve as your official notification that your minor partition has been accepted by the Planning Office. This partition applies to property located in Township 2 North, Range 12 East, Section(s) 21, Tax Lot \_\_\_\_\_, and is zoned "F2 (40)" Forest.

We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on March 12, 1985.

Sincerely,



Dan Durow  
Director of Planning

Encl. (Minor Partition Plan Application - copy)

dm

APPLICATION FOR MINOR PARTITION

APPLICANT: Forrester Brokers Inc. by

JOHNSON KARL A. 478-3526  
 (Last Name) (First) (Middle) (Telephone)  
1096 Canyon WayW., The Dalles, OREGON, 97053  
 (Street or P.O. Box) (City or Town) (State) (Zip)

LOCATION OF SUBJECT PROPERTY:

Township: T2N Range: 12E Section: 21 Tax Lot: \_\_\_\_\_  
 Legal Owner: Contract Purchaser  
 (If not legal owner, state interest in property)  
 Size of Parcel: 160 acres  
 (Total contiguous acreage owned by the applicant)

Existing Zoning: F-2(40) Minimum Lot Size: 40 acres

Existing Land Use: Grazing

Approximate acreage of proposed parcels being partitioned (up to 3 parcels):

PARCEL #1 40 acres Acres Dimensions: Width: IRREGULAR  
 Depth: \_\_\_\_\_  
 Name of Road providing public access: Osborn Cut-Off County Road  
 PARCEL #2 40 acres Acres Dimensions: Width: IRREGULAR  
 Depth: \_\_\_\_\_  
 Name of Road providing public access: Osborn Cut-Off County Road  
 PARCEL #3 \_\_\_\_\_ Acres Dimensions: Width: \_\_\_\_\_  
 Depth: \_\_\_\_\_  
 Name of Road providing public access: \_\_\_\_\_

Suitability Statement, if applicable: (See Brochure, #7, "Information Required on Tentative Plan")  
No investigation has been made of the suitability of any given parcel by an authorized representative of the DEQ. No warranty is made that any parcel will be usable for sub-surface sewage disposal.

ACCEPTED BY  
 DIRECTOR OF PLANNING  
3-11-85  
[Signature]

Contiguous property owners to the proposed Minor Partition, and those which may be affected by the partition:

NAME

ADDRESS

Estate of Earl Davis- Beulah Lundell

115 W. 14th St., The Dalles, Ore. 97058

Jim Foote

2505 Dry Creek Road, Mosier, Ore. 97040

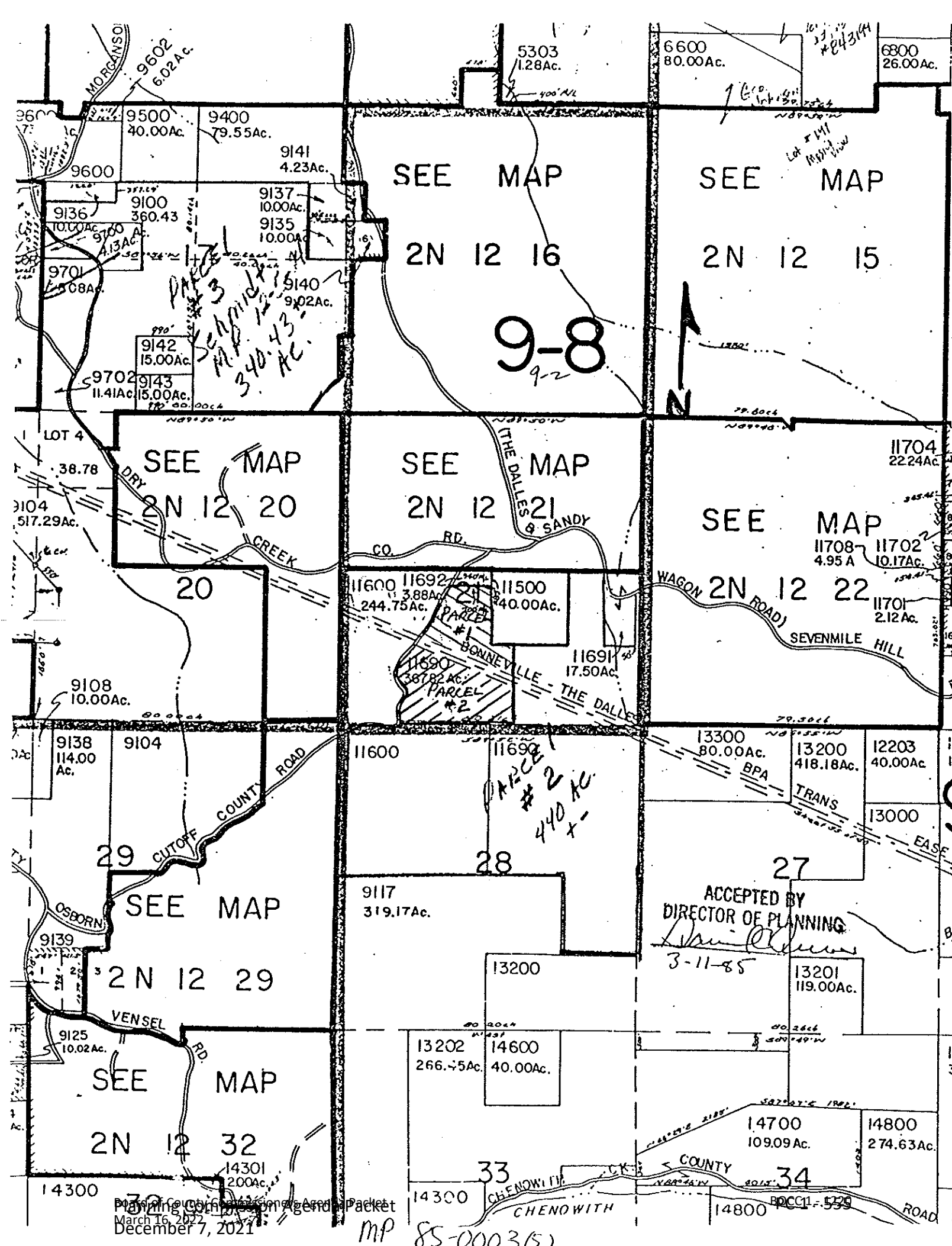
NOTE: Submit two (2) copies of a tentative plan, approximately to scale, on 8½" by 11" paper. See instructions for additional information needed on the tentative plan.

Karl Johnson  
Petitioner

March 1, 1985  
Date

FILING FEE (\$20.00) : \_\_\_\_\_

Make checks payable to the WASCO COUNTY PLANNING OFFICE



PARCEL #1

Property Description  
14-29921

EXHIBIT A

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, County of Wasco and State of Oregon, which lies Easterly of the Osborn County Cutoff Road and Northeasterly of the Southerly right-of-way line of the Bonneville-The Dalles Bonneville Power Administration Transmission Line Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Augusta P. Crosby, et al., a copy of which was recorded in the Deed Records of Wasco County, Book 91, Page 56 and amended by Amended Judgment on Declaration of Taking, a copy of which was recorded in the Deed Records of Wasco County, Book 91, Page 436.

EXCEPTING THEREFROM beginning at the Northeast corner of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon; thence South along the East line of the Southwest quarter 285 feet; thence West, parallel with the North line of said Southwest quarter, a distance of 700 feet, more or less to the center line of Cutoff County Road; thence Northeasterly along said center line, to the intersection of the North line of said Southwest quarter; thence East along said North line 550 feet, more or less to the point of beginning.

J



## PARCEL #2

That portion of the Southwest quarter of Section 21, T2N, R12E of W.M., County of Wasco, State of Oregon that lies Easterly of the Osborn County Cutoff Road and Southerly of the Southerly right-of-way line of the Bonneville-The Dalles Bonneville Power Adm. Transmission Line Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Augusta P. Crosby, et al, a copy of which was recorded in the Deed Records of Wasco County, Oregon, Book 91, Page 56 and amended by Amended Judgment on Declaration of Taking, a copy of which was recorded in the Deed Records of Wasco County, Oregon, Book 91, Page 436.

ALSO, beginning at the Southwest corner of the Southwest quarter, Southeast quarter of Section 21; thence East 227.7 feet on the South border of said Section 21; thence North on a line that is parallel to the quarter section line to a point that is 189 feet perpendicular distance to the centerline of the Bonneville-The Dalles Bonneville Power Administration Transmission Line Easement; thence Northwesterly along said parallel line to a point *on quarter sec* perpendicular distance of 189 feet from centerline of said easement; thence South along said quarter section line to the point of beginning. *with a chat is line*

# WASCO COUNTY PLANNING OFFICE

1721 W. 10th STREET

THE DALLES, OREGON 97058

DANIEL C. DUROW, Director of Planning

PHONE: (503) 298-5169

March 26, 1986

*M/P 36-103 WAF24*

*~~M/P 87-110 WAF24~~*

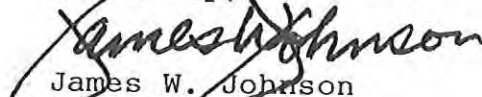
Forrester Brokers, Inc.  
c/o Karl Johnson  
1096 Canyon Way W  
The Dalles, OR 97058

Dear Karl:

This letter will serve as your official notification that your preliminary and final minor partition has been approved by the Planning Office. This partition applies to property located in: Township 2 North, Range 12 East, Section 21, Tax Lot(s) 11600 & 11604, and is zoned "F-2(40)" Forest Zone.

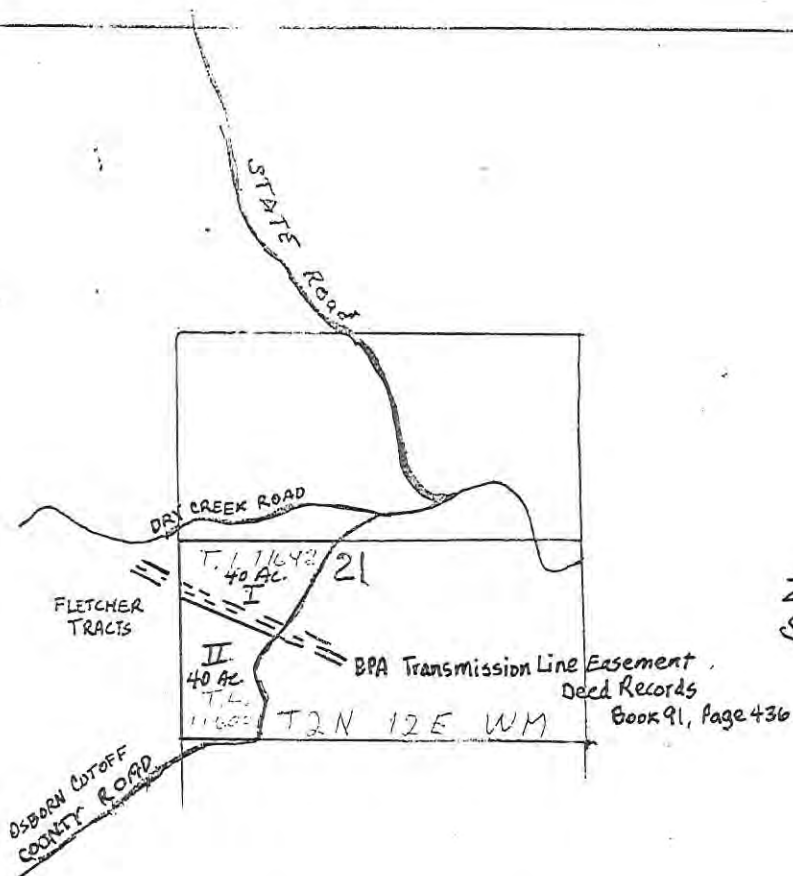
We are returning a copy for your files. Please note that this partition was filed with the Wasco County Clerk on March 25, 1986.

Sincerely,

  
James W. Johnson  
Associate Planner

Encl: (Minor Part. Plan Final-copy)

Partial Office of Environmental Quality Record Booklet  
March 15, 2022  
December 7, 2021



Zoning F-2 (40) Forest Zone  
Scale 1" = 2,000'

Minor Partition  
for  
Forrester Brokers Inc.  
3/19/86

We, the owners of the land shown herein, hereby declare that this division of land has been made with our free consent and in accordance with our desire  
FORRESTER BROTHERS INC  
Ruth L. Johnson 3/19/86  
OWNER DATE

OWNER DATE

Subscribed and sworn before me on this 19th day of March, 1986.

Notary Public for the State of Oregon  
JLANI KARE  
My Commission Expires 9-15-89  
NOTARY PUBLIC - OREGON

I hereby, certify that this partition was examined and approved this 25 day of March, 1986.

N/A  
Wasco Co. Surveyor

I hereby certify that this partition was examined and approved this 25 day of March, 1986.

Daniel A. Duro  
Wasco Co. Planning Dir.

RECORDING INFORMATION  
File Number 86-0002  
Instrument Received on the 25th day of March 1986 at 1:50 P. M.

Sue A. Proffitt  
Wasco Co. Clerk

WASCO CO. PLANNING DIR.

No investigation has been made by a representative of the Department of Environmental Quality and no warranty is made that any parcel will be usable for subsurface sewage disposal.

BPCG1 - 5339

FILED Wasco Co  
THE D. 1921

Parcel I

MAR 25 1 50 PM '25

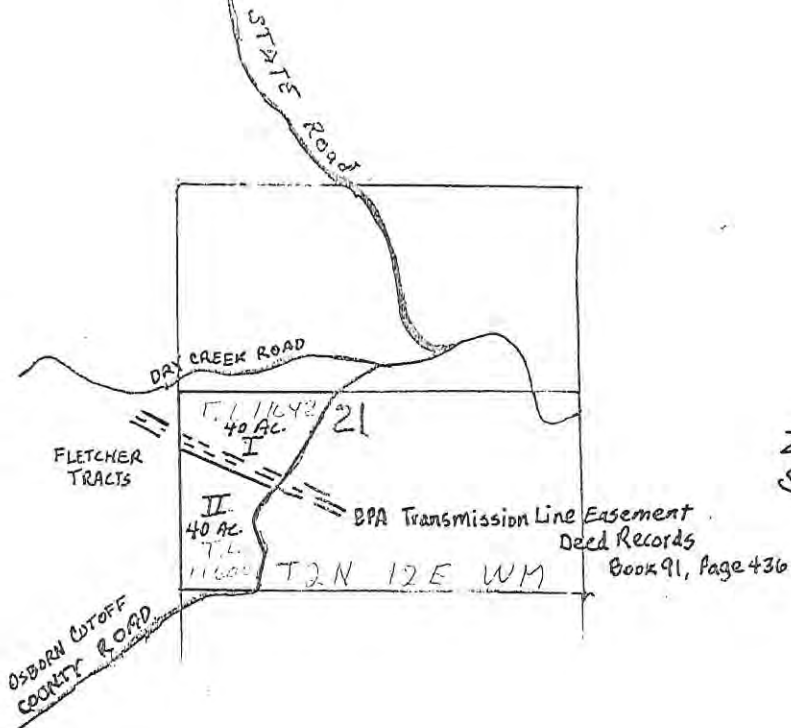
SUE A. PROFFITT

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County Oregon, lying west of the Osborn Cutoff County Road except that property lying southerly of the south boundary of the Bonneville Power Easement.

Parcel II

That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying southerly of the south boundary of the Bonneville Power Eastment and westerly of the Osborn Cutoff County Road.

ACCEPTED  
DEPARTMENT OF PLANNING  
*[Signature]*  
3-25-86



Zoning F-2 (40) Forest Zone  
Scale 1" = 2,000'

Deed Records  
Book 91, Page 436

Minor Partition  
for  
Forrester Brokers INC.  
3/19/86

No investigation has been made by a representative of the Department of Environmental Quality and no warranty is made that any parcel will be usable for subsurface sewage disposal.

We, the owners of the land shown herein, hereby declare that this division of land has been made with our free consent and in accordance with our desires.  
FORRESTER BROKERS INC.  
With L. Johnson 3/19/86  
OWNER DATE

OWNER DATE

Subscribed and sworn before me on this 19th day of March, 1986.

Notary Public for the State of Oregon  
My Commission Expires 9-15-89  
NOTARY PUBLIC - OREGON

I hereby, certify that this partition was examined and approved this day of 19.

N/A  
Wasco Co. Surveyor

I hereby certify that this partition was examined and approved this 25 day of March, 1986.

Daniel C. Dumas  
Wasco Co. Planning Director

RECORDING INFORMATION  
File Number 86-0000  
Instrument Received on the 25th day of March 1986 at 1:50 P.M.

Sue A. Proffitt  
Wasco Co. Clerk

March 15, 2022  
December 7, 2021



WASCO TITLE, INC.

TITLE INSURANCE - ESCROWS

TELEPHONE (503) 296-2495

512 WASHINGTON STREET

THE DALLES, OREGON 97058

February 26, 1986

Karl Johnson  
1096 Canyon Way West  
The Dalles, Oregon 97058

Order No. 14-30488

Dear Mr. Johnson:

This company is prepared to issue title insurance policy, in standard form, as of February 26, 1986 at 8:00 o'clock A.M., insuring the title to:

*Parcel II* That portion of the Southwest quarter of Section 21, Township 2 North, Range 12 East of the Willamette Meridian, Wasco County, Oregon, lying southerly of the south boundary of the Bonneville Power Easement and westerly of the Osborn Cut-Off County Road;

*Parcel I* in That portion of the SW 4 Sect 21, Twp 2 N R 12 E W 1/4 Wasco Co, lying west of the Osborn cut off Co Rd except that property lying southerly of the B. P. Easement, FORRESTER BROTHERS, INC., a Washington corporation;

subject to the usual printed exceptions and conditions contained in said policy, and

1. The usual reservations as contained in patent issued by the United States of America.
2. The rights of the public in and to the portions thereof included within the boundaries of roads and highways.
3. Public utility easements, if any shall be found to exist on the premises.
4. Easement in favor of the United States of America, including but not limited to the following: "Easement as set forth in Judgment on Declaration of Taking, United States of America vs. Agusta P. Crosby, et al., in the U. S. District Court for Oregon, No. 176, a copy of which was filed in the Deed Records of Wasco County, Oregon, Book 91, Page 56, on October 5, 1939. Said decree was amended by Amended Judgment on Declaration of Taking, a copy of which was filed in the Deed Records of Wasco County, Oregon on April 11, 1940, Book 91, Page 436. (Affects Secs. 21 & 28)
5. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Imo G. Klepper, lessor, to Husky Oil Company, lessee, dated December 6, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0764. (Affects additional property also)

*Bonneville*

*643-2457*

Karl Johnson  
Page 2  
February 26, 1986

6. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Deulah E. Lundell, lessor, to Husky Oil Company, lessee, dated December 5, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0765. (Affects additional property also)
7. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Earl L. Davis, lessor, to Husky Oil Company, lessee, dated December 4, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0763. (Affects additional property also)
8. Oil, Gas and Mineral Lease, including the terms and provisions thereof, Dora C. Findley, lessor, to Husky Oil Company, lessee, dated December 6, 1980, recorded March 27, 1981, Wasco County, Oregon, Micro-Film No. 81-0766. (Affects additional property also)
9. Trust Deed, including the terms and provisions thereof, executed by Forrester Brokers, Inc., to Wasco Title, Inc. as trustee for the Estate of Earl L. Davis, dated December 17, 1984, recorded December 21, 1984, Wasco County, Oregon, Micro-Film No. 84-3169, given to secure the sum of \$36,000.00 and interest thereon. (Affects additional property also)
10. Electric Line Right of Way Easement, including the terms and provisions thereof, Forrester Brokers, Inc., (Karl A. Johnson), grantor, to Wasco Electric Cooperative, Inc., grantee, dated December 31, 1984, recorded March 15, 1985, Wasco County, Oregon, Micro-Film No. 85-0505.
- out 11. ~~Contract, including the terms and provisions thereof, between Forrester Brokers, Inc., a Washington corporation, seller, and William C. Daley and Rebecca P. Daley, buyer, dated and recorded May 8, 1985, Wasco County, Oregon, Micro-Film No. 85-0949.~~
- out 12. ~~Easement for ingress and egress as reserved in Contract between Forrester Brokers, Inc., and William C. Daley and Rebecca P. Daley, recorded May 8, 1985, as Micro-Film No. 85-0949, shown above.~~
- out 13. 9.2 2N 12 11600 1985-86 taxes, \$197.24 and interest, unpaid.  
9.2 2N 12 11604 1985-86 taxes, \$306.06 and interest, unpaid.

There are no unsatisfied judgments against Paul J. Bonneau or Waiyee Bonneau.

Sincerely,

Wasco Title, Inc.

  
Pat McLoughlin, President

PMcL/dw  
cc: Bonneau



SEE MAP

SEE MAP

2N 12 6

2N 12 5

(PIONEER)

9-6

SEE MAP

SEE MAP

SEE MAP

2N 12 7

2N 12 8

2N 12 9

9

BEHRENS

CR

RD

MORGANSON

MARSH

"STATE" RD

CUTOFF

SEE MAP

2N 12 16

9-8

SEE MAP

2N 12 18

SEE MAP

2N 12 20

SEE MAP

2N 12 21

LITTLE DALLIES

SANDY

DIGGER RD

CARROLL

SEE MAP

2N 12 19

20

11604

49.00Ac.

11603

36.00Ac.

11602

43.00Ac.

11601

452.82Ac.

11692

3.88Ac.

11601

17.50Ac.

11691

17.50Ac.

11601

452.82Ac.

11500

40.00Ac.

11601

17.50Ac.

11691

17.50Ac.

11601

452.82Ac.

11500

40.00Ac.

11601

17.50Ac.

11691

17.50Ac.

11601

452.82Ac.



WASCO COUNTY PRELIMINARY MINOR PARTITION APPLICATION

APPLICANT:

SURVEYOR: (If Applicable)

Forrester Brokers INC

(Last) (Middle) (Last)

(Last) (First) (Middle)

1096 Canyon Way West

(Street or P.O. Box)

(Street or P.O. Box)

The Dalles Ore 97058

(City) (State) (Zip)

(City) (State) (Zip)

Telephone: 478 3526

Legal Owner: Forrester Brokers INC

If applicant is not legal owner, state interest in property:

LOCATION OF SUBJECT PROPERTY:

Township: 2 N Range: 12 E Section: 21 Tax Lot: 11600, 11604

PROPERTY CHARACTERISTICS:

Size of Parcel: 40 ACRES  
(Total contiguous acreage owned by applicant)

Existing Zoning: FR-40 Plan Designation: Forest

Existing Land Use:

PROPOSED PARTITION:

Parcel #1 40 Acres

Dimensions: Width: Irregular  
Depth: V

Name of road providing public access: Osborn cut off Co Rd

ACCEPTED BY  
DIRECTOR OF PLANNING

[Signature]

3-25-86

Preliminary Minor Partition Application  
Page 2 of 3

Parcel #2 40 Acres Dimensions: Width: Irregular  
Depth: \_\_\_\_\_  
Name of road providing public access: Osborne Ct Off Co. Rd  
Parcel #3 \_\_\_\_\_ Acres Dimensions: Width: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Name of road providing public access: \_\_\_\_\_

Proposed Water Supply: Drilled Well  
Proposed Sewage Disposal: Septic Tank  
(See Note #5)

NOTE: The following supporting documents shall be attached:

1. Preliminary plan map of the partition showing:
  - a. boundaries of the total contiguous ownership
  - b. boundaries of each proposed tract
  - c. the number assigned to each tract
  - d. acreage of each tract I 40 ± II 40 ±
  - e. location and name of existing roads
  - f. any private roads or easements and all relative restrictions or reservations Bonneville The Dalles Transmission line
  - g. location of water supply and sewage disposal on each tract
  - h. predominant natural features, such as water courses and their flows, marshes, rock outcroppings, and areas subject to flooding, sliding or other natural hazards
  - i. north point, scale and date
2. A vicinity map of such scale to clearly locate the proposed partition in relation to adjacent subdivisions, partitions, roadways and other land parcels.
3. Draft of any proposed restrictions and covenants affecting the partitioned land.
4. Legal description for each of the proposed tracts.
5. If not sewerred and located in an "F-1", "F-2", "A-1" and "FF-40" zones, a statement signed by an authorized representative of the



Preliminary Minor Partition Application  
Page 3 of 3

Department of Environmental Quality, State of Oregon, or County Sanitarian regarding the suitability of each parcel to be partitioned for subsurface sewage disposal; or a signed statement shown on the face of the final partition plan that no investigation has been made of representative of the Department of Environmental Quality, and that no warranty is made that any parcel will be usable for subsurface sewage disposal;

If not sewered and located in an "FF-10", "AR", "RR", "R-1", "R-2", "R-3", "RHM-2", "R-C", "C-1", "M-1", "M-2", or "M-3" zone; as statement signed by an authorized representative of the Department of Environmental Quality approving each parcel to be partitioned for subsurface sewage disposal; or a officer of a public sewer district or corporation warranting the availability of sewer hook-ups for each parcel to be partitioned.

FORRESTER BROTHERS, INC.

Ruth L. Johnson  
(Petitioner)

3-19-86

(Date)

NO INVESTIGATION HAS BEEN MADE OF REPRESENTATIVE  
OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY  
AND THAT NO WARRANTY IS MADE THAT ANY PARCEL  
WILL BE USABLE FOR SUBSURFACE SEWAGE DISPOSAL

## ATTACHMENT D – EXHIBIT 18

Sheila Dooley (Requested comments not be addressed in Staff Report)

Mike Sargetakis, Attorney for Sheila Dooley and Jill Barker (Requested opportunity to testify at hearing)

Jillian Barker (Comments added to PC Packet on November 28, 2021.

November 24, 2021

Dear Wasco County Planning Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

The following comments are in response to the new evidence submitted by the applicant.

1. Soil Assessment

In William Sumerfield's letter to Interim Director Kelly Howsley-Glover, dated July 9, 2021 on page 2, last sentence, he states: "With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use."

Photographs of the subject parcel contradict this statement as numerous Ponderosa Pine, Oregon White Oak and fir trees are present on the property in the areas that haven't been mowed LUBA Record photographs on pages 977-982 show this. On Google maps (7000 Seven Mile Hill Rd., The Dalles) you can clearly see the furrows/lines where the applicant has mowed. Furthermore the property across the road contains similar soil according to the USDA. In the past it was used to grow alfalfa hay and is now used as a tree farm.

Photo 1: Tree farm across road





The subject property has historically been used for farming, starting from at least the '60s if not earlier. Sam Decker farmed property on both sides of the road and had 3 cuttings of alfalfa per year in the mid-70s according to the neighbors. When the property was sold to Larry Black in the late '70s he purchased Mr. Decker's farm equipment (**bill of sale attached as Exhibit 1**) and continued farming the land and also had cattle grazing there in the late '70s. David Wilson continued the farm use up to the present time as evidenced by the mowing lines.

In the Planning Commission Agenda Packet from the initial approval of this application, staff noted that the USDA soil survey identified two soil types on the subject parcel: 49C and 50D (Wamic Loam – See Exhibit 5) and that both are Class IV soils, type 4a. LUBA Record at p. 1338. The staff report goes on to note that the site index for both is 70 which is an indication of the potential productivity and translates to the high end for potential yield for Class 6 for Ponderosa Pine.

The soil survey done by the USDA found the soils to be more productive than average (p. 821 of LUBA Record) and suited to growing Ponderosa Pine and Oregon white oak. These trees as well as fir trees are growing on the areas not mowed and are visible in the aerial photographs.

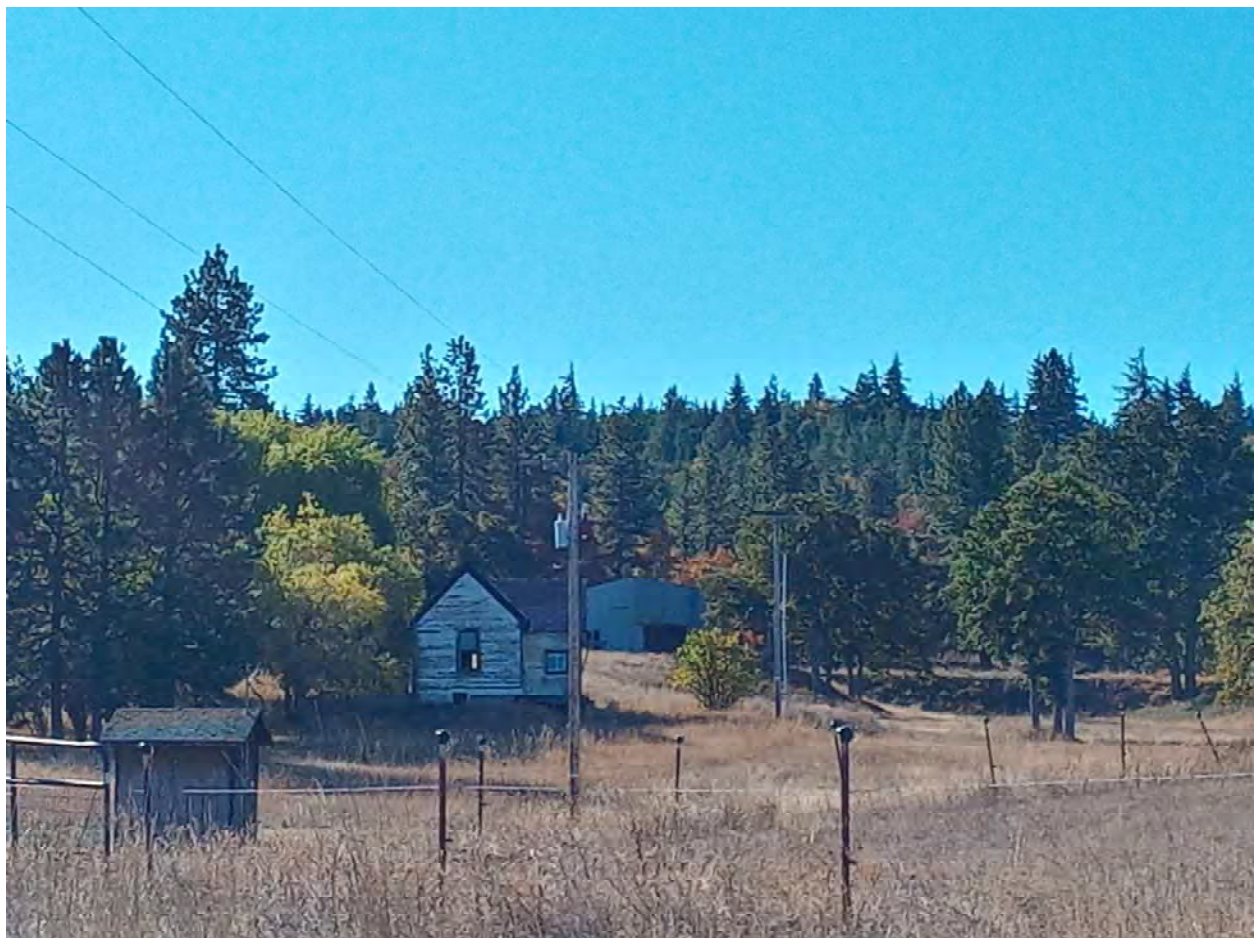


On page 3 of the applicant's Soil Assessment it states that "the subject property is complex and diverse." According to the Wasco County Soil and Water Conservation District staff, there are inclusion areas that could help account for this assessment showing poorer soil than what the USDA maps show. Inclusion areas contain other soil types within a soil type. There may be many inclusions present on this property according to WCSWCD.

The areas not used to grow hay on this property are similar in appearance to much of the other Mosier area forest zone properties. Oak, fir and pine trees are often seen growing together throughout the Mosier area. Oak and pine trees are similar in their soil requirements according to the Wasco County Soil and Water Conservation District staff. The oak and pine habitat is a unique habitat of high value to many animal, bird and insect species.

The applicant's Soil Assessment incorrectly states that the soils on the south side of the property are mostly unsuited soils (51D). The photograph taken from the county road facing south clearly shows conifer and Oregon White Oak trees growing throughout this area. The applicant's map shows that these areas are tree covered.

Photo 2: View to south





The area on the east side of the property and the southwest corner that are labeled as unsuitable soils are also tree covered. Approximately 90% of the areas that are labeled by the applicant's lawyer in his recent letter as unsuitable have trees growing on them.

Photo 3: View to east and south



According to the Wasco County Soil and Water Conservation District, the areas that have been used to grow alfalfa hay and oats can also grow trees. If you can grow alfalfa or oats on the soil, you can grow trees.

Photo 4: View to west





Photo 5: View to west



Photo 6: View to west



The applicant's Soil Assessment also incorrectly labels a total of 1.57 acres as infrastructure. The 1.48 acre infrastructure area includes the 2,660 square foot house and a couple of outbuildings. This area also includes vacant land that appears to be in a corral and areas with conifers. The other .09 acres labeled as infrastructure are for the illegal dwelling and a dilapidated unused barn with no roof. These are the only areas classified as Class 8 in the survey.

On page 3 of the Soil Assessment it states that a slim majority (preponderance) of the lot or 51.8% is made up of Class 7 and 8 soils. The Legend on page 13 breaks this down:

20.79 acres generally unsuited soils  
19.34 acres generally suited soils

Removing the illegal and unusable buildings changes this to 20.70 unsuited acres and 19.43 suited acres, a difference of 1.27 acres out of 40.13 total acres. If the vacant land and treed areas labeled as infrastructure are instead added to the suited acreage, there is a preponderance of suited soils.



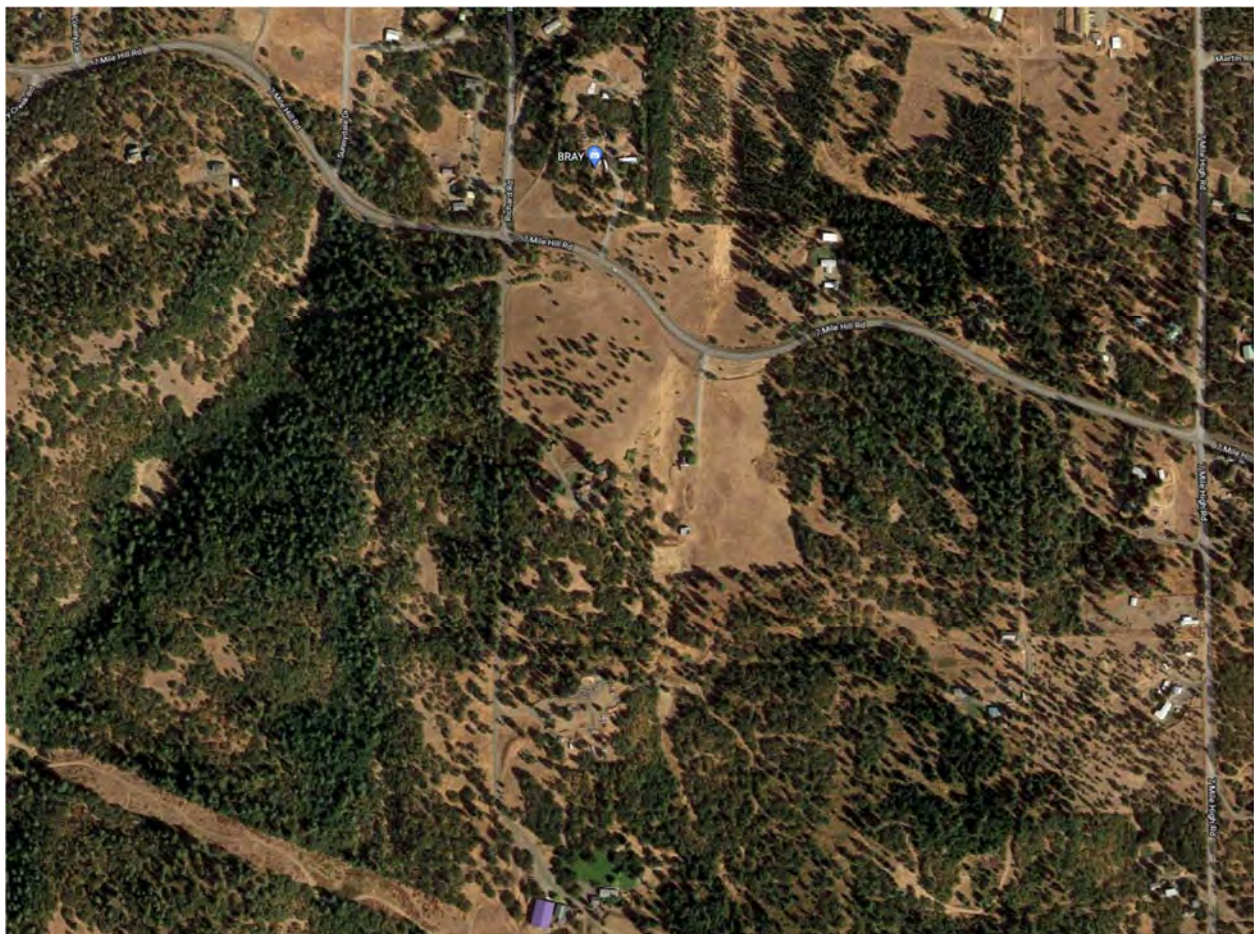
Another consideration is that a total of 23 locations were tested with the results extrapolated to apply to the areas around them. There is also the margin of error to consider especially when inclusion areas containing different soil types are involved.

On page 13 of the Soil Assessment, the map used to calculate the soil type areas does not contain 90 degree angles on the south side. As a result, the supposedly unsuited soil areas are overrepresented.

The Soil Assessment Completeness Review (Page 1) included with the Soil Assessment states that “the county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only.” The Soil Assessment was done with the stated goal of securing a Plan Amendment Zone Change (page 2 of Soil Assessment Release Form). This was to be accomplished by finding a preponderance of unsuited soil.

## 2. Aerial Photo of Subject Property and Adjoining Area

In the Remand Request letter on page 3, the applicant states “there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property, and lands immediately adjacent to the south and west of the subject property.” He states that his aerial photo shows a “moonscape” south of the property. This is not evident on Google maps of the surrounding area.





The only line of demarcation between his property and the surrounding properties is to the northwest due to his mowing of the subject property. He has also cleared an area around the house. Soil types don't follow property lines.

Adjoining this property to the south is a 69-acre parcel owned by the applicant and in farm deferral. The subject property is part of the 109-acre tract that he owns. In 2018 the applicant stated that he needed a 7,000 square foot building and a 2,500 square foot agricultural exempt building to support his agricultural/farm use. In January 2018 the Wasco County Planning Commission approved his request on appeal (PLAAPL-17-10- 001 Wilson Appeal) and overturned the Planning Director's denial of retroactive approval of a 7,000 square foot agricultural exempt building located on his adjoining 69 acre parcel. **(See attached Exhibit 2: Planning Commission meeting minutes of January 23, 2018 page 3)**

At the January 2, 2018 hearing Mr. Sumerfield stated that "Applicant makes substantial income from farm production each year the property has been in deferral." **(See attached Exhibit 3: Planning Commission meeting minutes of January 2, 2018, page 20)**

The Planning Commission found that "the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan." (January 23, 2018 meeting minutes, page 3)

South of that is commercial forest land zoned F-2 80. Pages 4 and 5 of the LUBA Final Opinion and Order describe the property and surrounding area in detail. In regards to the property south and west, the record states "To the south of that 69-acre parcel for approximately five miles is that zoned F-2 and managed for forestry and grazing. Record 25. To the west of the subject property lies a split-zoned 16.3 acre property with 5 acres zoned F-F 10, and the remaining approximately 11 acres zone F-2, and a 439-acre parcel zoned F-2 and managed for commercial forestry. All of the parcels that are immediately adjacent to west, east and south of the subject property possess similar soil types and slopes as the subject property."

### 3. Physically Developed Map & Area Calculations

The 40-acre parcel is part of a 109-acre tract zoned F-2 80 and owned by the applicant. On page 12 of the applicant's Soil Assessment, he has submitted a map of the tax lots in the surrounding area. This map is misleading as many of these tax lots to the south, southeast and west are part of larger tracts, in commercial forestry, zoned F-2 80 and therefore unbuildable. (LUBA Record Vicinity Map, page 8) **(Also see attached Exhibit 4: Tract map)**

In 2013 there was an application to rezone this property and several adjacent parcels to FF-10. The application was denied by the County Commission after the County received a letter from the Department of Land Conservation and Development (DLCD) and Oregon Department of Forestry (ODF) in strong opposition to this rezone due to its value as forest land. (Supplement to Complete LUBA Record pages 788-790)

DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained. At the County Commission hearing there were also concerns expressed by the Board of County Commissioners regarding fire safety and water supply.

In his Remand Request letter (page 3), the applicant stated that he is taking LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. The letter goes on to identify the following buffers, most of which are not actually required buffers:

- a. Power Lines: buffer of 15 ' either side from center line

Response: The Wasco Electric Coop usually trims tree limbs so that they do not touch the power lines. Photos 7 and 8 on following pages are examples of trees recently trimmed by the Wasco Electric Coop. These are not on the applicant's property.





Note: These examples of trees trimmed by Wasco Electric Coop are not on applicant's property.

In his Remand Request letter on page 3, the applicant states that there are 10,024 linear feet of power lines on the property. The LUBA Record on page 9 with his site plan shows overhead power lines running the length of the property, approximately 1,320 linear feet not 10,024 feet. These are the only power lines shown on the site plan submitted with his application. **See attached Exhibit 5: Site Plan.**

The map submitted with the Remand Request does not match the site plan in the application that went to LUBA. It contains proposed, not current, development. The additional power lines are nonexistent and are not visible from the road. The three trailer sites were not part of the original site plan either and I question whether these trailers would be permitted on F-2 80 property. It appears that the applicant is adding this proposed development to make a physically developed case after the fact. LUBA ruled that the property was not physically developed based on the evidence.

b. Structures: buffer of 50' each side from the following structures: Log home, barn #1, barn #2, lean to, old homestead home, and old homestead barn

Response: The Wasco County LUDO does not prohibit trees within 50 feet of a building. The 50-foot wide fire fuel break maintenance standards include having trees limbed up approximately 8 feet from the ground and removing underbrush. **(See attached Exhibit 6: LUDO Section 10.120: Defensible Space-Clearing and Maintaining a Fire Fuel Break.)**

In addition the applicant's buffer calculations include illegal and unusable buildings that should not be included. The old homestead home was replaced by the log home and is an abandoned illegal dwelling. What he refers to as the old homestead barn is an unusable dilapidated metal building with no roof.

The dimensions of the log house are shown as 80 x 100 or 8,000 square feet in his calculations but only 2,660 on the site plan.

c. 50' buffer along 7 Mile Hill Road

Response: Wasco County Public Works Director Arthur Smith (October 28, 2021 email) said that there is no defined or statutory setback for roads. "In Mosier, we have trees and other vegetation within 2 feet of the road shoulder...We would be cutting down trees for 100 years to clear every county road for 50 feet." **See attached Exhibit 7: Arthur Smith October 28, 2021 email**

D. 50' buffer along driveway easement

Response: There is no 50' buffer requirement along the driveway easement. A minimum driveway width of 20 feet is required (Wasco County LUDO Section 10.140 – Access Standards). **See attached Exhibit 8: Wasco County LUDO Section 10.140.** As roads are uses allowed by Goal 4, they are not considered as physical development.

As the entire record, including the new evidence does not demonstrate that the property is either physically developed to such an extent that it is no longer available for resource use or irrevocably committed to non-resource uses, the rezone request should be denied.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040

November 26, 2021

Dear Wasco County Planning Commissioners,

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I have the following additional comments regarding the new evidence submitted by the applicant.

According to the Wasco County Soil and Water Conservation District, Ponderosa Pine and Oregon White Oak can't grow on the 10E Bodell soil type. As most of the 6.06 acres labeled as 10E Bodell on the applicant's soil survey contain these trees, it appears that these areas are not correctly identified.

Please see the attached information. It shows the native vegetation that occurs naturally and should be present if the land has been undisturbed by development including farming as well as trees that are commonly planted.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040



## Ecological Site/Plant Association and Vegetation (OR)

### Wasco County, Oregon, Northern Part

[Composition of forest understory vegetation is based on canopy cover. Composition of rangeland vegetation is based on dry weight]

Map symbol and soil name	Ecological site or plant association	Common trees	Forest understory or rangeland characteristic vegetation	Composition	
				Forest	Range
				Pct	
10E:					
Bodell	SOUTH SLOPES 20-40 PZ (R006XA204OR)	—	Idaho fescue bluebunch wheatgrass Sandberg bluegrass	— — —	55 15 10
49C:					
Wamic, north	LOAMY 14-20 PZ (R006XA300OR)	Oregon white oak ponderosa pine	Idaho fescue bluebunch wheatgrass antelope bitterbrush Oregon white oak ponderosa pine prairie Junegrass Sandberg bluegrass	45 10 8 8 8 5 5	45 10 8 8 8 5 5
50D:					
Wamic	LOAMY 14-20 PZ (R006XA300OR)	Oregon white oak ponderosa pine	Idaho fescue bluebunch wheatgrass antelope bitterbrush Oregon white oak ponderosa pine prairie Junegrass Sandberg bluegrass	45 10 8 8 8 5 5	45 10 8 8 8 5 5
51D:					
Wamic	SOUTH SLOPES 14-20 PZ (R006XA200OR)	Oregon white oak ponderosa pine	bluebunch wheatgrass Oregon white oak Sandberg bluegrass antelope bitterbrush ponderosa pine	— — — — —	70 10 10 5 5

BPOC11 - 5382

March 16, 2022  
December 7, 2021  
BPOC11 - 5382

AFFIDAVIT

STATE OF OREGON     )  
                          ) ss.  
County of Wasco     )

I, LARRY BLACK, being first sworn depose and say:

That I did on or about the 26th day of January, 1977  
receive from Samuel A. Decker and Betty J. Decker a  
Bill of Sale, the original of which is attached hereto,  
conveying to me the items listed thereon.

That the consideration for the conveyance was part  
of the ranch sale transaction wherein I purchased from  
Samuel and Betty Decker certain real property as well as  
the personal property itemized on the Bill of Sale.

*Larry Black*



SUBSCRIBED AND SWORN to before me this 16th day of  
February, 1978.

*Meredith D. [Signature]*  
Notary Public for Oregon  
My Commission expires: 1-4-84

780515(3)

620 RV-2

KNOW ALL MEN BY THESE PRESENTS, That SAMUEL A. DECKER AND BETTY J. DECKER  
the part LES of the first part, for and in consideration of the  
sum of TEN Dollars,  
to THEN in hand paid by LARRY BLACK

the part Y of the second part, the receipt whereof is hereby acknowledged, do by these presents,  
bargain, sell and deliver unto the said part Y of the second part, HIS executors, administrators  
and assigns, all of the following described personal property, to-wit:

ONE CASE WHEEL TRACTOR  
ONE INTERNATIONAL TD6 CRAWLER  
ONE MOWER  
ONE HAY RAKE  
ONE DISC  
ONE GRAIN DRILL  
ONE FERTILIZER SPREADER  
ONE PLOW  
ONE HARROW  
ONE NEW HOLLAND HAY DALLER  
ONE TANDEM 18" DISC PLOW  
ONE HAY CONVEYOR  
ONE SPRINGTOOTH  
ONE HAY SKID  
ONE 500 GALLON FUEL TANK  
ONE 300 GALLON FUEL TANK  
ALL IRRIGATION PIPE AND FITTINGS ON THE PROPERTY  
ALL POSTS AND BUILDING MATERIAL ON THE PROPERTY

780515 (3)

620 NW-2



To have and to hold the same unto the said part Y of the second part, HIS executors, administrators and assigns forever.

And DO hereby covenant with the said part Y of the second part that THEY ARE the lawful owner S of said goods and chattels; that they are free from all encumbrances

that THEY have good right to sell the same as aforesaid, and that THEY will and THEIR executors and administrators shall warrant and defend the title thereto unto the said part Y of the second part, HIS executors, administrators and assigns against the lawful claims and demands of all persons whomsoever.

IN WITNESS WHEREOF, WE have set OUR hand S and seal S this 26th day of JANUARY, 1977.

Executed in the presence of:

Samuel A. Decker (SEAL)  
Betty J. Decker (SEAL)

STATE OF OREGON,

County of                      ss.

I,                      being duly sworn, depose and say that                      the sole owner                      of the property described in the foregoing bill of sale, and that the same is free and clear of liens and encumbrances of every kind and nature,

at date of execution of said bill of sale, and the same have been paid for in full.

Subscribed and sworn to before me this                      day of                     , 19            .

Notary Public for Oregon.  
My Commission Expires                     

BILL OF SALE  
(FORM No. 1)

TO

Dated                     , 19            

STATE OF OREGON, }  
County of Wasco, ss.

I, SUE A. PROFFITT, County Clerk and ex-officio Recorder of Conveyances, in and for said county, do hereby certify that the within instrument of writing was received for record -

FEB 16 4 03 PM '78

and recorded in the -

records of said County under Micro Film

NUMBER: 780515 (3)

INDEXED

Witness my hand & seal affixed at the Dunes  
SUE A. PROFFITT, County Clerk  
By                      Deputy  
Return to                       
Address                     

STATE OF OREGON,

County of                      ss.

BE IT REMEMBERED, That on this                      day of                     , 19            , before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named                     

known to me to be the identical individual                      described in and who executed the within instrument and acknowledged to me that                      executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Notary Public for Oregon.  
My Commission expires

**Wasco County Planning Commission**

**January 23, 2018**

**Meeting begins at 3:00 p.m.**

**Columbia Gorge Discovery Center**

**5000 Discovery Dr**

**Lower Level Classroom**

**The Dalles, OR 97058**

**CALL TO ORDER**

Members Present: Lynne Erickson, Vicki Ashley, Brad DeHart, Russell Hargrave, Jeff Handley, Chris Shanno,

Absent Members: Mike Davis

Staff Present: Dawn Baird, Angie Brewer, Brenda Coleman

**Chair Russell Hargrave** called the meeting to order at 3:10 p.m.

**Mr. Hargrave** asked if there was any public comment for anything not on the agenda. There was none.

**Mr. Hargrave** then opened for deliberation, the public hearing for PLAAPL-17-10-0001 for David Wilson, of a Type I Review to deny retroactive approval of a 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building.

**Mr. Hargrave** then asked Associate Planner Dawn Baird if any new information came in. Dawn responded that new information came in during the 7 day period the commission held the record open which the Commissioners have received in the Agenda Packet. No new information since that time. Planner Baird listed the following received information:

- Information submitted by the Appellant's attorney
- Staff Memo

**Deliberation continued**

**Vice Chair DeHart** stated that he has a difficult time not viewing it as an existing building. He feels they might have fell short of finding criteria to justify the building. From the information provided, including the other examples from around the county, he feels the County has not been very consistent with how buildings are reviewed, pertaining to the size of the buildings and use.

**Commissioner Ashley** stated that she did some research on the tax lots adjacent to or surrounding the examples submitted by the applicant. Being a farmer she understands you don't put your building on your best piece of ground. Generally you put it next to a road, next



to electricity as much as possible. A lot of the big buildings are located on a small parcel. Most of them are just a storage shed, but they are big. She feels that it is too bad that the applicant received misinformation from his neighbors about not needing a permit. But she is afraid that if the County lets this slide, how many more will try it. She feels that there are more out there that we are not aware of, this will be highly publicized and she feels that we are opening a can of worms if we let it go.

**Chair Hargrave** stated as for not considering the fact that it is there, he is worried about setting a precedent. He asked if the Commission would be setting a precedent and thinks this should hold weight on the decision the Commission makes. He stated that the problem isn't that it doesn't have a permit, but would a permit be allowed in this case.

**Commissioner Schanno** stated that he does not think the size breaks the rules, therefore it would have been permitted.

**Commissioner Handley** stated that he wasn't at the first hearing so he wasn't in on everything but he doesn't like the idea of telling someone how large of a structure they can build. He believes that if we go down that road, you will be telling people how large of an ag structure, then how large of a house they can build. He doesn't feel that we should be telling someone what the proper size of a structure they need. He feels it is up to the applicant to determine what size fits their need. **Chair Hargrave** stated that he wanted clarification on outbuildings, is there potential for the applicant to build an accessory building where the size is limited to 75% of the footprint of the size of the dwelling, so the rules for an accessory structure would then be relevant to this property. **Director Brewer** stated that yes, if you for some reason found that the agricultural use was not commercial in nature, then you would be pursuing an accessory structure instead of an agricultural building. **Commissioner DeHart** stated that in that case there would be no way to approve it based upon the size of the house. You would be restricted to 75% of the size of the house. **Director Brewer** stated that she wanted to clarify that the 75% rule is a Wasco County rule on top of the existing state of Oregon land use regulations and is not required by state law.

**Commissioner DeHart** stated that the only guideline the Commission has is the statewide 20000 sqft. **Director Brewer** stated that the 20000 is a maximum, but that the Wasco County Ordinance requires the planner to evaluate the size need based on the agricultural use and size of the operation. **Commissioner Erickson** asked for clarification of the outcome of the decision if the applicant had put all his equipment and hay in the structure. **Planner Baird** stated that if all the equipment had been there, there would have still been a lot of open space.

**Commissioner Ashley** asked if the applicant walked into the office today, would he be allowed to build the structure. **Director Brewer** stated that questions would be asked today that would quantify the size of the building based on the acres of the operation.

**Commissioner Erickson** stated that she thinks if a new application were to come in today, it would be approved. **Director Brewer** stated that she did not believe we would have approved

a 7000 sqft building, she further stated that there would be some back and forth conversations and would have come up with a satisfactory solution.

**Commissioner Schanno** moved to overturn the Director's Decision and approve the request for a 7000sqft with amended findings and conditions including a requirement that the applicant obtain an agricultural exempt permit from Building Codes.

**Commissioner Erickson** seconded.

**Chair Hargrave** called for discussion. There was none.

**Chair Hargrave** called for the vote. **The motion was approved 4 to 1, with 1 abstained, and 1 absent.**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes

Vice-Chair DeHart – yes

Commissioner Handley - abstain

Commissioner Davis – absent

Commissioner Ashley – no

Commissioner Schanno – yes

Commissioner Erickson – yes

Alternate Commissioner Position #1 – vacant

Alternate Commissioner Position #2 – vacant

**Vice Chair DeHart** moved to not rely on the formula in this case and to find that the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan.

**Commissioner Ashley** seconded.

**Chair Hargrave** called for discussion. There was none.

**Chair Hargrave** called for the vote. **The motion was unanimously approved 6 to 0, with 1 absent.**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes

Vice-Chair DeHart – yes

Commissioner Handley - yes

Commissioner Davis – absent

Commissioner Ashley – no

Commissioner Schanno – yes

Commissioner Erickson – yes

Alternate Commissioner Position #1 – vacant

Alternate Commissioner Position #2 – vacant

Results: the decision is overturned and the appeal is granted.

**Director Brewer** updated the Commission on the situation regarding the Building Codes Department moving into the Wasco County Public Works Building and no longer being a part of the dissolved Mid Columbia Council of Governments. She explained that State Staff will be assisting the county by instituting the building code program.

Meeting Adjourned 4:17pm

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Russell Hargrave, Chair  
Wasco County Planning Commission

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Angie Brewer, Planning Director  
Wasco County Planning & Development

**Wasco County Planning Commission**  
**January 2, 2018**  
**Meeting begins immediately following the**  
**3:00 p.m. Planning Commission Meeting**  
**Columbia Gorge Discovery Center**  
**5000 Discovery Dr**  
**Lower Level Classroom**  
**The Dalles, OR 97058**

**CALL TO ORDER**

Members Present: Lynne Erickson, Vicki Ashley, Brad DeHart, Russell Hargrave, Mike Davis, Chris Shanno,

Absent Members: Jeff Handley

Staff Present: Dawn Baird, Angie Brewer, William Smith, Riley Marcus,

**Chair Russell Hargrave** called the meeting to order at 3:10 p.m.

Mr. Hargrave asked if there was any public comment for anything on agenda. There was none. Mr. Hargrave then opened the public hearing for PLAAPL-17-10-0001 for David Wilson, of a Type I Review to deny retroactive approval of a 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building. Mr. Hargrave then asked Associate Planner Dawn Baird to give her Presentation.

Please see **Attachment A** for Dawn Baird's presentation on PLAAPL-17-10-0001 (Wilson Appeal).

**Mr. Hargrave** asked the rest of the Planning Commission if they had any questions. Two Commissioners indicated that they would like to wait to ask their questions until after the applicant presented.

**Public Testimony:**

**Bill Summerfield**, was the first to present, representing David Wilson. Mr. Summerfield stated that they were not here to discuss prior history or to discuss any prior Code Enforcement actions on the property. Mr. Summerfield stated that they are arguing a case solely on the application for an Agriculture Exempt Building. Mr. Summerfield stated that he had Mr. Wilson pull several past permits from Wasco County Planning Department for Agriculture Exempt Buildings. One of these first retroactive applications that they had pulled was for a greenhouse. Mr. Summerfield stated that this application had not caused any heartache at that time. Mr. Summerfield stated that Mr. Wilson is cleaning up all of the messes that were left on the

Wasco County Planning Commission  
January 2, 2018 Minutes  
Page 1 of 22

property prior to him purchasing it. Mr. Summerfield stated that the Planning Commission needed to look at this application as a clean sheet of paper and stated that he thinks that the application of those laws is arbitrary for this application. Mr. Summerfield stated that he had obtained 71 applications from a Records Request. He stated that he did not submit all of these applications as evidence and instead submitted a spreadsheet that summarized the results from all 71 applications.

Mr. Summerfield stated that he did not know how the department was not aware that he was not involved within the appeal. Stated that he submitted additional materials to staff on the Friday prior to the Commission meeting and hoped that the Planning Commission had enough time to review material. He asked that if more time was needed to better evaluate submitted materials, that it should be taken. Mr. Summerfield stated that the Planning Department was “over their squeeze”. He stated that one of the permitted outright uses is an Agricultural Exempt Building and that if you tick all the boxes for items such as setbacks and other requirements, that you should be able to get an Agriculture Building. He stated that at the application stage, you are entitled to put up your building and that statute does not include any size restrictions, and that there is no reference to any yields. He stated that calling technical experts is not authorized by any statutes and is not included in the administrative rules. Mr. Summerfield stated that the LUDO does not explain why you need a Farm Management Plan and that nothing within the LUDO tells you what this requirement is. And if the county were consistently applying, that the LUDO may be deemed unconstitutional or inappropriate and stated that there was not much oversight for an Agriculture Exempt Building on resource lands.

Mr. Summerfield stated that Planning Staff does not have the expertise to tell the farmers how to go about farming or where to keep their bailers, etc. He stated that the Planning Department is only responsible for reviewing applications. Mr. Summerfield stated that it should be “If you meet setbacks, yes. If you have a farm use, yes” and that the application process should remain pretty hands off. He stated that Dawn Baird makes this point by saying that she needed to contact experts and that it should not be the business staff should be in. Mr. Summerfield stated that in the Staff Report, every calculation was based off of 6 acres. And that David Wilson has 70 acres and talks about increasing farming in future. He stated that he thought that Ms. Baird did not evaluate this. He brought up the example of a past application for an Agriculture Exempt Building for Steve Skimore, who has a lavender farm, and that he increased the space for lavender over time. Mr. Summerfield stated that if you have resource land, you are entitled to build agricultural building.

Mr. Summerfield also stated that “if you are going to get out over your squeeze, you need to do it consistently”. He stated that this was the real reason why he and Mr. Wilson dug through past applications, especially these ones that were “justifiable” on the surface. He stated that you would expect to see some oversight or some scrutiny, however it was not there. He stated that Dave Wilson is being singled out and treated specially and that it was not right and that the laws did not allow this and that Dave needs to be treated as any other person would. Stated that we need to tick the boxes that need to be ticked.



Mr. Summerfield stated that a Farm Management Plan is a template supplied by county, to show what is passing muster in the county. He stated that this is not super comprehensive. He notes that within the past applications he they gathered that one Floor Plan had been submitted that was essentially empty, and yet it had been approved. Mr. Summerfield states that the Planning Department Staff needed to consistently apply standards and laws to each application. Mr. Summerfield stated that as for the Conditions of Approval, that removal of square footage of the existing illegally placed building was ridiculous and not feasible. Mr. Summerfield stated again that he was not sure why any past history was brought up and that Mr. Wilson had continued to meet the income test each year to remain within Farm Deferral, and that he would continue to do so. He stated that income is not a factor here such as Dawn had stated and that it was not a valid argument. Mr. Summerfield stated that this existing building is not an eyesore, and that it has existed for years. Should have been approved as is, and that is what we are here for today, is to have this building approved as is and to please ask for more time if it is needed.

**Mr. Hargrave** then asked if Mr. Wilson had submitted a Farm Management Plan. Mr. Summerfield stated that Mr. Wilson had and that it was included within the submitted application materials.

**Brad DeHart** asked Mr. Summerfield if Mr. Wilson owned any more property. Mr. Wilson responded that he did, and that it was not located within Farm Deferral.

**Lynne Erickson** asked when the property was purchased and when the building was put up. Mr. Hargrave asked her to hold onto her question so that Mr. Summerfield could take his seat and have Mr. Wilson come forward.

Mr. Wilson stated that he put up the Agriculture Building 18 years ago and he hah never received a permit. He stated that a few years ago he approached the county again to build a new home, and stated that he recognized that he needed to bring the Agriculture Building back into compliance. Mr. Wilson states that he has a 1,000 horsepower grinder, and had annoyed the neighbor due to the noise. Due to this, the code compliance officer came out. He stated that they were there for one reason, but they came out for a bunch of other things. He stated that for example, there were logs sitting on my property that I was going to be using for firewood. He stated that at the time, Kate was the Code Compliance Officer and that she questioned what these logs were going to be used for. He stated that his property use to be the Wrecking Yard, which Mr. Wilson claimed he has completely cleaned up. Mr. Wilson stated that the Code Compliance Officer then went to his other property to see if it might also have violations. It was at this time that the subject parcel with the illegal building in question, was discovered. Mr. Wilson stated that at this time, it had already cost him around \$8,000 to clean up the first property. He states that a complaint on one property does not justify visiting another property owned by the same landowner. Mr. Wilson points out that it was at this time

that his property was “red flagged” and that he was now before us to try to get this “unflagging” done to get a future new dwelling.

Mr. Wilson states that at the time Dawn Baird and Joe Ramirez came to look at the illegal building that not all of his farming equipment was inside the building. He stated that when Ms. Baird visited the property, the machines and equipment were out clearing another 6-8 acres for farming purposes.

**Vicki Ashley** interrupted and addressed that the original Farm Management Plan does not say this. **Ms. Baird** stated that there were revisions on the Farm Management Plan that does include the additional acreage.

**Mr. Wilson** stated that he thought Dawn’s analysis of the number of farm animals included for the Farm Use was insulting. Mr. Wilson handed out more pictures to give to the Planning Commission. He stated that there was only one pedal toy in the garage and not multiple. And that the refrigerator in the shop was so he could have a cold drink of water and a sandwich in the middle of the summer. He stated that his freezer within the Agriculture Building is used to store frozen meat of his own cattle. Mr. Wilson then stated this his wife is sick and has not had a chance to clear out some of her past antiques and that this is what was covered by a blue tarp within the Agriculture Building.

Mr. Wilson had mentioned that he had discussed with Joseph Ramirez a second time to come out and inspect the Agriculture Building. Mr. Wilson stated that when he finally called back in for this second inspection that when he asked for the Code Compliance Officer to come back out that Joseph Ramirez was no longer the Code Compliance Officer. Wilson stated that all of a sudden the second inspection was no longer needed and instead a decision was being made. Mr. Wilson pointed out that his Agrilcutre Building is not visible, however his neighbor, who had illegal development that was visible, had not yet been penalized. Mr. Wilson stated that this is not enough room for the building, and does not include for an additional 20 acres that will be farmed in the future. Mr. Wilson stated he does not want to file complaints on his neighbors and believes that he has been selected out. Stated that he and Dawn have had arguments in the office in the past and that for Staff to decide that they feel he only needs 2,500 SF “rubs him wrong”. Wilson stated that Planning Staff should not be deciding this for him and that how Planning Staff inprets law is completely different from how a lawyer would and that Staff has no business doing this. Mr. Wilson stated that he has spoken to the Wasco County lawyer Will Carey for three hours and that he agreed with Mr. Wilson; that the county has better things to do. Mr. Wilson stated that he has a paralyzed son who uses a John Deer toy tractor and that it was insulting to him that Dawn would even take the time to write that down. Mr. Wilson returned to his seat.

**Russell Hargrave** asked if there were any other questions.

**Mike Davis** asked Mr. Wilson what other farm equipment that there was.

**Mr. Wilson** stated that the bailer was not inside, and also has a bulldozer. He stated that this because of all these items that his floor plan makes all kinds of sense.

**Vicki** asked if Building Permits or Electric Permit was ever received?

**Mr. Wilson** stated that no there were not. He stated that he had been told by multiple other farmers at the time (18 years ago) that he did not need a Permit.

**Vicki** asked if a loft would be put in.

**Mr. Wilson** stated no. He also stated that the year before last he had to wait to plow because too much moisture. Then after he plowed there was no moisture at all and therefore he had to wait before planting any more alfalfa. States that none of this matters, never was trying to create a nuisance and that the Planning Staff just did not like him.

**Mr. Hargrave** again asked if anyone had any questions. No one had any. Mr. Hargrave asked if anyone wanted to speak for the proposition for the illegal Agriculture Building.

**David Rogers** came forward to provide public testimony. He asked if any of the Planning Commissions or Planning Staff were current farmers. It was at this time that Russell Hargrave interrupted him and asked him to please not interrogate the Commission or Staff as he did not see how it was relevant to the Agriculture Building.

**Mr. Rogers** then proceeded and stated that the Planning Commission was here to keep Staff in line and that Staff should not be interpreting the law. He stated that Planning Staff was singling Mr. Wilson out.

**Mr. Hargrave** stated that this was a good point and asked if there were any other questions. Asked if anyone wants to speak in opposition. There were none. At this time several other people in the audience raised their hands and stated that they would like to speak with concerns.

**Dean McCallister** came forward and stated that he had concerns about the specificity and that everyone should be treated fairly.

**Ther Keller(?)** stated that he would rather have one oversized building over multiple smaller buildings.

**Chuck Cobert** stated that he has concerns about the regulations over a size of a building and staff telling them what kind of equipment that they can and cannot have. Used the example that how do we approve a large SF dwelling for just a husband and a wife. He stated that he questions building without a permit, however not any further regulation in terms of equipment.

**Chris Schanno** asked if the original denial was based on the size of the building.

**Ms. Baird** stated that yes, it is. And that it also meets setbacks.

**Lynne Erickson** asked that when Staff looks through Farm Management Plan, does everyone else get the same scrutiny.

**Angie Brewer, Planning Director**, asked to respond to this question. She stated that a lot of times individuals come to the counter and ask and then get told it will be denied. Or pair it down to an Agriculture use that we cannot support. We want to encourage Agriculture Use in our resource zones. Ms. Brewer stated that she encourages staff to seek out experts. She stated that it looks like there are discrepancies included with two different Farm Management Plans that were submitted, however when we reached out to the technical experts, we reached out when we need to.

**Mrs. Erickson** again asked if all other Farm Management Plans get this level of scrutiny.

**Mrs. Brewer** stated yes, that we do review the Floor Plans and the template submitted.

**Ms. Baird** stated that we also do not typically reach out to the experts because we do not typically receive retroactive requests. She stated that "No, we do not usually go to the experts, however we also do not normally receive such a large building with such a small farm use."

**Mr. Wilson** made a statement in regards to marijuana and why for the last two years they do not receive this level of scrutiny.

**Brad DeHart** asked a question from the Staff Report, asked if the italicized portion was included within our Land Use Development Ordinance. Was wondering how much information was provided within these other applications and the level of detail included within the floor plan.

**Ms. Baird** stated that she cannot speak to all of the other Agriculture Buildings, but that she does look at the current farm use for every application.

**Mike Davis** asked Staff to help him understand that there was no formula for building sizes.

**Angie Brewer** stated that we have a Template Farm Plan that guides people, in order to make a farm and equitable decision and that there are different kinds of farms, as well as different kinds of farmers. When we do not feel comfortable, we do not go with our gut feeling, we will reach out to an expert. When we issue a decision, we assume that everything we put in writing, that could affect someone's land, could be taken to court. There is no magical formula because there are so many complexities to the analysis.

**Mr. Hargrave** closed the hearing for deliberation (4:58pm).

**Mike Hargrave** stated that he is here to interrupt what staff brings to the commission. Mr. Hargrave stated that he is also here to represent his community and the county and that he is not here to change the LUDO, and that he is here to look at the interpretation. And without question, he states that he is torn. He states that without question, he is trying to place himself within the same situation. He states that he would be excited to have a 7,000 SF Agriculture Building. He does state that before any development occurs, that you should talk to the County. He states that it needed to happen and did not. He states that on the other hand, it is a very small piece of property in comparison of thousands of acres that we are used to. His concern is how traumatic it would be for Mr. Wilson to have to remove a large portion of his Building and states that he would need to get this to code for public safety.

**Chris Schanno** stated he is not within the business of telling someone how to run their business. And if they meet Fire Safety Standards and Setbacks, is Wasco County in the business of telling someone how big of a building they need to run their operation? He states that he made a mistake, and that it seems excessive.

**Angie Brewer** stated we are resolving a violation by addressing this. We have an ordinance that requires us to have enough information to meet state statute. The way that we do this is to ask for a Floor Plan and a Farm Management Plan.

**Vicki Ashley** stated that her issue was no permits. She also states that this is an excessive amount of building for the size of the parcel.

**Russell Hargrave** stated that he has been on this Commission for a very long time, and just because you meet setbacks does not mean you can do whatever you want. This is F-2 land. This is the reason why we require supporting documentation and because whether it is permitted or not, depends on the use. In this case it is permitted outright. And that we need to start there, take a look at the use. I think that the fact that it is there is not any reason to approve it. I am bothered by that as a mechanical engineer. It is a relatively low profile building. In my experience, a building of this size is usually much taller in size. I feel like I have a good level set of the area, and is trying to determine if this case is being treated differently. The pictures do not necessarily determine the use. I was struck that this building has been here 18 years, and had been used for Ag use for this long as I did not see the second story, the extra bathroom, etc. Said he thought it showed very little evidence of non-farm uses. Farm Deferral, being taxed on it, so not just a one year idea, seems to be a very serious farming operation. Agrees one big building is better than equipment scattered all over your yard or multiple smaller buildings. What is the outcome that we want?

**Brad DeHart** states that he agrees, and he is not comfortable with permitting "Shedville", indicating multiple sheds. Wishes we had a guide like we did for accessory structures. States he is trying to not take into account as the cost will be much higher for part of the building being



torn down. Should be either all or nothing; seems too difficult to enforce. Thinks Staff has done an outstanding job, and in going down this path, the information we have received led us to a decision that he believes that none of us wanted to see. I can say right now that I don't know if we need to continue this, but I am certainly not ready to approve staff recommendation tonight. I think that this warrants more time.

**Lynne Erickson** states that she has concerns with the somewhat ambiguous/ not clear standards that are in place to base that size of the building on. Seems to me that there is ambiguity that I am wrestling with. Inclined to agree with Brad that she would not feel comfortable with supporting the recommendation in its entirety.

**Mike Davis** stated he agrees, impossible to remove a portion of a building and instead see this turned. Under the circumstances, let's leave the building alone, and state that it will only be used for agricultural purposes. It keeps the rest of his equipment out of the neighborhood, because it is a small neighborhood. I would love to put a little Tygh Valley in this area. I would like to see a slight modification to let the building stand, however ensure that everything else is brought to code.

**Russell Hargrave** states that the building being already constructed should not play into this at all.

**Vicki Ashley** stated that this sets precedent. That a building that has existed for 18 years and never received permits getting approval will set precedent.

**Brad DeHart** stated that Staff was taking on what they were handed and trying to build a case for somehow making it possible to stay. So if we were to back up and try and take another run at this as if the building were not there, could we somehow make another case to somehow make a case for this building to stay?

**Russell Hargrave** stated that it is not about the size, but is about the use. Stated that he did not see any other non ag use related items within the pictures. This does not corrupt the building from its agricultural use. Does not see any use that would indicate that this does not have an agricultural use. What is the use? I do not see a robust farm

**Mike Davis** stated that if we are going to go down this path, then the conflicting information in regards to a Farm Management Plan, basically we are kind of erasing and restarting this as a new application?

**Russell Hargrave** stated that the facts were balanced, and he appreciates the work that the Department did and hopes others see this too. Mr. Hargrave stated that he was not factoring in the fact that building is already there, and that he understands buildings get built without permits. Not bothered by building being there, and not going for a permit for an Ag Building, because at that time was not that clear. But that I still go back to the use. Not inconsistent with

what is going on within the area. I am going to recognize that we do not have a precise formula.

**Angie Brewer** stated that we do have to be able to find that there is indeed an Agricultural Use.

**Russell Hargrave** stated that you need to show that you have an approved use. Sees Farm Deferral, taxes, Farm Management Plan that has been submitted. But that it is a Farm Use. I do not see a lot of Non farm Agricultural Use. And that is what strikes me about it.

**Mike Davis** asked if the building had everything within it, would it be an approved building?

**Angie Brewer** stated that Staff is using the most reputable information and technical expertise to make these decisions. I defer to your discretion and authority to make this decision.

**Russell Hargrave** would anyone like to make a motion?

**Brad DeHart** said he would like more time and would not be making a motion. Stated that the stakes are high for this particular information, as well as for setting precedents.

**Russell Hargrave** stated that he supported this decision. Chris Schanno and Mike Davis both agreed.

**Vicki Ashley** stated that we have to have this resolved as this happened and we let it go and I think that we need something more clear and precise.

**Brad DeHart** part of the reason I need more time is to think through what some alternatives might be. I understand electricity has been done. That Mr. Wilson may not own this property forever.

**Mike Davis** called into question the use and application of the Farm Management Plan. Would like to propose we delay this, and contact another round of experts to see what can help us, as this will set precedence.

**Vicki Ashley** talked about how different zones may be different in terms of a Farm Management Plan.

**Vicki Ashley** moved that we continue hearing to Jan 23 at 3:00pm at the Discovery Center.

**Russell Hargrave** and **Mike Davis** both seconded.

**Chair Hargrave** called for the vote.

**The motion was approved 6 to 0, 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – yes  
Vice Chair Ashley – yes  
Vice Chair DeHart - yes  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

**Bill Summerfield** requested that the record be held open for 7 days.

**Russell Hargrave** stated that the record would be held open for 7 days, closing at 4:00 pm, January 9, 2018.

**Russell Hargrave** moved to close the hearing (5:45pm)

**Chris Schanno** moved to keep Russell Hargrave as chair. Mike Davis seconded.

**Chair Hargrave called** for the vote.

**The motion was approved 5 to 0, 1 abstain (Commissioner Hargrave), 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Hargrave – abstain  
Commissioner Ashley – yes  
Vice Chair DeHart - yes  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

**Mike Davis** nominated Brad DeHart as Vice Chair. Chris Schanno seconded.

**Chair Hargrave called** for the vote.

**The motion was approved 5 to 0, 1 abstain (Commissioner DeHart), 1 absent (Commissioner Handley).**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

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Chair Hargrave – yes  
Commissioner Ashley – yes  
Vice Chair DeHart - abstain  
Commissioner Handley - absent  
Commissioner Davis – yes  
Commissioner Schanno – yes  
Commissioner Erickson – yes  
Alternate Commissioner #1 – vacant  
Alternate Commissioner #2 – vacant

Approving of minutes was moved to the next meeting.

Russell Hargrave adjourned at 5:50pm.

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Russell Hargrave, Chair  
Wasco County Planning Commission

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Angie Brewer, Planning Director  
Wasco County Planning & Development

## ATTACHMENT A

### **PLANNING COMMISSION PRESENTATION: December 5, 2017**

#### **PLAAPL-17-10-0001 (David Wilson)**

Thank you and Good Afternoon. For the record my name is Dawn Baird and I am an Associate Planner for the Wasco County Planning Department. I am going to present the background information in this case.

1. **Request:** As the Chair indicated, today we will be discussing an appeal application from David Wilson, of a Type 1 Review to deny retroactive approval of a 100'L x 70'W x 14'T, 7,000 square foot (SF) agricultural exempt building, and approve a 2,500 SF agricultural exempt building.
2. **Location:** The subject property is located approximately 0.3 mile south of Sevenmile Hill Road southeast of Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described 2N 12E 22 4100, Accounts 14901, 13446, and 2N 12E 0 2800, Account 804. The subject property is 69.32 acres in size.
3. **Staff Recommendation:** The full Staff Recommendation was mailed in the Planning Commission's agenda packets. It was available for review at the counter one week prior to this hearing, and it is considered a part of the record.
4. **History of this request:**

In 2013, the Planning Commission held a public hearing to consider an application for Comprehensive Plan Amendment, Zone Change, and Exception to Statewide Planning Goal 4 – Forest Lands, for several tax lots on Sevenmile Hill Road and Dry Creek Road. This application was denied.

David Wilson decided to pursue a CPA/ZNC/Exception for 40 acres of property he owned and he submitted an application for this request on September 1, 2015. Staff processed the request, but found out prior to the hearing that Mr. Wilson's property had been improperly divided by a prior owner. In a discussion with Senior Planner, Dustin Nilsen, two weeks prior to the scheduled PC hearing for the CPA/ZNC/Exception, David Wilson stated that he was probably also going to have to get a permit for the 7,000 SF building since he had not gotten one. (Note: A former Code Compliance Officer found an illegally constructed 7,000 SF building on one of the illegal parcels. She documented it, but did not pursue enforcement action on the building.) Once David Wilson stated he had not obtained a permit for the 7,000 SF building, the Planning Department had clear evidence of 2 violations (illegal parcel, illegal building) on the property and could not pursue the CPA/ZNC/Exception until they were resolved.



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On May 16, 2017, David Wilson submitted a Type 2 application for a partition to legalize the subject properties. In addition, he submitted a Type 1 application for the 7,000 SF “agricultural exempt” building. Staff issued the Notice of Decision and Staff Report approving the partition request on June 15, 2017. The final partition plat was recorded on September 8, 2017.

Once the partition was completed, staff issued a decision on the retroactive approval of the 7,000 SF “agricultural exempt” building on October 5, 2017. The decision denied the 7,000 SF building, but approved a 2,500 SF building. This decision was appealed on October 13, 2017.

### 5. Let’s discuss why the request is before the Planning Commission...

An appeal of the Planning Director’s decision is heard by the Planning Commission. Once the appeal was submitted to the Planning Department, staff scheduled the public hearing before the Planning Commission for December 5, 2017.

**Stage in the Process:** Staff found the appeal request to be complete on October 19, 2017, and scheduled for a public hearing on today’s date. The required 20-day public notice was given on November 22, 2017 (20 days). The Staff Recommendation, with findings, conditions and conclusions, was issued on November 28, 2017, and was provided to the Planning Commission on the same day. On November 28, 2017, Mr. Wilson’s attorney, whom we did not know was involved in the process, requested postponement of the hearing, and agreed to today, January 2, 2018, to hear the matter. If the Planning Commission feels they have all the necessary information to make a **decision**, they will vote to do so today.

### 6. Criteria: The applicable standards used to evaluate each request include:

#### A. Oregon Administrative Rule (OAR) 660-006-0025, Uses Authorized in Forest Zones

#### B. Wasco County Land Use & Development Ordinance (LUDO)

##### 1. Chapter 1 – Introductory Provisions

Section 1.090, Definitions – Agricultural Structure

##### 2. Chapter 3 – Basic Provisions, Section 3.120, F-2, Forest Zone

Section 3.127, Property Development Standards

Section 3.129.D., Additional Standards – Siting Requirements

##### 3. Chapter 10 – Fire Safety Standards

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Section 10.130, Construction Standards For Dwellings And Structures – Decreasing The Ignition Risks By Planning For A More Fire-Safe Structure

### 4. Chapter 15 – Administration & Enforcement

Section 15.030, Authority

Section 15.060, Violation of Ordinance as a Nuisance

Section 15.070, Wasco County Code Compliance and Nuisance Abatement Ordinance

### 7. Findings:

In reviewing the request for retroactive approval of the 7,000 SF agricultural building, staff relied heavily on experts from Oregon State departments, particularly Mylen Bohle of the Oregon State Extension Office, and Robert Wood of the Water Resources Department, who provided projected yields, information about hay storage, and water rights. Staff gave the benefit of the doubt in all cases to the applicant. For instance, when OSU Extension Office staff indicated that hay is typically stored in 6' tall or 13.5' tall bales, staff calculated the space needed for 6' tall bales, which takes up more space than 13.5' tall bales.

Joseph Ramirez, former Code Compliance Officer, and I conducted a site visit to the property on May 31, 2017. We viewed the agricultural exempt structure and noted that it contained many personal items such as 4 upright freezers and 1 chest freezer, a pile of Mrs. Wilson's antiques under a tarp in the far left corner of the building, an electric wheelchair, 2 four-wheelers, a gun safe, toy pedal cars which Mr. Wilson said are used by his grandchildren for farming when they come to visit. There was a lot of vacant space in the "agricultural" building and Mr. Wilson explained that he didn't have all of his farm equipment in the building and some of the space was intended for hay storage.

In considering the expert testimony of the State of Oregon, all of the Ordinance criteria that must be met for this request, especially the definition of "Agricultural Structure", it is clear that a 7,000 SF building is not needed for the farm operation.

The County cannot consider the possibility that the applicant may expand his farm use in the future without considering the fact that he could abandon the farm use altogether. He has not harvested a crop of barley in the last 2 seasons. During the May 31st site visit dozens of items not included in the farm use on the land were being stored in the building.

**Grounds for Appeal #1:** The Planning Department erred in its interpretation of Wasco County Land Use & Development Ordinance (LUDO) 1.090, which requires that the applicant provide a Farm Management Plan to be reviewed and approved by the Planning Department.

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**STAFF RESPONSE:** As discussed on page 3 of the Staff Recommendation, the definition of “Agricultural Structure” includes a requirement that a Farm Management Plan be submitted for an Agricultural Exempt Building. The Planning Department required submittal of a Farm Management Plan consistent with Section 1.090, Definitions of the Wasco County LUDO. The definition of Agricultural Structure includes the requirement of a Farm Management Plan to ensure an agricultural building is only used for farm uses and is not so large that the owner may use it for non-farm uses instead, or in addition to the permitted farm use. Based on the LUDO adopted by the Board of Commissioners, and acknowledged by the Oregon Department of Land Conservation & Development, specifically Section 1.090, Definition of “Agricultural Structure,” the Planning Director must require a Farm Management Plan.

Staff finds that the Planning Director has the right to review and approve a Farm Management Plan for the proposed use, and Grounds for Appeal #1 is not a valid reason for overturning the Decision of the Director.

**Grounds for Appeal #2:** The Planning Department erred in finding that the applicant’s application and Farm Management Plan did not support the approval of a 7,000 SF agricultural building.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, staff contacted the Watermaster’s Office to determine if the subject parcel contained water rights for irrigation. According to Bob Wood, Watermaster, the subject parcel does not contain any registered water rights. Staff contacted the Oregon State Extension Office to find out how much area it takes to store 6 acres of hay. According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce an annual crop of approximately 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate between 3-9 tons.

Based on projected barley yields, storage of 9 tons of hay in 6’ tall stacks, would require slightly less than 400 SF. Associated equipment such as a tractor, baler, etc., would require less than 2,000 SF of space. The entire farm operation could occur in a building containing less than 2,500 SF. Many of the items the applicant states he intends to store in the agricultural building are not currently stored in the building. Based on common accepted farming practices, many hay operations do not store the rake, swather, etc., under cover because the implements are difficult to access within a building. When staff conducted a site visit to the subject parcel on May 31, 2017, the rake and swather were stored outside. The applicant’s proposed floor plan shows an excessive amount of space will be used for these farm implements

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which were not being stored inside prior to the site visit. Staff concludes that since these implements were not being stored in the building

Staff finds that retroactive approval of the owner's 7,000 SF agricultural building is not justified because the existing farm use can be accommodated in a 2,500 SF building.

**Grounds for Appeal #3:** The Planning Department erred in making unwarranted and unsupported assumptions about the applicant's farm yields and farm practices.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, and above in Grounds for Appeal #2, staff contacted the agricultural experts at Oregon State University Extension Office to request data about potential yields and space for storage for 6 acres of barley hay in northern Wasco County.

Staff contacted the Oregon State Extension Office to find out how much area it takes to store 6 acres of hay. According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce an annual crop of approximately 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate between 3-9 tons. This is not unwarranted and unsupported assumptions about farm yields and practices, but based on factual data collected by Oregon State University Extension Office for decades pertaining to soil types, climate conditions, precipitation, improvements in farm practices, etc. Grounds for Appeal #3 does not support overturning the Decision of the Planning Director because the Planning Department did not make unwarranted and unsupported assumptions about the applicant's farm yields and farm practices.

**Grounds for Appeal #4:** The Planning Department erred in making calculations about applicant's needs and projected use of the agricultural building based on its unwarranted and unsupported assumptions.

**STAFF RESPONSE:** As discussed on page 4 of the Staff Recommendation, Oregon State University Extension Office provided calculations about potential yields and storage requirements for the barley hay. Regarding the needs and projected use of the agricultural building, the building is proposed to be used for agricultural storage of farm equipment for the production of barley hay, oats, and seasonal grazing (cattle). The owner states that he needs this large building for the current farm use yet much of his farm equipment was stored outside when staff conducted a site visit to the property on May 31, 2017.

Mr. Wilson stated that he has been plowing additional land adjacent to the current 6 acres of barley/oats and plans to continue to expand the farm use and increase the number of cattle grazed on the property. He indicated he was not able to plant a

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crop in 2017 due to a lack of moisture in the soil and that he did not get “much of a crop” in 2016 which was not worth harvesting.

Staff concedes that they are not experts regarding agricultural production and sought input from experts at the State of Oregon, and Oregon State Extension Office, as well as from Bob Wood, Watermaster, Oregon Water Resources Department. Based on the information provided below,

Staff asked Oregon State Extension Office’s “Ask an Expert” website how much area it takes to store 6 acres of hay. Their response states:

*“Hay crop yields can vary between crop varieties and irrigation. With a highly productive irrigated crop you could see between 8-10 tons per acre for the entire season. Therefore about 60 tons would be about the highest production you could see for one year.*

*Assuming a harrowbed is used for stacking which stacks 9 bales high (13.5’), 1440 bales (24 bales per ton) would require about 1,050 square feet (14,140 cubic feet). If only stacked 4 bales high (about 6’ tall) it would require 2,360 square feet.”*

If cropland is irrigated it requires a Water Right from the Oregon Water Resources Department. On June 21, 2017, Robert Wood, Watermaster for Wasco County, confirmed that the existing barley field does not have a water right.

According to Mylen Bohle, Oregon State Extension Office, non-irrigated barley would produce approximately an annual crop of 0.5 – 1.5 tons per acre under conditions in northern Wasco County. This means that 6 acres of non-irrigated barley would generate 3-9 tons.

Based on projected barley yields, storage of 9 tons of hay in 6’ tall stacks, would require slightly less than 400 SF. Associated equipment such as a tractor, baler, etc., would require less than 2,000 SF of space. The entire farm operation could occur in a building containing less than 2,500 SF. Based on common accepted farming practices, many farmers do not store their rake, swather, and hay baler in an agricultural building because it is difficult to maneuver the tractor within the building to hook up these farm implements. The applicant’s proposed floor plan shows an excessive amount of space will be used for these farm implements. This finding is based on expert input from Oregon Water Resources Department and the Oregon State Extension Office and is not based on “unwarranted and unsupported assumptions about the applicant’s farm yields and farm practices as stated in Applicant’s Assignment of Error #3. Hay storage calculations are based on OSU Extension Office experts’ input, and staff’s calculations about the projected equipment storage.



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Grounds for Appeal #4 does not support overturning the Decision of the Planning Director because the Planning Department did not make unwarranted and unsupported assumptions about the applicant's farm yields and farm practices, but made the decision based on information from the OSU Extension Office and by the owner's storage of farm implements during their site visit to the parcel on May 31, 2017.

**Grounds for Appeal #5:** The Planning Department erred in determining that the applicant's application supports only a 2,500 SF agricultural building

**STAFF RESPONSE:** As discussed on pages 4 and 5 of the Staff Recommendation, staff provides justification for the need for approximately 400 SF of space to store hay, and less than 2,000 SF for farm equipment/machinery. Allowing 2,500 SF of building space is slightly larger than needed for the farm operation. Based on common accepted farming practices for a hay operation, staff finds that a maximum of 2,500 SF is adequate for the existing farm operation and the Planning Department did not err in their determination.

**Grounds for Appeal #6:** The Planning Department erred in conditioning the approval of the agricultural building on applicant removing 4,500 SF of the agricultural building.

**STAFF RESPONSE:** As discussed on pages 4 and 5 of the Staff Recommendation, staff provides justification for the need of approximately 400 SF of space to store hay, and less than 2,000 SF for farm equipment/machinery. Allowing 2,500 SF of building space is slightly larger than needed for the farm operation. Based on common accepted farming practices for a hay operation, staff finds that a maximum of 2,500 SF is adequate for the existing farm operation, therefore 4,500 SF of the building should be removed.

The owner has not provided any reasoning describing why this condition was an error. Staff recommends Grounds for Appeal #6 be denied.

**Grounds for Appeal #7:** The Planning Department's decision contains numerous factual errors, such as the statement that the application is for a "three-sided building" and erroneous descriptions of surrounding properties.

**STAFF RESPONSE:** The owner is correct that the building is not three-sided (see photo below showing the front of the building). The property owner did not describe the remaining "numerous factual errors" in the report. Staff has limited information about surrounding properties. It is unlikely that descriptions of surrounding properties will change the basic fact that a 7,000 SF agricultural building is not necessary for 6 acres of hay, three cows and five chickens.

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Staff recommends Grounds for Appeal #7 be denied. The fact that the building is not 3-sided does not change the fact that a 7,000 SF building is not needed for the existing farm operation, nor does the use of surrounding properties change anything about the farm use on the applicant's land.

Additional information was submitted by the applicant's attorney on Friday, December 29, 2017, and first seen by staff this morning. I e-mailed it to the Planning Commission by mid-morning. The following is my response to the attorney's comments.

Summerfield: The decision is arbitrary and capricious because the Department has never challenged a farm management plan or tied the requested building size to the acreage or the projected farm fields.

*Scrutiny of the proposed use: Department **always** looked at the farm management plan and scrutinized, however it was not done in writing because these are type 1 reviews and do not generally require findings.*

Summerfield: There are no denied agricultural exempt building permits.

*Property owners typically do not apply for an agricultural exempt building if they will be denied because if there is a legally placed dwelling on the property they can build one or more detached accessory buildings subject to the 75% size limit. Regarding permits cited by the applicant, nearly all of these are located on one tax lot, but the applicants often own much more farm land than the identified tax lot. For instance, the identified agricultural building constructed on a 21.61 acre property owned by Filbin is part of a 2,096 acre ranch.*

Summerfield: Farm Management Plan: 6 acres alfalfa/oats, 5 poultry, 3 cattle seasonally

*Hand out chart of cited agricultural building permits. This chart shows overall acres owned by the applicant of agricultural permits, and the existing farm use. Most of the larger buildings are related to marijuana production, a relatively new farm use in Oregon. Inside grow operations are limited to 10,000 SF of growing. Other larger buildings are in conjunction with ranches and farms that contain hundreds and thousands of acres and are justified for the existing use.*

Summerfield: Building has existed for 18 years without complaints.

*The building cannot be seen unless one drives ¼ mile south of Sevenmile Hill Road onto the property. The lack of complaints does not justify approving an illegally constructed building. If the applicant had requested approval of the*

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*building before it was constructed, it would have been denied. Please remember that when staff visited the building last May, there were more things in the building **not** related to farm use than were related to farm use and staff must assume that it would have continued to be improperly used.*

Summerfield: Future expansion of farm use: Farm management plan shows intention to farm more of his property than the Department acknowledged in analyzing his projected farm-related needs.

*Most people plan for the future. Plans do not always come to fruition. Staff reviews the existing farm use and generally makes their decision based on what is on the ground. Exceptions are sometimes made when the property owner can show they have invested in the future expansion. For example, if they can show receipts for new orchard trees or vineyard plants, or that they have paid for more cattle yet to be delivered, investment in irrigation system supplies, etc. Other than saying he has plans to expand his farm use when he retires sometime in the future, staff has not seen that he has invested in future expansion. (Mason Road – Jamison Farms – vineyard)*

Summerfield: Applicant makes substantial income from farm production each year the property has been in deferral.

*Would not be able to support himself on his income. He has an excavation business that staff assumes is his primary income.*

*When I first went to work in the planning field in 1979 in Hood River County, one of the first things I learned was that the Oregon Legislature created agricultural exempt permits for full-time farmers and ranchers. Like the farm deferral program, it was intended to give farmers and ranchers a financial break so that they could continue to bring food to the public. It was not for part-time farmers who had other jobs to support themselves. And please let me say that part-time farmers are very important, but this was not who the Legislature was trying to help: it was family farms and ranches where this was their full-time job. The owner constructed a building without permits. Staff is uncertain whether an electrical permit was obtained for electricity in the building. The owner has the ability to construct multiple detached accessory buildings to satisfy his needs but is unwilling to do so because he already constructed the building. Staff does not believe the existence of the building is justification to allow it to remain. It is important to consistently implement land use regulations so that all persons are treated equally. If Mr. Wilson's building is permitted to remain, he will be getting a benefit not given to any other property owner in Wasco County, which is not fair to other property owners.*

### **8. Planning Commission Decision Options:**

## ATTACHMENT A

- A. Uphold the decision of the Planning Director and deny the Appeal, with the proposed Conditions and Findings in the Staff Recommendation
- B. Uphold the decision of the Planning Director and deny the appeal, with amended Conditions and Findings.
- C. Overturn the decision of the Planning Director and approve the request for a 7,000 SF (or other size) agricultural exempt building with amended Conditions and Findings in the Staff Recommendation; or
- D. Continue the hearing to a date and time certain if additional information or review time is needed to determine whether standards and criteria are sufficiently addressed.

### 9. Proposed Conditions:

#### A. **After expiration of the 12-day appeal period the Owner shall comply with the following conditions:**

- 1. A 2,500 square foot (SF) agricultural building is approved. The owner shall remove 4,500 SF from the existing building no later than May 1, 2018.
- 2. Obtain an Approach Road Permit from the Wasco County Public Works Department within 30 days of final approval for the existing driveway approach onto Sevenmile Hill Road.
- 3. The owner shall record a restrictive covenant in the deed records of Wasco County stating that the agricultural building will only be used for agricultural uses

#### B. **Miscellaneous Conditions**

- 1. Outdoor lighting shall be sited, limited in intensity, shielded and hooded in a manner that prevents the lighting from projecting onto adjacent properties, roadways, and waterways. Shielding and hooding materials shall be composed of nonreflective, opaque materials. If the existing outdoor lighting is motion-activated, no hooding and shielding materials are required, however if the lighting is on from dusk to dawn, the lighting shall meet the outdoor lighting standard.
- 2. Failure to meet all conditions of approval will result in enforcement action by Wasco County through the Code Compliance and Nuisance Abatement Ordinance.

## ATTACHMENT A

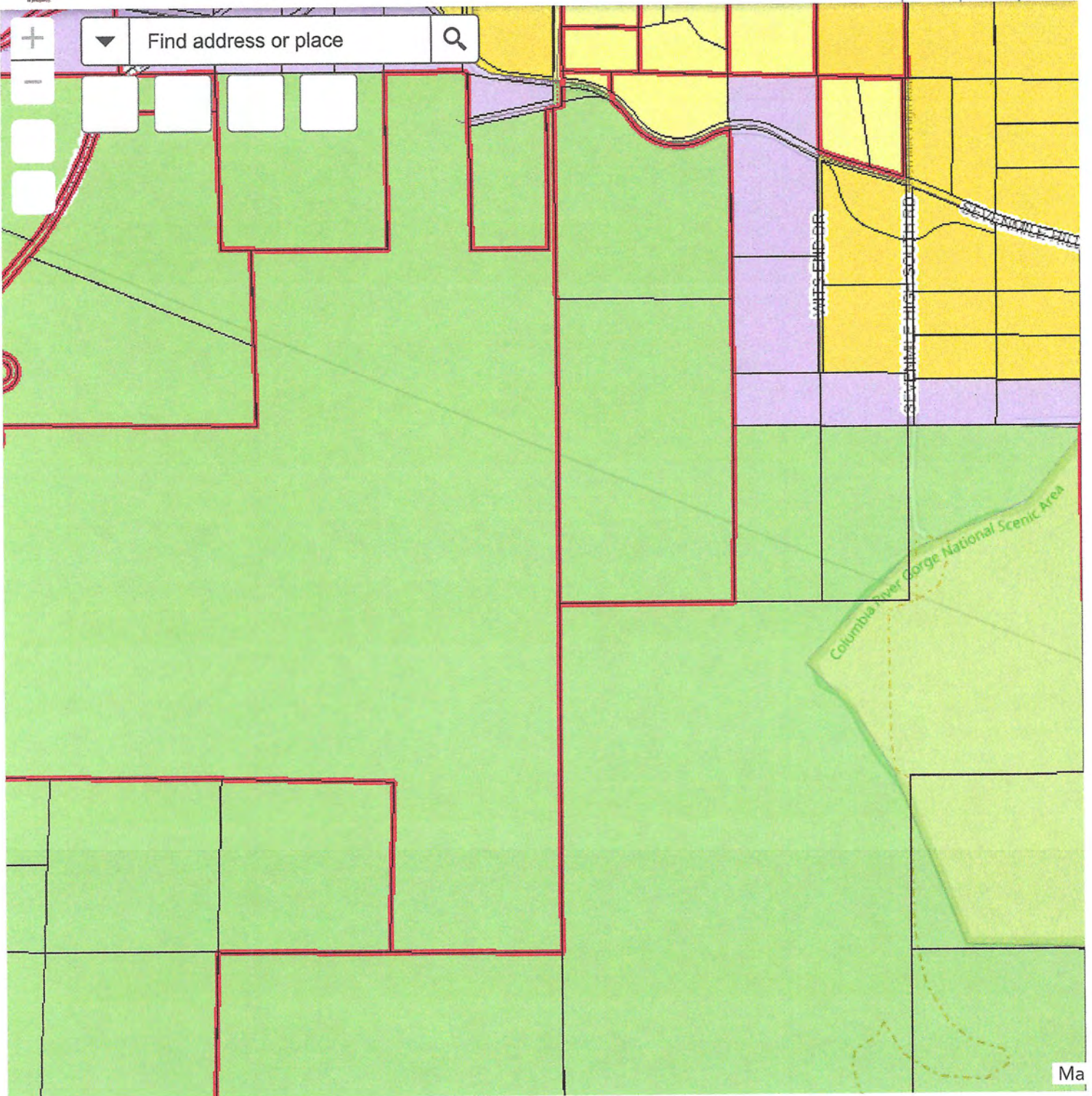
**10. Staff Recommendation:** Staff recommends Option A – Uphold the Decision of the Planning Director and deny the Appeal, with the proposed Conditions and Findings in the Staff Recommendation.

Staff is not aware of any reason to continue this public hearing and believes the Planning Commission has sufficient information to make a decision on this request.

That concludes my presentation and I would be glad to answer any questions the Commission may have.

P:\Staff Reports\Chronological\2017\APL\PLAAPL-17-10-0001ofPLAPAR-17-05-0002\_WilsonAgBldg\09 - Staff Documents\120517\_PC\_Presentation\_WilsonAPL.doc



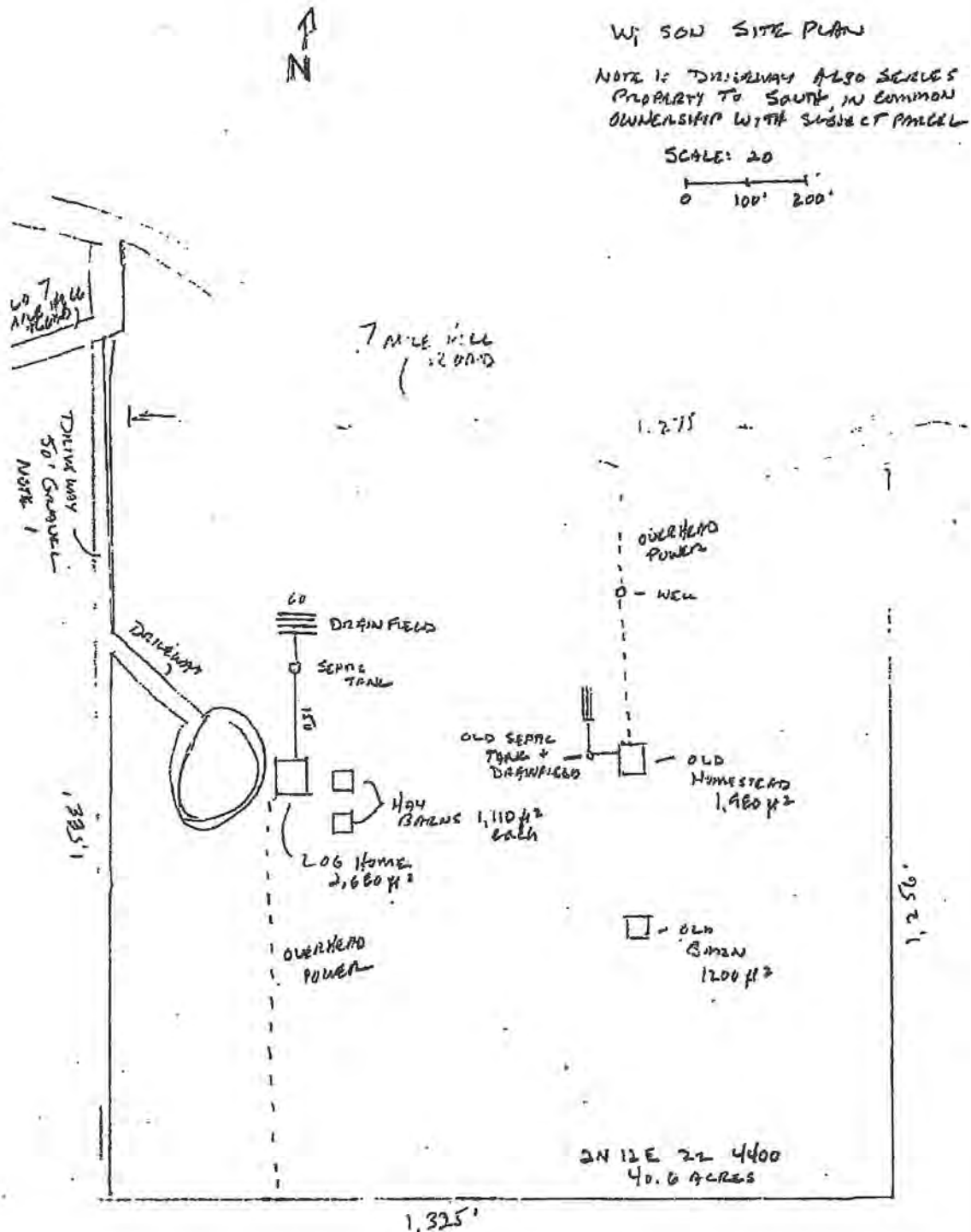


0.2mi  
-121.278 45.636 Degrees

<https://public.co.wasco.or.us/gisportal/apps/webappviewer/index.html?id=80a942ec81da4dd2bcc16032cc329459>

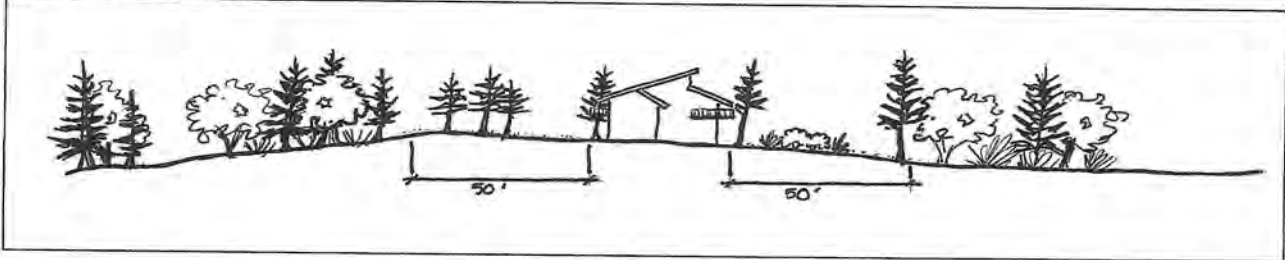
# ATTACHMENT B - MAPS

## Site Plan



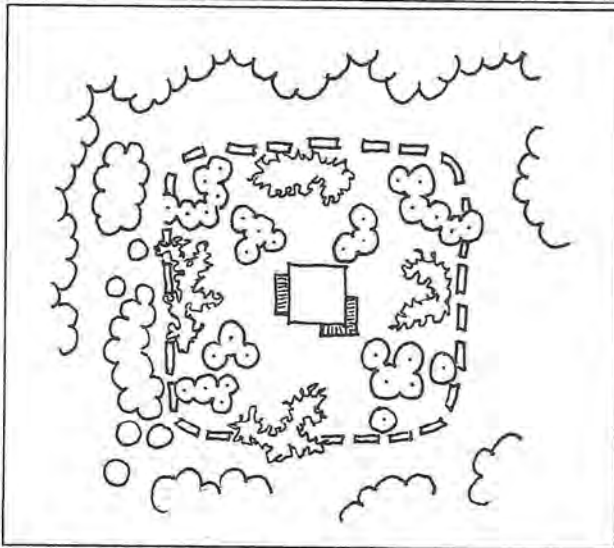
## Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break

### DEFENSIBLE SPACE



Fire Fuel Break Includes: Irrigated fire resistant domestic plantings, low volume slow burning plantings, and trees encouraged to provide shade and ground cooling. Trees should be grouped. Groups of trees shall be spaced to avoid creation of a continuous tree canopy. Trees shall be kept in healthy fire resistant condition. Trees shall be limbed up to create a vacant area between ground fuels and canopy fuels. Under story vegetation shall be minimized and ground cover shall be kept trimmed low to the ground.

### Is your building surrounded by a 50-foot wide fire fuel break?



Fire Fuel Break Area Plan View  
Illustration



Fire Fuel Break Area Sample

### MAINTENANCE STANDARDS FOR FIRE FUEL BREAK AREA:

- Ground cover maximum 4 inches tall;
- Trees limbed up approximately 8 feet from the ground,
- Trees kept free from dead, dry, or flammable material;
- Ladder fuels must be removed;
- No shrubs or tall plants under trees;
- Shrubs only in isolated groupings that maximize edges of ornamental beds to avoid continuous blocks of ground fuel;



## Re: Road buffer

From: Arthur Smith (arthurs@co.wasco.or.us)

To: sdooley3300@yahoo.com

Date: Thursday, October 28, 2021, 09:46 AM PDT

There is no defined or statutory setback for roads.

County road right-of-way is usually 60 feet in width - 30 feet either side of the centerline stripe. Our road crews like to keep a clear zone from the shoulder of the road, so they can perform maintenance work, but that can vary from road to road and area to area. In Mosier, we have trees and other vegetation within 2 feet of the road shoulder. In that area, it is natural for denser vegetation and it does not cause an unsafe situation. In Wamic, there may not be a tree or shrub for the entire 60 feet of right-of-way. There are trees, mailboxes, fences and all sorts of other objects located within the right-of-way. If you think there is an unsafe situation, I can take a look.

Arthur

On Thu, Oct 28, 2021 at 9:32 AM Sheila Dooley <sdooley3300@yahoo.com> wrote:

So what is the setback?

Sheila

On Thursday, October 28, 2021, 07:41:13 AM PDT, Arthur Smith <arthurs@co.wasco.or.us> wrote:

No, there is no requirement like that. We would be cutting down trees for 100 years to clear every county road for 50 feet.

Arthur

On Wed, Oct 27, 2021 at 4:46 PM Sheila Dooley <sdooley3300@yahoo.com> wrote:

Hi Arthur,

Is there a requirement that trees not be planted within 50 feet of county roads?

Thanks,

Sheila

Sent from Mail for Windows



**Arthur Smith | Director**  
**PUBLIC WORKS**

arthurs@co.wasco.or.us | www.co.wasco.or.us  
541-506-2645 | Fax 541-506-2641  
2705 East 2nd Street | The Dalles, OR 97058



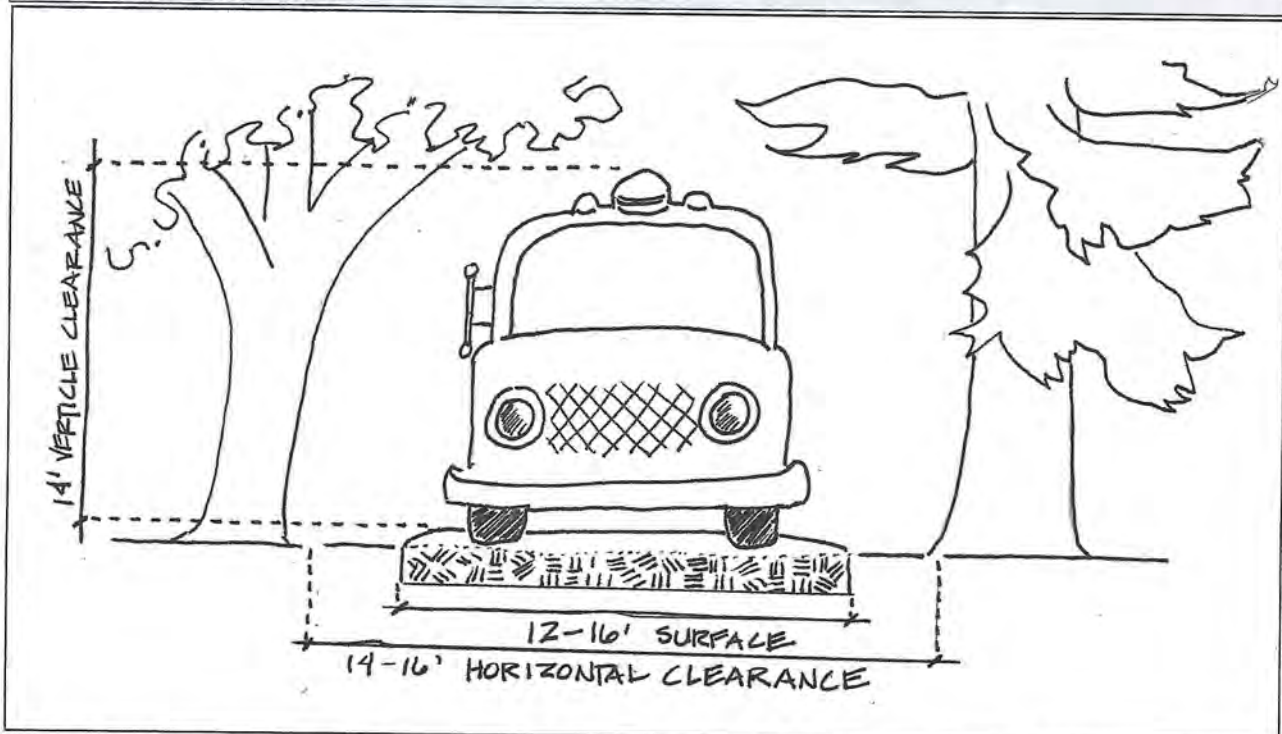
**Arthur Smith | Director**  
**PUBLIC WORKS**

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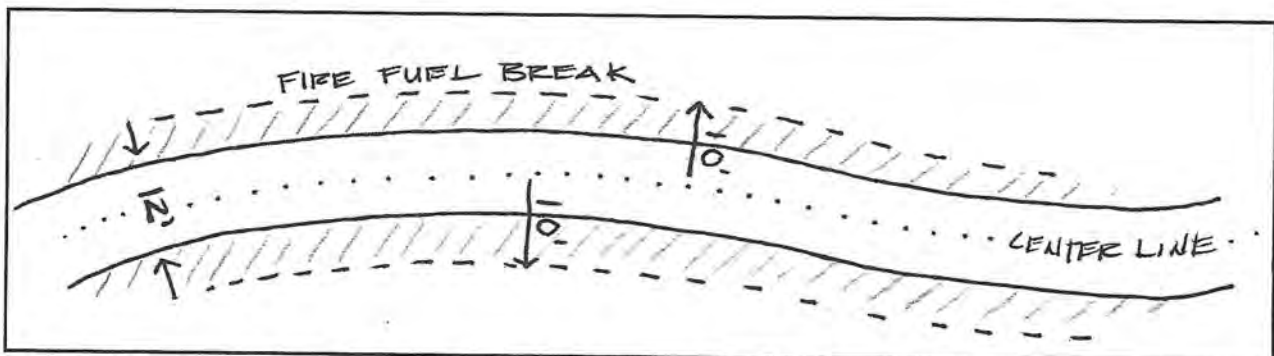


B. This Standard is applicable to all residential driveways in: -All Zones	
B. If <u>Yes</u> Then	B. If <u>No</u> Then
<ul style="list-style-type: none"> <li>Emergency responders will be able to bring all vehicles onto your property and to your building site.</li> <li>You will be able to get off your property as the fire equipment accesses the site.</li> </ul>	See (A) above.

**C. Does your residential driveway provide adequate clearance for emergency vehicles and is there sufficient clear area along the driveway to allow responders to maneuver safely around their vehicles?**



Responding vehicles need over 13 vertical feet and a minimum of 14 horizontal feet of clearance to pass through vegetation along a driveway.



A fire fuel break extending 10 feet either side of the center line of the driveway is required.



Daniel Dougherty &lt;danield@co.wasco.or.us&gt;

## Testimony for Packet

11 messages

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Wed, Nov 24, 2021 at 1:02 PM










Daniel,

Attached are my testimony and 8 exhibits for the December 7th Planning Commission packet. Please do not address my comments in the staff report. Also can you please let me know that you received them.

Thank you,

Sheila Dooley

### 9 attachments

-  **Wilson remand testimony 11-24-21.docx**  
10877K
-  **Exhibit 1 Farm equipment bill of sale.pdf**  
1887K
-  **Exhibit 2 Planning Commission meeting minutes of Jan 23, 2018\_.pdf**  
97K
-  **Exhibit 3 Planning Commission meeting minutes of Jan. 2, 2018.pdf**  
213K
-  **Exhibit 4 Tract map.pdf**  
822K
-  **Exhibit 5 Site plan.pdf**  
235K
-  **Exhibit 6 LUDO Section 10.120 Defensible Space.pdf**  
729K
-  **Exhibit 7 Arthur Smith October 28, 2021 email.pdf**  
515K
-  **Exhibit 8 LUDO Section 10.140 Access Standards.pdf**  
633K

**Daniel Dougherty** <danield@co.wasco.or.us>  
To: Sheila Dooley <sdooley3300@yahoo.com>

Wed, Nov 24, 2021 at 1:16 PM

Good afternoon,

Your materials have been received and will be added to the record. I will do my best to directly address comments prior to the PC Packet being submitted.

Respectfully,

Daniel  
[Quoted text hidden]

--

**Daniel Dougherty | Senior Planner**

Board of County Commissioners Agenda Packet

BCC1 - 6288



## PLANNING DEPARTMENT

[danield@co.wasco.or.us](mailto:danield@co.wasco.or.us) | <http://www.co.wasco.or.us/departments/planning/index.php>

541-506-2560 | Fax 541-506-2561

2705 E Second Street | The Dalles, OR 97058

### Office Notice about COVID-19

Welcome back! We have resumed in-person customer service. Office hours are Tuesday and Thursday, 10am to 4pm with a lunchtime closure. Appointments can be accommodated on Fridays. Masks are required in the office unless you bring your vaccination card to demonstrate you are a full two weeks out from your final COVID-19 vaccination.

**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

---

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Wed, Nov 24, 2021 at 1:19 PM

I don't want my comments addressed. Thanks.

[Quoted text hidden]

---

**Daniel Dougherty** <danield@co.wasco.or.us>  
To: Sheila Dooley <sdooley3300@yahoo.com>

Wed, Nov 24, 2021 at 1:43 PM

Hi Sheila,

Will do.

Respectfully,

Daniel

[Quoted text hidden]

---

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Wed, Nov 24, 2021 at 2:32 PM

Hi Daniel,

Thanks! Have a good Thanksgiving,

Sheila

[Quoted text hidden]

---

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Sun, Nov 28, 2021 at 8:28 AM

Hi Daniel,

Is it too late to make a correction to my testimony and send in a corrected version to replace what I already sent you? The exhibits would stay the same.

Thanks,

Sheila

[Quoted text hidden]

---

**Daniel Dougherty** <danield@co.wasco.or.us>  
To: Sheila Dooley <sdooley3300@yahoo.com>

Sun, Nov 28, 2021 at 9:08 AM

Good morning,

I'm building the packet for tomorrow. Much of it is already put together, which has been time consuming. Please submit your final version, and I'll add it to the packet.

Respectfully,

Daniel

[Quoted text hidden]

---

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Sun, Nov 28, 2021 at 9:47 AM

Thanks, Daniel. Attached is the final version below. I didn't know if I needed to resubmit the exhibits that go with it so have attached them anyway although they haven't changed.

Also I assume you received the additional testimony that I sent Friday that I want included in the packet also.

Thanks again,

Sheila

[Quoted text hidden]

---

#### 9 attachments



**Wilson remand testimony rev. 11-28-21.docx**  
10879K



**Exhibit 1 Farm equipment bill of sale.pdf**  
1887K



**Exhibit 2 Planning Commission meeting minutes of Jan 23, 2018\_.pdf**  
97K



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213K



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**Exhibit 5 Site plan.pdf**  
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729K



**Exhibit 7 Arthur Smith October 28, 2021 email.pdf**  
515K



**Exhibit 8 LUDO Section 10.140 Access Standards.pdf**  
633K

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Sun, Nov 28, 2021 at 10:50 AM

Please let me know that you received this. Thanks.

[Quoted text hidden]

---

**Sheila Dooley** <sdooley3300@yahoo.com>  
To: Daniel Dougherty <danield@co.wasco.or.us>

Sun, Nov 28, 2021 at 1:07 PM

I changed the date on the document name to Wilson Remand testimony 11-28-21. I didn't change it on the actual document which still says November 24, 2021. Hope this isn't confusing.

[Quoted text hidden]

---

**Daniel Dougherty** <danield@co.wasco.or.us>  
To: Sheila Dooley <sdooley3300@yahoo.com>

Sun, Nov 28, 2021 at 8:31 PM

Good evening,

Your original, supplemental, and recent update has been received. They are added to the PC Packet.

Respectfully,

Daniel

[Quoted text hidden]





Daniel Dougherty &lt;daniel@co.wasco.or.us&gt;

## Wilson Remand Hearing - Oral Testimony

2 messages

**Mike Sargetakis** <mike@sargetakis.com>  
To: Daniel Dougherty <daniel@co.wasco.or.us>

Wed, Nov 24, 2021 at 2:33 PM

Hi Daniel-

I believe written testimony appearing in the staff report for the Wilson remand is due today. I wanted to make sure I requested an opportunity to at least testify orally at the hearing. I may submit written testimony as well, with the understanding that it is unlikely to appear in the packet.

Thanks  
Happy thanksgiving  
Mike Sargetakis  
*Attorney for Sheila Dooley and Jill Barker*

--

**Mike Sargetakis** (he/him)  
Attorney | Law Office of Mike Sargetakis  
**735 SW 1st Ave., 2nd Floor**  
**Portland, OR 97204**  
tel. (971) 808-1495  
[mike@sargetakis.com](mailto:mike@sargetakis.com)

**Daniel Dougherty** <daniel@co.wasco.or.us>  
To: Mike Sargetakis <mike@sargetakis.com>

Wed, Nov 24, 2021 at 2:36 PM

Good afternoon,

Acknowledged and received. I'll add this email to the record.

Respectfully,

Daniel

[Quoted text hidden]

--



**Daniel Dougherty | Senior Planner**  
**PLANNING DEPARTMENT**

**[daniel@co.wasco.or.us](mailto:daniel@co.wasco.or.us)** | <http://www.co.wasco.or.us/departments/planning/index.php>

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**Email is still the best way to reach me!** Please view our [website](#) for office hours and COVID-19 accommodations.

*This correspondence does not constitute a Land Use Decision per ORS 197.015.  
It is informational only and a matter of public record.*



Daniel Dougherty &lt;danield@co.wasco.or.us&gt;

## Wilson Remand Application - 2021

1 message

**Jillian Barker** <bjillian187@gmail.com>  
To: danield@co.wasco.or.us

Sun, Nov 28, 2021 at 11:06 AM

November 26, 2021

Dear Wasco County Planning Commissioners,

I have the following concerns regarding the Wilson Remand (File # 921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-965):

I find it obviously refutable to claim that soils on the applicant's property that are presently voluntarily growing many trees, are nevertheless categorized in the applicant's soil study as incapable of growing trees due to unsuitable soil classifications. This appears to be an error or misinterpretation of the conclusions of the soil study.

Some years ago in the process of doing fire fuel reduction on the property, the mechanical grub-hoeing of the understory has removed many young seedling and sapling conifer and oak trees in those areas. In spite of this there are still numerous oak and conifer trees in the alleged "unsuitable soil" areas in the east and south parts of the property which are not mowed, as evidenced in the current aerial photos.

The areas that have been mowed are very suitable for trees and in the past produced three crops of alfalfa each year. In 1977 I assisted in the purchase of alfalfa hay from that same field. The fact that the applicant is not using most of his property for forest purposes and has not replanted the open field with trees (or let them grow back naturally) does not make it any less valuable as forest land.

I fully concur with Sheila Dooley in her analysis of the Remand application issues, regarding the physically developed or irrevocably committed exception requirements. I am surprised that the new site plan map submitted with the Remand application does not match the site plan map that was originally submitted to Wasco County and LUBA in 2019. There are many new non-existing plans and infrastructure drawn on this new site plan map that were not included in the original map. This has totally changed the application and these proposed changes are not relevant to the Remand application.

Additionally, the "literal moonscape nature of the adjoining properties south of the subject property" are merely natural dry grasslands and wheat/hay/grazing fields in summertime (on overexposed film) and are irrelevant to the Remand application.

Thank you for your attention.

Sincerely,

Jill Barker

P.O. Box 572

Mosier, Oregon 97040

# PHILLIPS REYNIER SUMERFIELD & CLINE, LLP

DEBORAH M. PHILLIPS  
RONALD H. REYNIER  
WILLIAM H. SUMERFIELD  
JULIE L. CLINE

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P. O. BOX 758  
718 STATE STREET  
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(541) 386-4264  
FAX: (541) 386-2557  
E-MAIL: [bill@phillipsreynier.com](mailto:bill@phillipsreynier.com)

Licensed in Oregon & Washington

July 9, 2021

Kelly Howsley-Glover, Interim Director  
Wasco County Planning Department  
2705 E. Second Street  
The Dalles, OR 97058

**Hand Delivered**

RE: **PLAQJR-15-09-0002**  
**921-18-000086-PLNG**  
**LUBA No. 2019-065**

David Wilson zone change, comprehensive plan amendment, and goal exception applications – remand hearing

Greetings,

I represent the applicant, David Wilson, in the above matters. By decision dated January 14, 2020, LUBA remanded the above zone change approval. Mr. Wilson is prepared to proceed with the remand hearing, and submits the following new evidence for consideration. Applicant also anticipates submitting written argument prior to the hearing, and appearing at the hearing to present the new evidence and make argument. All of the matters raised in this letter will be addressed in more detail in the written argument to be submitted prior to the hearing.

The remand hearing fee of \$350.00 is included with this letter.

## **Soils Assessment**

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.<sup>1</sup>

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. A complete copy of Mr.

---

<sup>1</sup> Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error.



Kitzrow's report and DLCD's review is included with this letter for inclusion in evidence and consideration on remand.

### **Aerial Photo of Subject Property and Adjoining Area**

Previous aerial photos submitted tended to focus tightly on the subject property and on the adjoining residential enclaves. There are lands west and south of the subject parcel which are zoned for resource use, and a portion of those lands are in commercial timber production. LUBA faulted the county for failing to adequately address those lands:

"The findings do not address at all the relationship of the subject property to the adjacent approximately 450 acres of F-2 zoned lands located to the west of the subject property that are in timber production and/or that possess soils suitable for forestry production, or the approximately 2,000 acres of resource land that are in forest use located immediately south of intervenor's 69-acre adjacent F-2 parcel to the south of the subject property, or the potential for resources use of the property in conjunction with the adjacent F-2 zoned properties." *LUBA decision, p. 12, lines 1-8.*

What the local decision-making bodies knew, and what LUBA failed to grasp, is that there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property and lands immediately adjacent to the south and west of the subject property. This aerial photo, taken with a much wider perspective, clearly shows the literal moonscape nature of the adjoining properties south of the subject property.

### **Physically Developed Map & Area Calculations**

On appeal, Appellants claimed, and LUBA accepted the claim, that only approximately 12 percent of the subject property was physically developed, while more than 87 percent of the property was undeveloped. LUBA cited the administrative rule discussing the necessary findings:

"Whether land has been physically developed with uses not allowed by an applicable goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception." OAR 660-004-0025(2).

While there is a comprehensive site plan in the record which formed the basis for the County's findings,<sup>2</sup> Applicant submits a more comprehensive map with this letter for additional clarity.

---

<sup>2</sup> Record on Appeal at 215.

Wasco County Planning Department  
July 9, 2021  
Wilson Remand Hearing

In the previous hearings, Applicant testified as to his knowledge of applicable buffers, and argued that common sense required recognition of reasonable buffers around such development as power lines, structures, and septic drain fields. The county decision makers accepted that argument. LUBA was not impressed by this application of common sense:

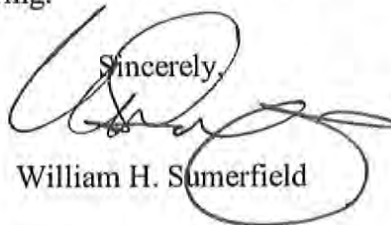
“Intervenor responds that managing the subject property for commercial forestry would require ‘extensive’ fire buffers along the eastern and northern borders that are adjacent to developed residential areas and around the existing dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points out that ‘two strings’ of overhead power lines are located on the property, and that forestry uses would require a buffer from those lines. *Id.* We understand intervenor to argue that such extensive buffers mean that the property is ‘physically developed to the extent it is no longer available’ for forestry uses.

\*\*\*\*\*

Further, we agree with petitioners that the county’s decision is not supported by substantial evidence in the record, where the evidence in the record is that the property has available at least 87 percent of its area for forestry. Intervenor does not attempt to quantify the amount of buffer that would be required to conduct forestry uses or quantify the amount by which that buffer would decrease the amount of property available for forestry uses to such an extent that the property ‘is no longer available for forestry uses.’ We conclude that the county’s findings in support of its approval of a physically developed exception are not supported by substantial evidence in the record.”

Applicant takes LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. Applicant has again discussed the powerline buffer with the power company (15’ from centerline), and has applied those in the attached calculations, in addition to a 50’ buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50’ buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Please add this letter and supporting materials to the record on remand. I look forward to working with you to schedule a hearing.

Sincerely,  
  
William H. Sumerfield

WHS/

Enclosures (*Soils Assessment, Aerial Photo, Development Map, Developed Area Calculations*)

## Power Lines

15' either side from center line

$$10,024 \text{ linear feet} \times 30' = 300,730 \text{ ft}^2$$

## Structures

50' each side from dimensions below

$$\text{Log Home } 80 \times 100 = 36,000 \text{ ft}^2$$

$$\text{Barn \#1 } 24 \times 35 = 16,740 \text{ ft}^2$$

$$\text{Barn \#2 } 30 \times 30 = 16,900 \text{ ft}^2$$

$$\text{Lean To } 16 \times 30 = 15,627 \text{ ft}^2$$

$$\text{Old Homestead Home } 55 \times 55 = 24,025 \text{ ft}^2$$

$$\text{Old Homestead Barn } 25 \times 55 = 16,875 \text{ ft}^2$$

**Total square footage developed area 426,887 ft<sup>2</sup>**

$$40 \text{ acres} = 1,742,700 \text{ ft}^2$$

$$426,887 / 1,740,700 = .2452 \text{ (24.52\% of total area)}$$

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

$$50' \text{ buffer along 7 Mile Hill Road} = 65,000 \text{ ft}^2$$

$$50' \text{ buffer along driveway easement} = 79,300 \text{ ft}^2$$

$$571,187 / 1,740,700 = .3281 \text{ (32.81\% of total area)}$$





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

[www.oregon.gov/LCD](http://www.oregon.gov/LCD)



## Soil Assessment Completeness Review

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030.

Hilary Foote  
DLCD Farm Forest Specialist  
March 29, 2001

The department will consider soil assessments under OAR 660-033-0030 to be complete if they meet the following standards:

(1) General information, to include:

- (a) Title of the report; Wildon – Order 1 Soil Survey
- (b) Person making request for soils assessment; David Wilson
- (c) Names of soil scientist/classifier conducting the field work and preparer of the report, along with their certification numbers; Gary Kitzrow, CPSC/CPSS #1741
- (d) Land use case file number (if available); n/a
- (e) County in which the assessment was conducted; Wasco
- (f) Location of the project site, including the township, range, section and tax lot numbers; Township 2N Range 12E Section 23 Taxlot 4400, Wasco County, Oregon
- (g) Present zoning designation; EFU
- (h) Current land use; unknown
- (i) Parcel acreage: 40.13 ; evaluated: 40.13 ,and
- (j) A description of the purpose of the assessment. Zone Change

(2) Previous Mapping or Background: The soil scientist/classifier shall provide a copy of the applicable and most current National Cooperative Soil Survey map(s) provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey, with the area of investigation outlined on the map(s). The scale of the map(s) shall be identified and a list of the map units under investigation shall be listed. The applicable

interpretations and minor components (inclusions) for the map units for which the investigation is being made shall also be provided. NRCS mapped soils include: Wamic loam, 5 to 12 percent north slopes (capability class 4e), Wamic loam, 12 to 20 percent slopes (capability class 4e) and Wamic-Skyline complex, 2 to 20 percent slopes (capability class 4e (Wamic components) and 7s (skyline components)). See pages 8-9.

(3) Methods Used by Soil Scientist/Classifier: The soil scientist/classifier shall describe the methodologies used for the preparation of the report and shall include the following:

- (a) The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted
- (b) The date(s) of the field investigation; December 18-19, 2020
- (c) The methods used for observations (backhoe, auger, shovel, etc.) and methods used for documentation (for slope, color, pH, etc.); Backhoe, field texturing, munsell chart comparison, soil pH, field assessment, etc as described on page 1.
- (d) The number and location of borings either shown on an aerial photograph base map of the parcel or provided in a table with latitude and longitude coordinates. In conducting Order 1 soil surveys, the scale of the base maps used for the survey needs to be large enough to enable the identification of polygons of soil map units as consociation map units. Soil map units identified as a complex, association, or undifferentiated group should be avoided as this defeats the purpose of an Order 1 survey. If, however, the soils are so intermingled that they cannot be mapped at a reasonable scale so as to identify consociation map unit polygons, then there should be sufficient sampling and documentation of the complex to demonstrate this soil component distribution. A percentage of each member of the complex will be used in determining area of extent and the reported percentages will be based on this sampling and its documentation, including soil profile descriptions, boring locations and, where useful, photographs. 23 locations. Coordinates listed on page 1 and mapped on page 10
- (e) Geomorphic and vegetation correlations supporting the interpretation of land capability classes of soils that differ from those in the official soil survey information; and Described on page 2.
- (f) A notation of any limitations encountered during the field investigation, such as soil depth, drainage, slope or inaccessibility. No limitations noted (page 2).



(4) Results, Findings, and Decisions: The soils report shall describe how the level of order of survey used in this investigation differs from that used by NRCS in the original soil survey. The soils report shall also include:

- (a) An overview of the geology or geologic setting, describing sources of parent material, bedrock and related factors; Described on page 2
- (b) A description of the landforms and topography, confirming the relationship of landforms to soil mapping units; Described on pages 2 and 3
- (c) A description of on-site and adjacent hydrology, including surface and subsurface features, intermittent versus perennial, floodplain and floodways and other related information; Described on page 3.
- (d) A description of the revised soil mapping units with their range of characteristics, explaining how and why they differ from NRCS soil mapping. The soils report shall include a summary of soil variability incorporating significance of preceding weather (above or below average), where known and crops and natural vegetation present; and Described on page 3
- (e) A tabulation of all previous and revised soil mapping units complete with their acreages and land capability classification. Pages 3, 8, 9 and 13

(5) Summary or Conclusion: The soils report shall contain a section reiterating the purpose of the investigation, explaining the significance of the revised soil mapping and describing any other significant issues related to the report's purpose. Page 3

(6) References: This section may list any manuals or publications utilized or referenced by the report. Page 3

(7) Attachments: Other informational materials provided as attachments, such as maps, figures or appendices shall include the following and shall be printed on 8 ½ x 11" wherever possible:

- (a) Vicinity map at a scale of 1:48,000 or smaller showing the project location; Map included on page 11
- (b) The NRCS soils map generated from Web Soil Survey at a scale of 1:20,000 or larger outlining the project site; Map included on page 7
- (c) Site condition map (aerial photo) at a scale of 1:5,000 or larger outlining the project site and showing the location of site investigations (borings) and other relevant features; Map included on page 10
- (d) Topography map at a scale of 1:24,000 or larger outlining the project site; Map included on page 11
- (e) Assessor's map at a scale of 1:5,000 or larger outlining the project site; Map included on page 12
- (f) Revised soils map of the project site at a scale of 1:5,000 or larger; Map included on page 13

- (g) Soil profile descriptions and site observation notes; and Pages 14-36
  - (h) Representative soil profile descriptions of any soil type identified in the project area that is not described or identified in the published soil survey for the area mapped. Page 37
- (8) Soils reports shall be submitted electronically to the department to hilary.foote@state.or.us, accompanied by a Soils Assessment Submittal Form. Payment of a non-refundable administrative fee of \$625 should be sent by check.



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD

## Soils Assessment Submittal Form



### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

### Property Information

Person who requested soils assessment: David Wilson  
 Mailing address: 7100 7 Mile Hill Rd The Dalles Or 97058  
 Email address: none Telephone number: 541-492-3230  
 Property owner (if different): \_\_\_\_\_  
 Property address (if different): 7000 7 Mile Hill Rd The Dalles Or 97058  
 County: Wasco Township: 2N Range: 12E Section: 22  
 Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13  
 Comprehensive Plan designation: \_\_\_\_\_ Zone: EEU  
 Proposed land use action: Plan Amendment Zone Change To RR10

The soils professional must submit an electronic copy of the soils assessment together with this form to Timothy Murphy, Farm and Forest Lands Specialist, at the above address. The person requesting the soils assessment or the property owner must submit a check for a non-refundable administrative fee of \$625 made out to the Department of Land Conservation and Development, to Timothy Murphy, at the same address.

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews or field checks will accompany the soils assessments.

The department and the Land Conservation and Development Commission will not be held liable for non-performance or information that is contained in soils assessments, or for negative reviews, field checks or audits of soils assessments. For the protection of the department and commission, we ask that you read and sign the following authorization and disclaimer:

*I hereby expressly give my consent, should I be notified by the department that the submitted soils assessment for my property is selected for a review and field check, to authorize timely*



access to my property by a DLCD-contracted soils professional to perform a field check to corroborate the information provided in the submitted soils assessment. I understand that failure to authorize access to the property may result in a negative review.

I hereby waive my right to pursue a claim for relief or cause of action alleging injury from the content of soils assessments or from any negative reviews, field checks or audits conducted by the department and any and all soils professionals used by the department under OAR 660-033-0030(5) and (9). I hold these entities harmless and release them from liability for any injury or damage that may occur in conjunction with the submitted soils assessment.

In exchange for the department's review of this submittal under the soils assessment program, I expressly agree to forever waive and give up all claims, suits, actions, proceedings, losses, damages, liabilities, awards and costs of every kind and description, including any and all federal and state claims, reasonable attorney's fees, and expenses at trial (collectively "claims") which I have or may have a right to bring against any agency, department, the state, or their agents, officials or employees arising out of or related to my participation and performance in the soil assessment program, including but not limited to claims for mistake or negligence of the department, the state of Oregon, and their officers, employees and agents. I further agree that the provisions of this Liability Waiver and Release from Federal and State Claims shall be effective and binding upon my heirs, executors, administrators, successors, assigns, beneficiaries, or delegates and shall inure to the benefit of the department, the State of Oregon, and their officers, employees and agents.

David Wilson David Wilson  
Person who requested soils assessment

1/15/21  
Date

\_\_\_\_\_  
Property owner (if different)

\_\_\_\_\_  
Date

In addition to agreeing to the above, I hereby certify that the attached soils assessment that I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department.

[Signature]

\_\_\_\_\_  
Soils professional

1/10/21  
Date

\* Must be from the posted list of qualified soils professionals at: <http://www.oregon.gov/LCD/pages/soilsassessment.aspx>



Soils Assessment Submittal Form 2 of 2





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soils Assessment Release Form

### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

Date of submittal of soils assessment to department: Jan 23, 2021

### Property Information

Person who requested soils assessment: David Wilson

Mailing address: 7100 7 Mile Hill Rd The Dalles Or 97058

Email address: none Telephone number: 541-490-3230

Property owner (if different):

Property address (if different): 7000 7 mile Hill Rd The Dalles Or 97058

County: Wasco Township: 2N Range: 12E Section: 22

Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13

Comprehensive Plan designation: \_\_\_\_\_ Zone: FFA

Proposed land use action: Plan Amendment zone change to RR10

If you would like the soils assessment for the subject property to be released to a County planning department for its consideration in a land use proceeding, please sign this form and send it to Timothy Murphy at the above address, or email to: [timothy.murphy@state.or.us](mailto:timothy.murphy@state.or.us).

I hereby request that the Department of Land Conservation and Development release the soils assessment submitted to the department on the above date regarding the above-described property to the Wasco County Planning Department, as well as any department notifications of deficiencies. I understand that any and all previous soils assessments applying to this property produced under this rule, as well as any department notifications of deficiencies in such soils assessments, will also be released to the local government.

David Wilson

Person who requested soils assessment

1/15/21  
Date

Property owner (if different)

Date



Wilson- Order 1 Soil Survey Report

RE: OAR 660-033-0030

1). General Information

- a). Order 1 Soil Survey Report—Wilson Property, Oregon
- b). David Wilson
- c). Gary A. Kitzrow, M.S., CPSC/CPSS # 1741, Master of Science
- d). None
- e). Wasco
- f). RE: T2N R12E Sec. 23C TL# 4400
- g). EFU
- h). Zone change
- i). 40.13 Ac./40.13 acres
- j). complete a site-specific soil survey for the above parcel to determine if a preponderance of the property is comprised of generally unsuited soils. The goal is to secure a Plan Amendment Zone Change.

2). Enclosed

- a). Scale of enclosed USDA-NRCS Soil maps: 1:3170;—USDA Soil Legend: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs.
- a). We completed a total of 23 descriptions for the 40.13-acre study site.
- b). December 18-19, 2020
- c). A Backhoe was used to excavate the study area Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing.
- d). Enclosed is a map showing all description locations.
  - 1). 45.63857' N -121.31456' W
  - 2). 45.63825' N -121.31395' W
  - 3). 45.63832' N -121.31380' W
  - 4). 45.63857' N -121.31344' W
  - 5). 45.63876' N -121.31392' W
  - 6). 45.63891' N -121.31370' W
  - 7). 45.64031' N -121.31458' W
  - 8). 45.63857' N -121.31456' W
  - 9). 45.64071' N -121.31207' W
  - 10). 45.64030' N -121.31235' W
  - 11). 45.64063' N -121.31125' W
  - 12). 45.64030' N -121.31113' W
  - 13). 45.64003' N -121.31100' W
  - 14). 45.63979' N -121.31075' W
  - 15). 45.63871' N -121.31071' W
  - 16). 45.63897' N -121.31229' W
  - 17). 45.63804' N -121.31140' W
  - 18). 45.63827' N -121.31133' W
  - 19). 45.63889' N -121.30940' W
  - 20). 45.63926' N -121.30998' W
  - 21). 45.63980' N -121.30980' W
  - 22). 45.64031' N -121.30998' W
  - 23). 45.63926' N -121.30991' W

Pg. 2 T2N R12E Sec. 23C TL# 4400

e). There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related.

Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present.

(f). No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

#### (4) Results, Findings and Decisions:

- (a) The bedrock geology for this land base is basalt mixed with areas in the southwest portion of the property exhibiting a paralithic contact with and without a duripan which all occur at less than 20". Little direct hard rock is noted in this area transitioning from definable soil. Soil development is generally a function of the presence or absence of ejected ash moving into or out from the subject study area. The basalt itself yields very immature, shallow soils when soils erode *from* the site hence the Class 7 (Bodell and Skyline). Conversely, where soil accumulates via erosion (central area and central northern areas), soils deepen up, Soil Capability Class gets better and Wamic soils become dominant. The Wamic soils are more of a function of accretion NOT soil removal but basalt is a common thread underlying all areas on this parcel. Lithic verses paralithic geologic contacts are important on this subject property. Where paralithic contacts are present (SW ¼ and some SE ¼ ) of the ownership, soils shallow-up and the bedrock becomes a more dominant portion of the land capability.
- (b) The landforms present on this study site include planar to planar concave, non-colluvial lava plains and basins with local microsites. In the bottomland area (mid northern property) some mixed alluvium and terrace remnants may be present but are truncated and ill-defined. The soils we found strongly correlate to these landforms. Rolling convex



Pg. 3 T2N R12E Sec. 23C TL# 4400

areas in the northwest ¼ (north of the developed infrastructure areas) are classified as indistinct uplands showing suited Wamic soils throughout. Contiguous areas due south exhibit ancient infrastructure dating back to the 1980s. The eastern 1/3 of the survey area shows harder bedrock and much rock in the soil profile as a function of the more sharply overt convex slopes some of which face west and northwest. These eastern areas show landforms which are much more dissected and abbreviated as compared with area in the western 1/3. The soils reflect these contrasting landforms. Much of the eastern 1/3 of the ownership exhibits harsh-growing conditions.

- (c) No natural drainageways are confirmed within the parcel. The nearest drainageway is about 2 miles southeast and 4 miles due east.
- (d) Our Order I Soil Survey confirms Skyline, Wamic, Bodell and Infrastructure are the only soil mapping units confirmed on the subject property. Presence or absence of a paralithic geologic contact combined with landscape position principally govern the soil series and mapping units present. The subject property is complex and diverse. Shallow Bodell and Skyline soils are consistently present but are spread out throughout the ownership. Wamic soils are found where ash has eroded from surrounding low hillslopes.
- (e) Previous USDA Survey: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs. GSEA: Final Order I Soil Survey Mapping units: See attached Soil Map.

(5) Summary and Conclusions:

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% ( 20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

References: Official Soil Series Descriptions USDA NRCS-Wasco County: Bodell, Wamic and Skyline Soil Series

Soil Survey Report, Soil Survey, Wasco County

Soil Survey Manual, USDA

(6) Attachments:

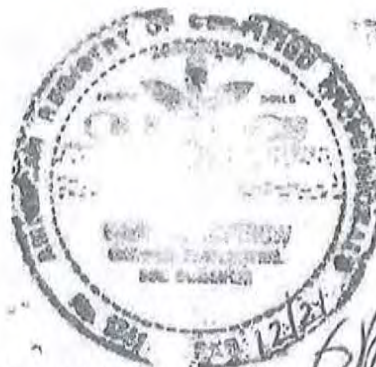
- (a) Vicinity Map
- (b) NRCS Soil Map for property
- (c) Site Condition map
- (d) Topography map outlining the subject property
- (e) Assessor's map outlining the study parcel
- (f) Revised Order I Soil Map
- (g) Soil Profile descriptions: Wamic, Skyline and Bodell Soils
- (h) Representative Soil profile descriptions

Pg. 4 T2N R12E Sec. 23C TL# 4400

Please call with questions,



Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier, Certified Professional Soil Scientist #1741  
Principal Soil Taxonomist  
GROWING SOILS ENVIRONMENTAL ASSOCIATES





Wilson  
T2N R12E Sec. 23C TL# 4400  
Vicinity Map







United States  
Department of  
Agriculture

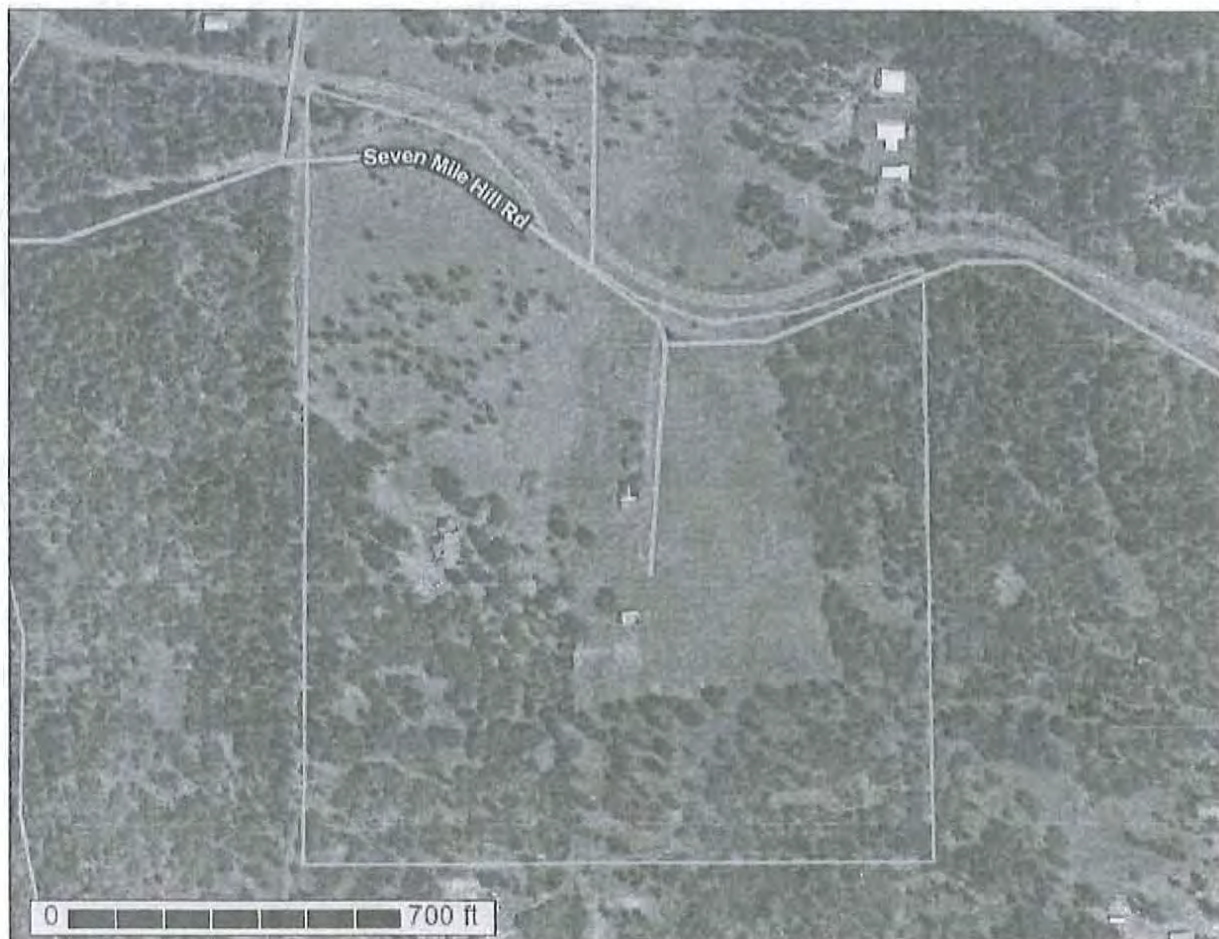
**NRCS**

Natural  
Resources  
Conservation  
Service

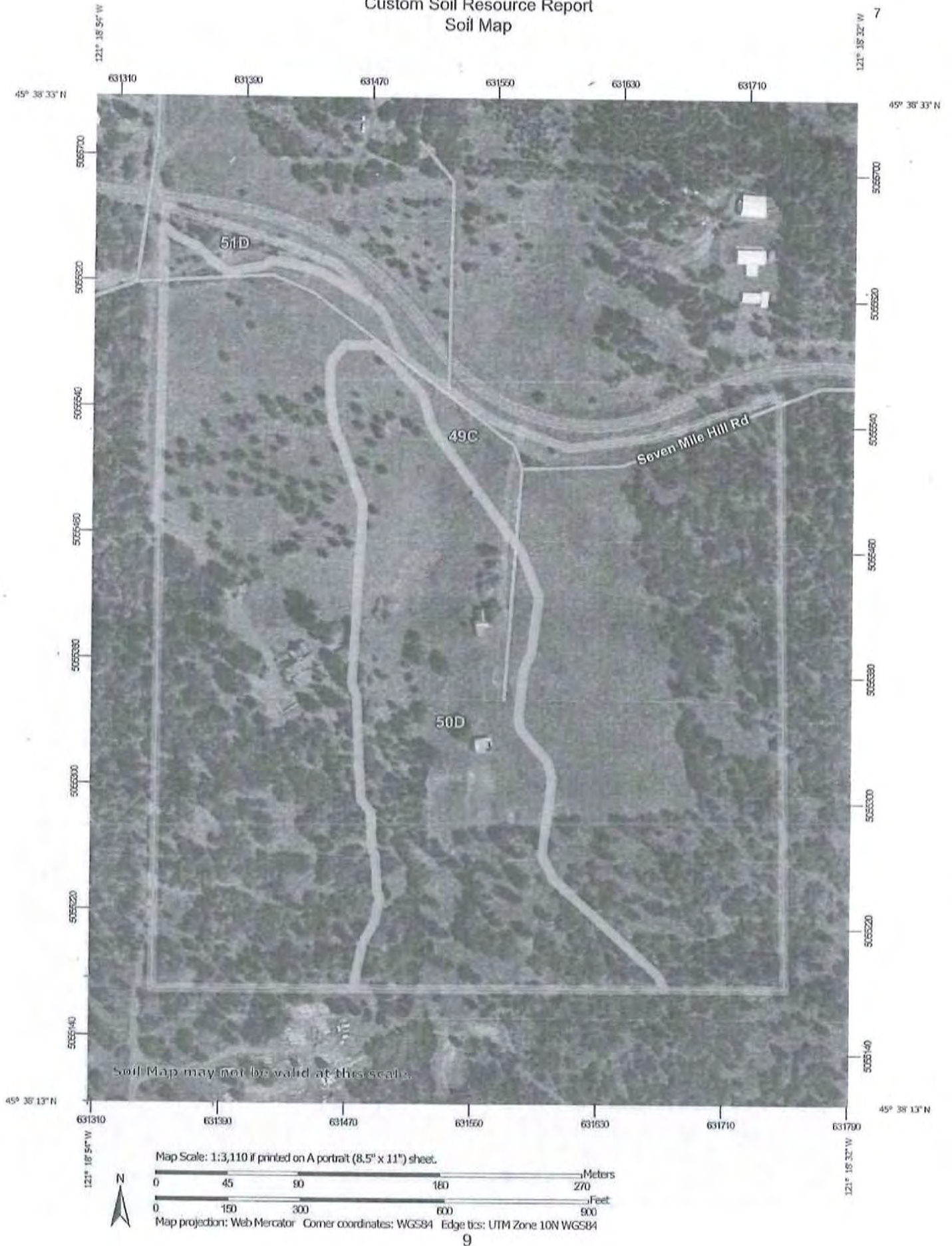
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

6

# Custom Soil Resource Report for Wasco County, Oregon, Northern Part



# Custom Soil Resource Report Soil Map





## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49C	Wamic loam 5 to 12 percent north slopes	28.6	72.0%
50D	Wamic loam, 12 to 20 percent slopes	10.7	26.8%
51D	Wamic-Skyline complex, 2 to 20 percent slopes	0.5	1.3%
Totals for Area of Interest		39.8	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

- Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion.

### Report—Land Capability Classification

Land Capability Classification—Wasco County, Oregon, Northern Part				
Map unit symbol and name	Pct. of map unit	Component name	Land Capability Subclass	
			Nonirrigated	Irrigated
49C—Wamic loam 5 to 12 percent north slopes				
	90	Wamic, north	4e	—
50D—Wamic loam, 12 to 20 percent slopes				
	90	Wamic	4e	—
51D—Wamic-Skyline complex, 2 to 20 percent slopes				
	60	Wamic	4e	—
	20	Skyline	7s	—



Wilson

T2N R12E Sec. 23C TL# 4400

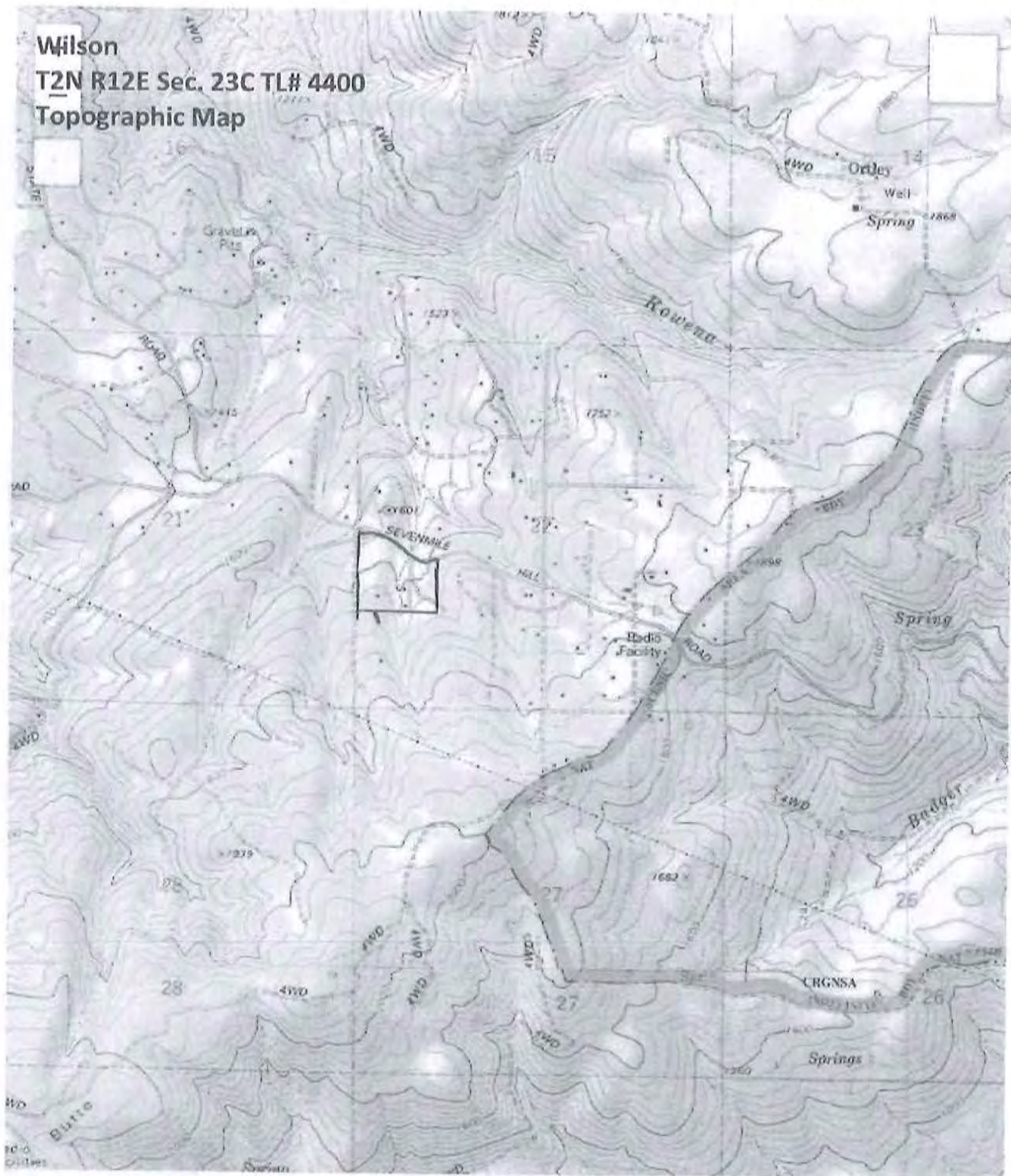
Site Condition Map





## The Dalles Topo Map in Wasco County Oregon

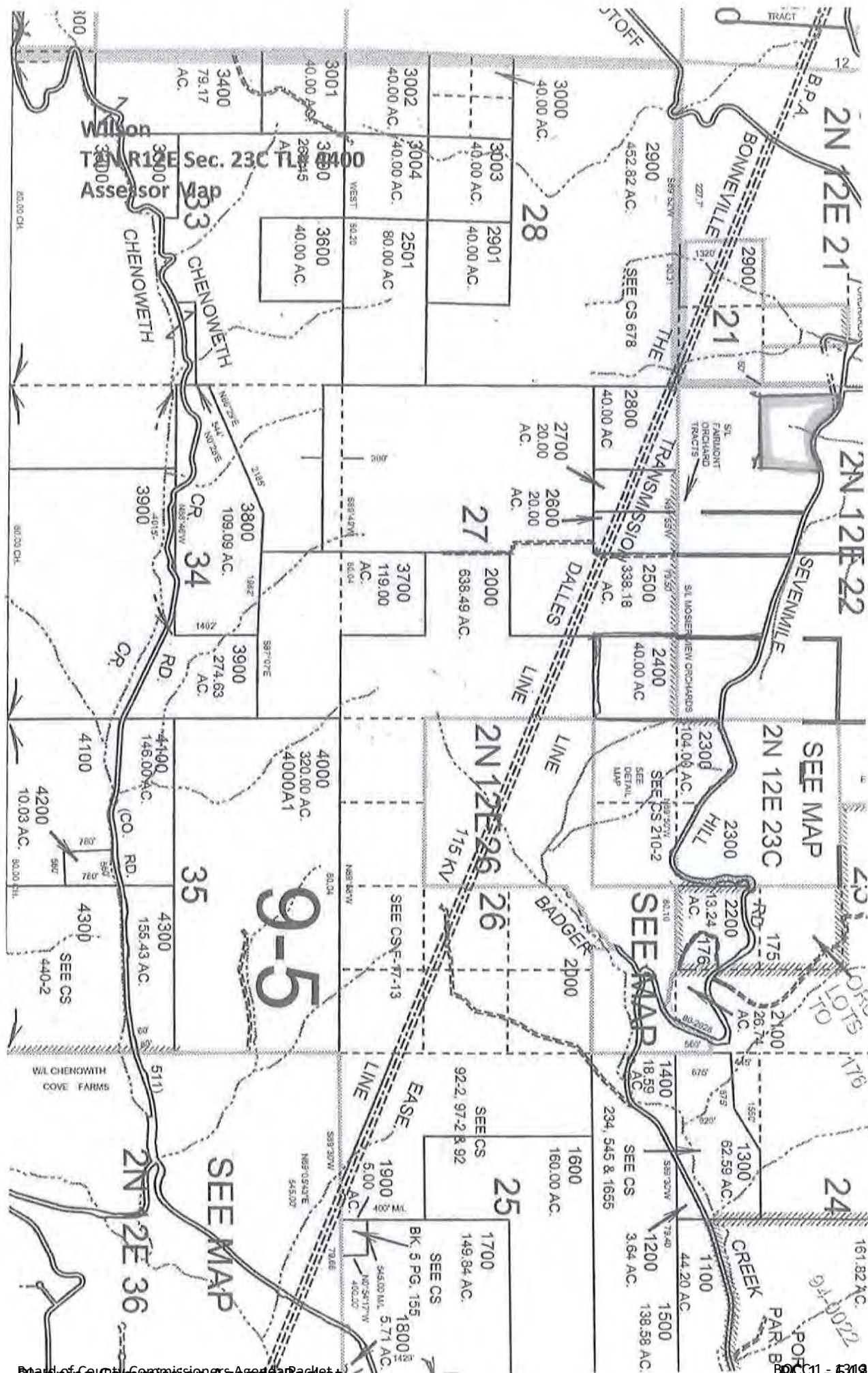
11


[Print this map](#)

Map provided by TopoZone.com



2012-2





# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



### Legend

Capability Class    Acreage

#### Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsited Soils = 20.79 Acres

#### Generally Sited Soils

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Sited Soils = 19.34 Acres

Total Acres: 40.13 Acres  
Percentage of Generally Unsited Soils: 51.8%



# Growing Soils Environmental Associates

impermeable below 15" <sup>14</sup>  
 - 15" poor

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (1) Location SW extreme corner  
 GPS Coordinates see report  
 Slope 5 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees ~ HW

### BRIEF PROFILE DESCRIPTION

good roots to 15"  
Then abrupt stop

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR	+	L	14	10	cm 1-15	yes 1/2	fr	+	+	x= mod
---	-----	------	---	---	----	----	---------	---------	----	---	---	--------

BA	6-12	10YR	+	L	16	10	cm 1-15	yes 2	fr	+	+	x= mod
----	------	------	---	---	----	----	---------	-------	----	---	---	--------

CB	12-15	10YR	+	L	11	10	cm 1-15	yes 2	fr	+	+	x= mod sh
----	-------	------	---	---	----	----	---------	-------	----	---	---	-----------

2CR	15"											x= None
-----	-----	--	--	--	--	--	--	--	--	--	--	---------

Consolidated Not cemented

unified description

Remarks

poor soil  
below 15"

Basalt  
Diagnostic hor

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Loamy  
 Soil Drainage Class w Soil Erodibility Index + .29+ Series Skyline  
 Hydrologic Group D/K Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # 2 Location SW extreme corner Area  
 GPS Coordinates see report  
 Slope \_\_\_\_\_ Elevation \_\_\_\_\_ Landform uplands / hills / Plateau  
 Geology/Genesis ash over sediment  
 Vegetation HW trees / xerophyte

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-5	10YR 3/2	0	L	1x9	10	cm 1-2	yes 1 1/2	fr	0	0	x= med
AB	5-6	10YR 7/6	0	L	1x10	10	cm 1	yes 1"	fi	0	0	x= med
BC	6-21	10YR 4/6	0	L	11	10	soft	yes 1"	fi	0	0	x= med
2CR	21"+				fractured + saprolitic						(1+) 2+	0

abrupt geologic contact

Sediments (Alkrent?)

Remarks

⊕ Abbreviated  
⊖ Andic

⊕ Cemented  
⊕ Indurated

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Abiotic xeromorphic Family Loamy  
 Soil Drainage Class wd Soil Erodibility Index 1, 2, 7, 7 Series SKYLINE  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralitic contact  
 Flooding Potential 0 Wetland Conditions 0



## 16

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # (3) Location SW corner  
GPS Coordinates see report  
Slope 16 Elevation — Landform uplands / hills  
Geology/Genesis ash over sediment  
Vegetation —

[illegible]

Remarks

- ⊕ highly erodible
- ⊖ Diagnostic hor.
- ⊕ soft fings in control section

Classification \_\_\_\_\_ Family Loamy  
Soil Drainage Class WD Soil Erodibility Index 30+ Series Skyline  
Hydrologic Group D Depth to Mottles A Effective Rooting Depth <10 cm  
Depth Current Water Table A Est Depth Seasonal High Water Table A  
Runoff Potential mod due to shallow paralithic contact  
Flooding Potential A Wetland Conditions A

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # (4) Location Western mid Limb  
 GPS Coordinates see report  
 Slope 7 Elevation ~ Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees - hwy & upland shrubs

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2 10yr	<u>0</u>	<u>L</u>	<u>16</u>	<u>9/10</u>	<u>yes</u>	<u>1 1/2</u>	<u>fr</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>x=</u>
AB	6-18 10yr	<u>0</u>	<u>L</u>	<u>1m</u>	<u>SBK</u>	<u>10</u>	<u>yes</u>	<u>2 1/4</u>	<u>fr</u>	<u>0</u>	<u>0</u>	<u>x=</u>
BW	8-24 10yr	<u>0</u>	<u>L</u>	<u>1m</u>	<u>SBK</u>	<u>10</u>	<u>yes</u>	<u>2 1/4</u>	<u>fr</u>	<u>0</u>	<u>0</u>	<u>x=</u>
2CR	(24) 1/2	<u>X</u>	<u>Paralitic</u>	<u>contact</u>	<u>hardness</u>	<u>at 2.5-3</u>	<u>x=</u>					

Remarks

Borderline  
SKyline / Wamias

Capability Class 7/6 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification fine loamy, Andic Xerochrept Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 1204 Series SKyline / Wamias  
 Hydrologic Group 2 Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralitic contact  
 Flooding Potential 0 Wetland Conditions 0

freely drained



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Zou  
 Stop # 5 Location NW 1/4 near access Rd  
 GPS Coordinates see enclosed report  
 Slope 7 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	A	L	1+9	<15	yes	1"	fr	0	0	mod
BW	6-17"	10YR 4/3	0	L	1m, f	<10	yes	1"	fr	0	0	mod
BW	17-24"	10YR 4/3	0	L	"	10	yes	1"	fr	0	0	mod
BC	24-29"	10YR 5/4	0	L	"	12	yes	1 1/2"	fr	0	0	mod
R	29"	basalt (fractured)										X
		⊕ Lithic										X

Remarks

-AP

⊕ Bt but close

mixed medial properties

no low BD

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index  Series Wamak  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0

## SOIL PROFILE DOCUMENTATION SHEET

East facing slope  
somewhat protected

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
Stop # 6 Location NW 1/4 - Above steep drop off  
GPS Coordinates see enclosed report  
Slope 10% Elevation → Landform upland / low rolling hill / Basin  
Geology/Genesis residual / colluvium  
Vegetation monocots, scattered trees (open grown)  
Hardwoods

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-8	10YR 3/2	θ	L	1m	9r	cm 1	yes	1"	fr	θ	θ x= mod
BW	8-16	10YR 4/3	θ	L	1.5m	5BK 10	cm 1	yes	1"	fr	θ	θ x= mod
BW	16-31	10YR 4/4	θ	L	"	15	yes	2"	(fr)	θ	θ	θ x= mod
BC	31-37	10YR 4/4	θ	HL	"	10	yes	2"	(fr)	θ	θ	θ x= mod
R	37"	basalt										θ x= X

Remarks

-AP  
θ BT

HL = ~ 28-30" clay

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" x 2"

Classification mesic Xerochrepts Family Fi-Isamy  
Soil Drainage Class WD Soil Erodibility Index → Series Wanam  
Hydrologic Group A Depth to Mottles θ Effective Rooting Depth →  
Depth Current Water Table θ Est Depth Seasonal High Water Table θ  
Runoff Potential mod due to basalt rock  
Flooding Potential θ Wetland Conditions θ



# Growing Soils Environmental Associates

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1D slope" north of house (50D)

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzen  
 Stop # 7 Location West central Edge  
 GPS Coordinates see report  
 Slope 7 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation tree - conifer + Hw

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-6	10YR	A	L			cm	yes	1 1/2 fr	A	A	X= mol
AB	6-9	10YR	A	L			cm	yes	1 1/2 fi	A	A	X= mol
BW	9-30	10YR	A	L			cm	yes	1 1/2 fi	A	A	X= mol
2CR	30"			Saprolitic							1+ X= A	
				Sediment							2+	
											X=	
											X=	

Remarks

Capability Class 7/b Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification

Soil Drainage Class wp Soil Erodibility Index 24-26 Series SKYline/wemy  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential A Wetland Conditions A



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

steep, dry  
East face slope

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
Stop # 8 Location North central portion  
GPS Coordinates see report  
Slope 10% Elevation 500 Landform Low hillslopes  
Geology/Genesis resistant basalt  
Vegetation few hardwoods (xerophytes) - Mostly open

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-3	10YR 3/3	D	CB 1m9r	cm L <sub>2</sub>	25	yes	11	fr	0	0	x= mod
BC	3-11	10YR 4/3	D	CB 1c	cm L <sub>2</sub>	30	yes	11	f <sub>1</sub>	0	0	x= mod
BC <sub>2</sub>	11-18	10YR 5/4	D	CB (mass)	cm L <sub>2</sub>	35	yes	21	f <sub>1</sub>	0	0	x= mod slow
R	18"			Basalt / Geo. contact							0	x=
												x=
												x=

Remarks → A clay 2° To Din PM to basalt

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal Family Lo-skeletal  
Soil Drainage Class WD Soil Erodibility Index .27 Series Bodell  
Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <5"  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to rocky, shallow soils  
Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/18/20 Preparer K. Tzrow  
 Stop # (9) Location mid property  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

1'6" surface Rock

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR	2/2	CB	1/yr	25	cm 1-2	yes	1 1/2"	0	0	X= mod
BC	6-12	10YR	4/3	9/1	1/yr	30	cm 4	yes	1"	0	0	X= mod
BC	12-18	10YR	4/4	CB	"	35	yes	1"	1"	0	0	X= mod slow
R	18"			Basalt /	Geo. contact						0	X=
												X=
												X=

Remarks

next to old house

skip microsit

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-S/6/6/2  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (10) Location mid south East Ave  
 GPS Coordinates see report  
 Slope 10 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees w/ Nat'l open area w/ forbes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	10YR 2.5	3/4	L	1C	cm	1	yes	1 1/2	(fr)	1+	0 x=
Bw	6-14	10YR 4	4/4	L	1C	cm	1	yes	1 1/2	fi	1+	0 x=
Bw	14-30	10YR 4.5	4.5	L	1C	cm	1	yes	1 1/2	fi	1+	0 x=
2CR	30"										1+	0 x=
											2+	0 x=
												x=
												x=

Remarks

W/amic on steep  
C slope

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2"

Classification fine loamy mixed mesic Family Loamy

Soil Drainage Class wp Soil Erodibility Index 24-2 Series Skylark

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralitic contact

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

Clay content  $\bar{X} = 20-22\%$  Strong C<sup>24</sup> 7  
SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # (11) Location SE corner of property  
GPS Coordinates see report  
Slope 11 Elevation --- Landform uplands / hills  
Geology/Genesis ash over sedimentary Andesite basalt  
Vegetation solid trees HWE  
a few conifers

284° Aspect

## BRIEF PROFILE DESCRIPTION

PO or Site

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------	------------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-4	10YR	0	L	1+9/10	cm	1	yes	1 1/2" fr	0	0	X= mod
AB	4-6	7.5YR	0	L	1+10	cm	55	yes	1 1/2" fi	0	0	X= mod
BC	6-15	7.5YR	0	L	11	5	yes	1" fi	0	0	X= mod slow	
2CX vs 2CR	15				distinct	CR	X	X			1+ X= 2+	

CR Mohr 2 to 3

Duration 15"  
No rooting Ability

Remarks

folded

Diagnostic

ARD = 15" !

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Entic Abruptic Durochrome Family Loamy  
Soil Drainage Class WD Soil Erodibility Index .24 Series SKyline  
Hydrologic Group D/C Depth to Mottles 0 Effective Rooting Depth <10"  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to shallow paralithic contact  
Flooding Potential 0 Wetland Conditions 0

BRE 22"



# Growing Soils Environmental Associates

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Small Inclusion  
slope Area

Completed into

Transition between 49C & 50D

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 12 Location South Central Area - 100' N of S. 1st  
 GPS Coordinates see enclosed report  
 Slope 16 Elevation — Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuals only  
 Vegetation trees mixed monocots - isolated hardwood  
≡ No v few cmh

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR 3/4	0	L			cm	1"	fr	0	0	x= mod
---	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>1</sub>	6-9	10YR 3/4	0	L			cm	1"	fr	0	0	x= mod
-----------------	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>2</sub>	9-15	7.5YR 5/4	0	9L			15	yes	1"	fr	0	x= mod
-----------------	------	-----------	---	----	--	--	----	-----	----	----	---	--------

BC	15-20	7.5YR 5/4	0	9L			15	yes	2"	fr	0	x= mod
----	-------	-----------	---	----	--	--	----	-----	----	----	---	--------

2R	20"	basalt	highly	fr - weak, fractured						0	0	x= xstn
----	-----	--------	--------	----------------------	--	--	--	--	--	---	---	---------

R begins @ 50" & between 20 & 50" xstn perm to

Remarks

Borderline Wamic & SKyline

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index

Series Wamic/Skyline

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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ARD=27" ~~mod~~ warm but a little shallow

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
 Stop # 13 Location SE Edge of hay field  
 GPS Coordinates see enclosed report  
 Slope 4-6 Elevation      Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual - basalt  
 Vegetation monocots

near steep "E" slope where there is a major soil change ??

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-5	10YR 3/2	+	L	1 fm	cm 1-2	yes	1"	fr	+	+	mod
BW <sub>1</sub>	5-14	10YR 4/3	+	L	1+ sbk	cm	yes	1"	fr	+	+	mod
BW <sub>2</sub>	14-20	10YR 5/4	+	9L	"	15	yes	1"	fr	+	+	mod
BC	20-28	7.5YR 5/4	+	19L	"	15	yes	1"	fr	+	+	mod
2CR	28-4	basalt - highly weathered - saprotitic										

Remarks: ~~Even distribution from top to bottom~~  
 good moderately deep soils  
 possibly mottled in upper 1'

~~Even not distribution top to bottom~~

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification Vitrands Xerochrepts Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth       
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rocks  
 Flooding Potential + Wetland Conditions +

\*\*\* (+) parallel, thin contact



# Growing Soils Environmental Associates

27

Model B0 dell

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kit zero w  
 Stop # 14 Location East Limits near opening  
 GPS Coordinates see report  
 Slope 6-8 Elevation → Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes, dissected

ARD=22"

### BRIEF PROFILE DESCRIPTION

dissected landscape = Floral Diversity

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-4	10YR 3/2	Δ	stony Hgr	cm 1	25	yes	2 1/2	fr	Δ	Δ	X= mod
BC	4-17	10YR 3/4	Δ	CB	1 m	30	yes	2 1/2		Δ	Δ	X= mod
BC	17-24	10YR 3/1	Δ	CB	11	35	yes	2 1/2		Δ	Δ	X= mod slow
# CR/R	21"	Basalt / Geo. contact									Δ	X=
		Fractured large										X=
		Lithic contact boulders										X=

Remarks Opacalithic

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lithic, Abruptic Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25-30 Series Badel (10E)  
 Hydrologic Group A Depth to Mottles Δ Effective Rooting Depth <5 ft  
 Depth Current Water Table Δ Est Depth Seasonal High Water Table Δ  
 Runoff Potential mod due to rocky, shallow soils, dissected  
 Flooding Potential Δ Wetland Conditions Δ landscape



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzrow  
 Stop # 15 Location NE 1/4 ~ 80' west of prop. limits  
 GPS Coordinates see report  
 Slope 15° Elevation ~ Landform low hillslopes (west face)  
 Geology/Genesis resistant basalt  
 Vegetation Dense Hardwoods, Xerophytes, no monocots  
Balsam root

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	2	VCB	1M9	25	yes	24	fr	0	0	x= mod
BC	6-14	10YR 4/3	0	CB	1C	30	yes		fr	0	0	x= mod
BC	14-20	10YR 4/4	0	stony	(DNA)	35	yes			0	0	x= mod slow
R	20"			Basalt / Geo. contact							0	x=
												x=
												x=

Remarks

ARD = 18"

Diagnostic horizon

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25 Series Bode  
 Hydrologic Group A Depth to Mottles 4 Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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highly skeletal :: CC 7 V Wt

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzrow  
 Stop # 16 Location NE Extreme corner  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform Low Hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR	D	VCB	L	25	yes	fr	fr	14	0	x= mod
BW	7-20	10YR	D	VCB	L	40	yes	fr	fr	14	0	x= mod
BC	20-25	10YR	D	VCB	L	35	yes	fr	fr	0	0	x= mod slow
R	25+										0	x=
												x=
												x=

Remarks

Strongly skeletal

ARD=25"

Overtly convex

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal, Andic Xerodry Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 27 Series Bode  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth 45"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

(49C)

Job Name Wilson Date 12/19/10 Preparer K. T. Zou  
 Stop # 17 Location SE 1/4 open hay field  
 GPS Coordinates See Report  
 Slope 5 Elevation  Landform upland  
 Geology/Genesis residual basalt  
 Vegetation no trees; dead grasses + mums

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	7.5YR 3/2		L	1M gr	5	cm	yes	1/2" fr	0	0	x= total
Bw	6-11	4/3		L	1C sbk	5	cm		fr	1+	0	x= mod
Bw	11-18	5/4		L	1M blk	5			fr	0	0	x= mod
BC	18-29			L	1C (blk)	5		2"	UG	0	0	x= mod
CR	29 1/4				saprolitic sediment							x=

Remarks geologic contact close by  
medial??

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" x2"

Classification Andic Xerochrepts Family fi lo  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wamuk  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth 10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential Low due to soil depth  
 Flooding Potential 0 Wetland Conditions 0



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BPC11- 637



# Growing Soils Environmental Associates

49<sup>32</sup>

Suitel

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
 Stop # 19 Location Mud Property  
 GPS Coordinates see enclosed report  
 Slope 3 Elevation --- Landform upland / low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots only (slight depression nearby = localized relief)

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 2/2	0	L	1f, m	<15	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>	7-14	10YR 2/2	0	L	1m	SRK	yes	1"	fr	0	0	x= mod
BW <sub>2</sub>	14-21	7.5YR 5/4	0	L	1m, c	SRK	yes	1"	fr	0	0	x= mod
BW <sub>3</sub>	21-29	7.5YR 5/4	0	L	mass	vs. SRK	yes	1"	fr	0	0	x= mod
CR	29"	basalt fractured -				X				0	0	x=
R	>45"	borderline saprolite										x=

Remarks

ARD 225 to 30"

Good Modest Wamuc

No Argillite but good

cambric

Capability Class 4/6 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification --- Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index --- Series Wamuc  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth ---  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzerow  
 Stop # 20 Location North end  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2		stony		25	yes	24	fr			x= mod 22
BC	7-11	10YR 4/3		CB		30	yes		fr			x= mod slow
B	11-20	10YR 4/4		CB		35	yes		fr			x= mod slow
CR	20'4	Basalt / Geo. contact						indurated				
M. h.s. hard ~ 2.5-3												
can chip with tile spade												
<div style="font-size: 2em; font-family: cursive;">FDDR</div>												

Remarks \_\_\_\_\_

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Bode 1/5K/4  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential A Wetland Conditions A

**Wilson****T2N R12E Sec. 23C TL# 4400****Typifying Pedons****Wamic**

A 0-8" loam; 10YR 3/2; weakly smeary, low bulk density weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

Bw1 8-16" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

Bw2 16-26" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

BC 26-38" loam; 10YR 5/4; weak fine, coarse sub angular structure parting to blocky; firm; slightly sticky, non plastic; 5% cobbles; few fine roots; pH. 7.6

38"+ Paralithic contact, indurated but non-cemented basalt; non-calcareous

**Bodell**

A 0-5" stony loam, 10YR3/3, 20% gravels, 15% cobbles; friable, weak fine granular structure; few fibrous roots, non-sticky, non-plastic, clear wavy boundary pH=7.7

Bw 5-10" very cobbly loam, 10YR5/4, 10% gravels, 25% cobbles; friable consistence, weak fine, medium sub angular-blocky structure; no roots; slightly sticky, non- plastic, pH=7.9

BC 10-16" cobbly loam, 10YR5/4, 5% gravels, 25% cobbles; very firm consistence, weak medium subangular blocky structure; common interstitial and tubular pores; slightly-sticky, non- plastic, pH=7.9

16"+ hard, Massive Basalt; non-saprolitic, lithic

**Skyline**

A 0-3" loam; 10YR 3/2; non-smeary, weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

BC1 3-11" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

BC2 11-18" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

18"+ Paralithic contact, sedimentary origin



# Growing Soils Environmental Associates

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49C#

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzeron  
 Stop # 23 Location North central extreme  
 GPS Coordinates see enclosed report  
 Slope < 4 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-5	10YR 3/2	0	L	1fM	cm L	yes	1 1/2	f	0	0	mod
BW	5-18	10YR 2/4	0	L	1C SBK	cm	yes	1 1/2	f	0	0	mod
BW	18-30	10YR 5/6	0	L	1C SBK	cm	yes	1 1/2	f	0	0	mod
B	30-35	10YR 5/6	0	L	1C SBK	cm	yes	1 1/2	f	0	0	mod
CR	35	basalt - Saprolitic (Mott = 3012)										

Estimated  
 Remarks: Transient water table  
 not SBK

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = > 2" x 2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wanik wet  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

49C\* = wet phase<sup>35</sup>

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzrow  
 Stop # 22 Location North central extreme limits  
 GPS Coordinates see enclosed report  
 Slope <2 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots isolated Fox wet forbs

\* DTM = 35"

### BRIEF PROFILE DESCRIPTION

Lowest elevation  
in parcel +  
lowest landscape

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con-	Andic	Indur	Set
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR <sup>3/2</sup>	0	L	1f m/c	cm	yes	1/4	f	0	0	x= mod
BW <sub>1</sub>	7-14	10YR <sup>3/3</sup>	0	L	1m c	cm	yes	2/4	f	0	0	x= mod
BW <sub>2</sub>	14-30	10YR <sup>5/4</sup>	0	HL	1c	cm	yes	2/4	f	0	0	x= mod slow
BC	30-35	10YR	0	HL	??	cm	yes	2/4	f	0	0	x= mod slow
CR	35"	basalt			fractured							x=
		Abtupt geo contact										x=

Remarks

Browner than upslope Areas  
no rock

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class MWD Soil Erodibility Index 128+ Series Wanick wet  
 Hydrologic Group A/A Depth to Mottles 10" Effective Rooting Depth <10"  
 Depth Current Water Table 50" Est Depth Seasonal High Water Table 40-50"  
 Runoff Potential mod due to basalt rocks  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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hydrology alteration in area  
20 to 7 mile Hill Rd

Border de pression  
Area

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
Stop # 21 Location North Central extreme  
GPS Coordinates see enclosed report  
Slope 43 Elevation  Landform upland / Low rolling hill / Basin  
Geology/Genesis residuum + some colluvium  
Vegetation monocots, isolated Tac monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A		10YR 3/2	L	16m	cm	1"	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>		10YR 3/2	L	5BK 10	cm	2"	yes	2"	fr	0	0	x= mod
BW <sub>2</sub>		10YR 4/3	L	"	10	yes	2"	fr	0	0	0	x= mod
BC		22	(10) H	"	5	yes	1 3/4"	fr	0	0	0	x= mod
R	55"	basalt weathered										

Remarks

254-  
inter pore  
locations

Highly erodible

Wet warm  
Hot table

Capability Class 4/6 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index 27-35 Series Wamak

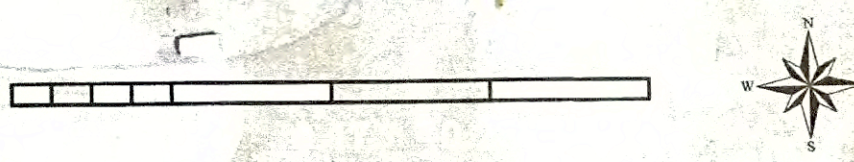
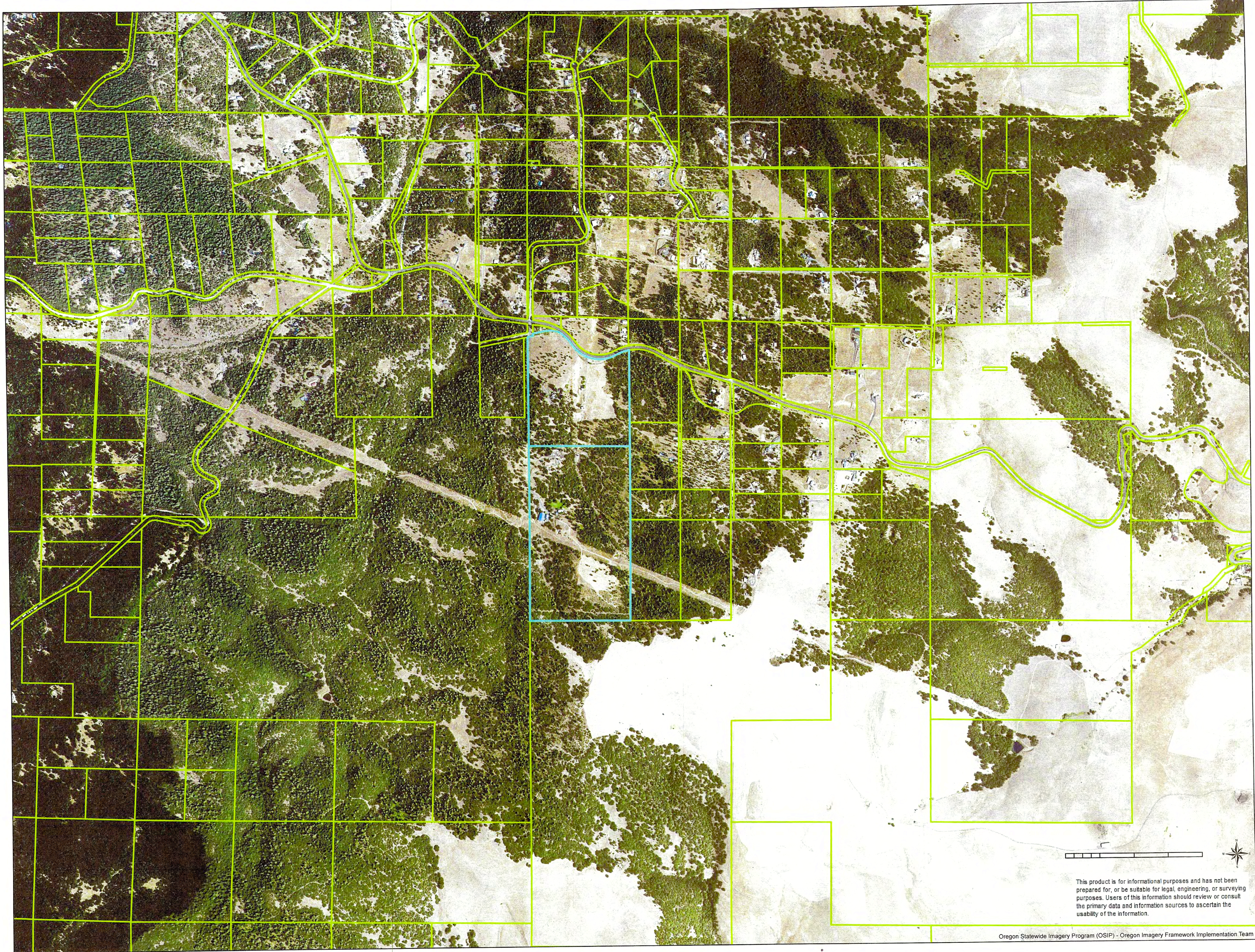
Hydrologic Group A Depth to Mottles 38" Effective Rooting Depth

Depth Current Water Table 50" Est Depth Seasonal High Water Table 50" or less

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0 to 1





This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.







# PHILLIPS REYNIER SUMERFIELD & CLINE, LLP

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Licensed in Oregon & Washington

July 9, 2021

Kelly Howsley-Glover, Interim Director  
Wasco County Planning Department  
2705 E. Second Street  
The Dalles, OR 97058

**Hand Delivered**

RE: **PLAQJR-15-09-0002**  
**921-18-000086-PLNG**  
**LUBA No. 2019-065**

David Wilson zone change, comprehensive plan amendment, and goal exception applications – remand hearing

Greetings,

I represent the applicant, David Wilson, in the above matters. By decision dated January 14, 2020, LUBA remanded the above zone change approval. Mr. Wilson is prepared to proceed with the remand hearing, and submits the following new evidence for consideration. Applicant also anticipates submitting written argument prior to the hearing, and appearing at the hearing to present the new evidence and make argument. All of the matters raised in this letter will be addressed in more detail in the written argument to be submitted prior to the hearing.

The remand hearing fee of \$350.00 is included with this letter.

## **Soils Assessment**

The application previously proceeded using the Wasco County NCRS soils map for the subject property. That map indicated the subject property contained two Class IV soil types.

On December 18, 2020, Soils Scientist Gary Kitzrow conducted a soils study at the subject property. Mr. Kitzrow found that the subject property consists predominantly of generally unsuitable Class 7 and Class 8 soils. Mr. Kitzrow submitted a report to DLCD on January 23, 2021, which report was reviewed and accepted by Hilary Foote, DLCD Farm, Forest Specialist on March 20, 2021.<sup>1</sup>

On January 15, 2021, Applicant Wilson signed the Soils Assessment Release Form authorizing release of the assessment to Wasco County Planning. Presumably, DLCD provided Wasco County with a copy after Ms. Foote's review and acceptance. A complete copy of Mr.

---

<sup>1</sup> Ms. Foote's Completeness Review letter is erroneously dated March 29, 2001. This is obviously a typographical error.



Kitzrow's report and DLCD's review is included with this letter for inclusion in evidence and consideration on remand.

### **Aerial Photo of Subject Property and Adjoining Area**

Previous aerial photos submitted tended to focus tightly on the subject property and on the adjoining residential enclaves. There are lands west and south of the subject parcel which are zoned for resource use, and a portion of those lands are in commercial timber production. LUBA faulted the county for failing to adequately address those lands:

"The findings do not address at all the relationship of the subject property to the adjacent approximately 450 acres of F-2 zoned lands located to the west of the subject property that are in timber production and/or that possess soils suitable for forestry production, or the approximately 2,000 acres of resource land that are in forest use located immediately south of intervenor's 69-acre adjacent F-2 parcel to the south of the subject property, or the potential for resources use of the property in conjunction with the adjacent F-2 zoned properties." *LUBA decision, p. 12, lines 1-8.*

What the local decision-making bodies knew, and what LUBA failed to grasp, is that there is a clear line of demarcation between productive lands further to the west of the subject property, and the subject property and lands immediately adjacent to the south and west of the subject property. This aerial photo, taken with a much wider perspective, clearly shows the literal moonscape nature of the adjoining properties south of the subject property.

### **Physically Developed Map & Area Calculations**

On appeal, Appellants claimed, and LUBA accepted the claim, that only approximately 12 percent of the subject property was physically developed, while more than 87 percent of the property was undeveloped. LUBA cited the administrative rule discussing the necessary findings:

"Whether land has been physically developed with uses not allowed by an applicable goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception." OAR 660-004-0025(2).

While there is a comprehensive site plan in the record which formed the basis for the County's findings,<sup>2</sup> Applicant submits a more comprehensive map with this letter for additional clarity.

---

<sup>2</sup> Record on Appeal at 215.

Wasco County Planning Department  
July 9, 2021  
Wilson Remand Hearing

In the previous hearings, Applicant testified as to his knowledge of applicable buffers, and argued that common sense required recognition of reasonable buffers around such development as power lines, structures, and septic drain fields. The county decision makers accepted that argument. LUBA was not impressed by this application of common sense:

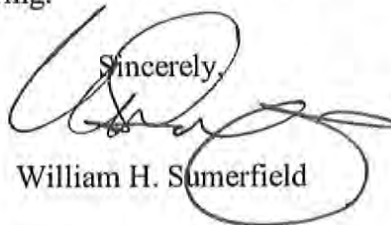
“Intervenor responds that managing the subject property for commercial forestry would require ‘extensive’ fire buffers along the eastern and northern borders that are adjacent to developed residential areas and around the existing dwelling on the property. Intervenor’s Response Brief 27. Intervenor also points out that ‘two strings’ of overhead power lines are located on the property, and that forestry uses would require a buffer from those lines. *Id.* We understand intervenor to argue that such extensive buffers mean that the property is ‘physically developed to the extent it is no longer available’ for forestry uses.

\*\*\*\*\*

Further, we agree with petitioners that the county’s decision is not supported by substantial evidence in the record, where the evidence in the record is that the property has available at least 87 percent of its area for forestry. Intervenor does not attempt to quantify the amount of buffer that would be required to conduct forestry uses or quantify the amount by which that buffer would decrease the amount of property available for forestry uses to such an extent that the property ‘is no longer available for forestry uses.’ We conclude that the county’s findings in support of its approval of a physically developed exception are not supported by substantial evidence in the record.”

Applicant takes LUBA up on its invitation to attempt to quantify the amount of land unable to be used due to applicable buffers. Applicant has again discussed the powerline buffer with the power company (15’ from centerline), and has applied those in the attached calculations, in addition to a 50’ buffer around each structure. Excluding the many roads on the subject property, and ignoring the pond and septic drain fields, the developed area comprises approximately 24.5% of the subject property. Adding 50’ buffers along Seven Mile Hill Road and the driveway easement serving properties to the south increases this figure to 32.81%. With over half the property consisting of unsuitable soils, there is virtually no land available to support resource use.

Please add this letter and supporting materials to the record on remand. I look forward to working with you to schedule a hearing.

Sincerely,  
  
William H. Sumerfield

WHS/

Enclosures (*Soils Assessment, Aerial Photo, Development Map, Developed Area Calculations*)

### **Power Lines**

15' either side from center line

$$10,024 \text{ linear feet} \times 30' = 300,730 \text{ ft}^2$$

### **Structures**

50' each side from dimensions below

$$\text{Log Home } 80 \times 100 = 36,000 \text{ ft}^2$$

$$\text{Barn \#1 } 24 \times 35 = 16,740 \text{ ft}^2$$

$$\text{Barn \#2 } 30 \times 30 = 16,900 \text{ ft}^2$$

$$\text{Lean To } 16 \times 30 = 15,627 \text{ ft}^2$$

$$\text{Old Homestead Home } 55 \times 55 = 24,025 \text{ ft}^2$$

$$\text{Old Homestead Barn } 25 \times 55 = 16,875 \text{ ft}^2$$

$$\text{Total square footage developed area } 426,887 \text{ ft}^2$$

$$40 \text{ acres} = 1,742,700 \text{ ft}^2$$

$$426,887 / 1,740,700 = .2452 \text{ (24.52\% of total area)}$$

*Note: Total does not include roads, natural features, buffers near road or property boundaries, or septic tanks and drainfields*

$$50' \text{ buffer along 7 Mile Hill Road} = 65,000 \text{ ft}^2$$

$$50' \text{ buffer along driveway easement} = 79,300 \text{ ft}^2$$

$$571,187 / 1,740,700 = .3281 \text{ (32.81\% of total area)}$$





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

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## Soil Assessment Completeness Review

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030.

Hilary Foote  
DLCD Farm Forest Specialist  
March 29, 2001

The department will consider soil assessments under OAR 660-033-0030 to be complete if they meet the following standards:

(1) General information, to include:

- (a) Title of the report; Wildon – Order 1 Soil Survey
- (b) Person making request for soils assessment; David Wilson
- (c) Names of soil scientist/classifier conducting the field work and preparer of the report, along with their certification numbers; Gary Kitzrow, CPSC/CPSS #1741
- (d) Land use case file number (if available); n/a
- (e) County in which the assessment was conducted; Wasco
- (f) Location of the project site, including the township, range, section and tax lot numbers; Township 2N Range 12E Section 23 Taxlot 4400, Wasco County, Oregon
- (g) Present zoning designation; EFU
- (h) Current land use; unknown
- (i) Parcel acreage: 40.13 ; evaluated: 40.13 ,and
- (j) A description of the purpose of the assessment. Zone Change

(2) Previous Mapping or Background: The soil scientist/classifier shall provide a copy of the applicable and most current National Cooperative Soil Survey map(s) provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey, with the area of investigation outlined on the map(s). The scale of the map(s) shall be identified and a list of the map units under investigation shall be listed. The applicable

interpretations and minor components (inclusions) for the map units for which the investigation is being made shall also be provided. NRCS mapped soils include: Wamic loam, 5 to 12 percent north slopes (capability class 4e), Wamic loam, 12 to 20 percent slopes (capability class 4e) and Wamic-Skyline complex, 2 to 20 percent slopes (capability class 4e (Wamic components) and 7s (skyline components)). See pages 8-9.

(3) Methods Used by Soil Scientist/Classifier: The soil scientist/classifier shall describe the methodologies used for the preparation of the report and shall include the following:

- (a) The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted
- (b) The date(s) of the field investigation; December 18-19, 2020
- (c) The methods used for observations (backhoe, auger, shovel, etc.) and methods used for documentation (for slope, color, pH, etc.); Backhoe, field texturing, munsell chart comparison, soil pH, field assessment, etc as described on page 1.
- (d) The number and location of borings either shown on an aerial photograph base map of the parcel or provided in a table with latitude and longitude coordinates. In conducting Order 1 soil surveys, the scale of the base maps used for the survey needs to be large enough to enable the identification of polygons of soil map units as consociation map units. Soil map units identified as a complex, association, or undifferentiated group should be avoided as this defeats the purpose of an Order 1 survey. If, however, the soils are so intermingled that they cannot be mapped at a reasonable scale so as to identify consociation map unit polygons, then there should be sufficient sampling and documentation of the complex to demonstrate this soil component distribution. A percentage of each member of the complex will be used in determining area of extent and the reported percentages will be based on this sampling and its documentation, including soil profile descriptions, boring locations and, where useful, photographs. 23 locations. Coordinates listed on page 1 and mapped on page 10
- (e) Geomorphic and vegetation correlations supporting the interpretation of land capability classes of soils that differ from those in the official soil survey information; and Described on page 2.
- (f) A notation of any limitations encountered during the field investigation, such as soil depth, drainage, slope or inaccessibility. No limitations noted (page 2).



(4) Results, Findings, and Decisions: The soils report shall describe how the level of order of survey used in this investigation differs from that used by NRCS in the original soil survey. The soils report shall also include:

- (a) An overview of the geology or geologic setting, describing sources of parent material, bedrock and related factors; Described on page 2
- (b) A description of the landforms and topography, confirming the relationship of landforms to soil mapping units; Described on pages 2 and 3
- (c) A description of on-site and adjacent hydrology, including surface and subsurface features, intermittent versus perennial, floodplain and floodways and other related information; Described on page 3.
- (d) A description of the revised soil mapping units with their range of characteristics, explaining how and why they differ from NRCS soil mapping. The soils report shall include a summary of soil variability incorporating significance of preceding weather (above or below average), where known and crops and natural vegetation present; and Described on page 3
- (e) A tabulation of all previous and revised soil mapping units complete with their acreages and land capability classification. Pages 3, 8, 9 and 13

(5) Summary or Conclusion: The soils report shall contain a section reiterating the purpose of the investigation, explaining the significance of the revised soil mapping and describing any other significant issues related to the report's purpose. Page 3

(6) References: This section may list any manuals or publications utilized or referenced by the report. Page 3

(7) Attachments: Other informational materials provided as attachments, such as maps, figures or appendices shall include the following and shall be printed on 8 ½ x 11" wherever possible:

- (a) Vicinity map at a scale of 1:48,000 or smaller showing the project location; Map included on page 11
- (b) The NRCS soils map generated from Web Soil Survey at a scale of 1:20,000 or larger outlining the project site; Map included on page 7
- (c) Site condition map (aerial photo) at a scale of 1:5,000 or larger outlining the project site and showing the location of site investigations (borings) and other relevant features; Map included on page 10
- (d) Topography map at a scale of 1:24,000 or larger outlining the project site; Map included on page 11
- (e) Assessor's map at a scale of 1:5,000 or larger outlining the project site; Map included on page 12
- (f) Revised soils map of the project site at a scale of 1:5,000 or larger; Map included on page 13

- (g) Soil profile descriptions and site observation notes; and Pages 14-36
  - (h) Representative soil profile descriptions of any soil type identified in the project area that is not described or identified in the published soil survey for the area mapped. Page 37
- (8) Soils reports shall be submitted electronically to the department to hilary.foote@state.or.us, accompanied by a Soils Assessment Submittal Form. Payment of a non-refundable administrative fee of \$625 should be sent by check.



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD

## Soils Assessment Submittal Form



### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

### Property Information

Person who requested soils assessment: David Wilson  
 Mailing address: 7100 1 Mile Hill Rd The Dalles Or 97058  
 Email address: none Telephone number: 541-492-3230  
 Property owner (if different): \_\_\_\_\_  
 Property address (if different): 7000 1 Mile Hill Rd The Dalles Or 97058  
 County: Wasco Township: 2N Range: 12E Section: 22  
 Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13  
 Comprehensive Plan designation: \_\_\_\_\_ Zone: EEU  
 Proposed land use action: Plan Amendment Zone change To RR10

The soils professional must submit an electronic copy of the soils assessment together with this form to Timothy Murphy, Farm and Forest Lands Specialist, at the above address. The person requesting the soils assessment or the property owner must submit a check for a non-refundable administrative fee of \$625 made out to the Department of Land Conservation and Development, to Timothy Murphy, at the same address.

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews or field checks will accompany the soils assessments.

The department and the Land Conservation and Development Commission will not be held liable for non-performance or information that is contained in soils assessments, or for negative reviews, field checks or audits of soils assessments. For the protection of the department and commission, we ask that you read and sign the following authorization and disclaimer:

*I hereby expressly give my consent, should I be notified by the department that the submitted soils assessment for my property is selected for a review and field check, to authorize timely*



access to my property by a DLCD-contracted soils professional to perform a field check to corroborate the information provided in the submitted soils assessment. I understand that failure to authorize access to the property may result in a negative review.

I hereby waive my right to pursue a claim for relief or cause of action alleging injury from the content of soils assessments or from any negative reviews, field checks or audits conducted by the department and any and all soils professionals used by the department under OAR 660-033-0030(5) and (9). I hold these entities harmless and release them from liability for any injury or damage that may occur in conjunction with the submitted soils assessment.

In exchange for the department's review of this submittal under the soils assessment program, I expressly agree to forever waive and give up all claims, suits, actions, proceedings, losses, damages, liabilities, awards and costs of every kind and description, including any and all federal and state claims, reasonable attorney's fees, and expenses at trial (collectively "claims") which I have or may have a right to bring against any agency, department, the state, or their agents, officials or employees arising out of or related to my participation and performance in the soil assessment program, including but not limited to claims for mistake or negligence of the department, the state of Oregon, and their officers, employees and agents. I further agree that the provisions of this Liability Waiver and Release from Federal and State Claims shall be effective and binding upon my heirs, executors, administrators, successors, assigns, beneficiaries, or delegates and shall inure to the benefit of the department, the State of Oregon, and their officers, employees and agents.

David Wilson David Wilson  
Person who requested soils assessment

1/15/21  
Date

\_\_\_\_\_  
Property owner (if different)

\_\_\_\_\_  
Date

In addition to agreeing to the above, I hereby certify that the attached soils assessment that I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department.

[Signature]

\_\_\_\_\_  
Soils professional

1/10/21  
Date

\* Must be from the posted list of qualified soils professionals at: <http://www.oregon.gov/LCD/pages/soilsassessment.aspx>



Soils Assessment Submittal Form 2 of 2





# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soils Assessment Release Form

### Soils Professional Information

Soils professional\*: Gary A. Kitzrow Certification number: 1741

Date of submittal of soils assessment to department: Jan 23, 2021

### Property Information

Person who requested soils assessment: David Wilson

Mailing address: 7100 7 Mile Hill Rd The Dalles Or 97058

Email address: none Telephone number: 541-490-3230

Property owner (if different):

Property address (if different): 7000 7 mile Hill Rd The Dalles Or 97058

County: Wasco Township: 2N Range: 12E Section: 22

Tax lot(s): 4400 Parcel Acreage: 40.13 Acres Evaluated: 40.13

Comprehensive Plan designation: \_\_\_\_\_ Zone: FFA

Proposed land use action: Plan Amendment zone change to RR10

If you would like the soils assessment for the subject property to be released to a County planning department for its consideration in a land use proceeding, please sign this form and send it to Timothy Murphy at the above address, or email to: [timothy.murphy@state.or.us](mailto:timothy.murphy@state.or.us).

I hereby request that the Department of Land Conservation and Development release the soils assessment submitted to the department on the above date regarding the above-described property to the Wasco County Planning Department, as well as any department notifications of deficiencies. I understand that any and all previous soils assessments applying to this property produced under this rule, as well as any department notifications of deficiencies in such soils assessments, will also be released to the local government.

David Wilson

Person who requested soils assessment

1/15/21  
Date

Property owner (if different)

Date



Wilson- Order 1 Soil Survey Report

RE: OAR 660-033-0030

1). General Information

- a). Order 1 Soil Survey Report—Wilson Property, Oregon
- b). David Wilson
- c). Gary A. Kitzrow, M.S., CPSC/CPSS # 1741, Master of Science
- d). None
- e). Wasco
- f). RE: T2N R12E Sec. 23C TL# 4400
- g). EFU
- h). Zone change
- i). 40.13 Ac./40.13 acres
- j). complete a site-specific soil survey for the above parcel to determine if a preponderance of the property is comprised of generally unsuited soils. The goal is to secure a Plan Amendment Zone Change.

2). Enclosed

- a). Scale of enclosed USDA-NRCS Soil maps: 1:3170;—USDA Soil Legend: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs.
- a). We completed a total of 23 descriptions for the 40.13-acre study site.
- b). December 18-19, 2020
- c). A Backhoe was used to excavate the study area Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing.
- d). Enclosed is a map showing all description locations.
  - 1). 45.63857' N -121.31456' W
  - 2). 45.63825' N -121.31395' W
  - 3). 45.63832' N -121.31380' W
  - 4). 45.63857' N -121.31344' W
  - 5). 45.63876' N -121.31392' W
  - 6). 45.63891' N -121.31370' W
  - 7). 45.64031' N -121.31458' W
  - 8). 45.63857' N -121.31456' W
  - 9). 45.64071' N -121.31207' W
  - 10). 45.64030' N -121.31235' W
  - 11). 45.64063' N -121.31125' W
  - 12). 45.64030' N -121.31113' W
  - 13). 45.64003' N -121.31100' W
  - 14). 45.63979' N -121.31075' W
  - 15). 45.63871' N -121.31071' W
  - 16). 45.63897' N -121.31229' W
  - 17). 45.63804' N -121.31140' W
  - 18). 45.63827' N -121.31133' W
  - 19). 45.63889' N -121.30940' W
  - 20). 45.63926' N -121.30998' W
  - 21). 45.63980' N -121.30980' W
  - 22). 45.64031' N -121.30998' W
  - 23). 45.63926' N -121.30991' W

Pg. 2 T2N R12E Sec. 23C TL# 4400

e). There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related.

Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present.

(f). No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

#### (4) Results, Findings and Decisions:

- (a) The bedrock geology for this land base is basalt mixed with areas in the southwest portion of the property exhibiting a paralithic contact with and without a duripan which all occur at less than 20". Little direct hard rock is noted in this area transitioning from definable soil. Soil development is generally a function of the presence or absence of ejected ash moving into or out from the subject study area. The basalt itself yields very immature, shallow soils when soils erode *from* the site hence the Class 7 (Bodell and Skyline). Conversely, where soil accumulates via erosion (central area and central northern areas), soils deepen up, Soil Capability Class gets better and Wamic soils become dominant. The Wamic soils are more of a function of accretion NOT soil removal but basalt is a common thread underlying all areas on this parcel. Lithic verses paralithic geologic contacts are important on this subject property. Where paralithic contacts are present (SW ¼ and some SE ¼ ) of the ownership, soils shallow-up and the bedrock becomes a more dominant portion of the land capability.
- (b) The landforms present on this study site include planar to planar concave, non-colluvial lava plains and basins with local microsites. In the bottomland area (mid northern property) some mixed alluvium and terrace remnants may be present but are truncated and ill-defined. The soils we found strongly correlate to these landforms. Rolling convex



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areas in the northwest ¼ (north of the developed infrastructure areas) are classified as indistinct uplands showing suited Wamic soils throughout. Contiguous areas due south exhibit ancient infrastructure dating back to the 1980s. The eastern 1/3 of the survey area shows harder bedrock and much rock in the soil profile as a function of the more sharply overt convex slopes some of which face west and northwest. These eastern areas show landforms which are much more dissected and abbreviated as compared with area in the western 1/3. The soils reflect these contrasting landforms. Much of the eastern 1/3 of the ownership exhibits harsh-growing conditions.

- (c) No natural drainageways are confirmed within the parcel. The nearest drainageway is about 2 miles southeast and 4 miles due east.
- (d) Our Order I Soil Survey confirms Skyline, Wamic, Bodell and Infrastructure are the only soil mapping units confirmed on the subject property. Presence or absence of a paralithic geologic contact combined with landscape position principally govern the soil series and mapping units present. The subject property is complex and diverse. Shallow Bodell and Skyline soils are consistently present but are spread out throughout the ownership. Wamic soils are found where ash has eroded from surrounding low hillslopes.
- (e) Previous USDA Survey: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs. GSEA: Final Order I Soil Survey Mapping units: See attached Soil Map.

(5) Summary and Conclusions:

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% ( 20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

References: Official Soil Series Descriptions USDA NRCS-Wasco County: Bodell, Wamic and Skyline Soil Series

Soil Survey Report, Soil Survey, Wasco County

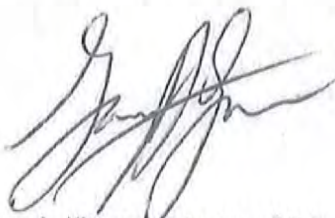
Soil Survey Manual, USDA

(6) Attachments:

- (a) Vicinity Map
- (b) NRCS Soil Map for property
- (c) Site Condition map
- (d) Topography map outlining the subject property
- (e) Assessor's map outlining the study parcel
- (f) Revised Order I Soil Map
- (g) Soil Profile descriptions: Wamic, Skyline and Bodell Soils
- (h) Representative Soil profile descriptions

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Please call with questions,



Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier, Certified Professional Soil Scientist #1741  
Principal Soil Taxonomist  
GROWING SOILS ENVIRONMENTAL ASSOCIATES





**Wilson**  
**T2N R12E Sec. 23C TL# 4400**

**Vicinity Map**







United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

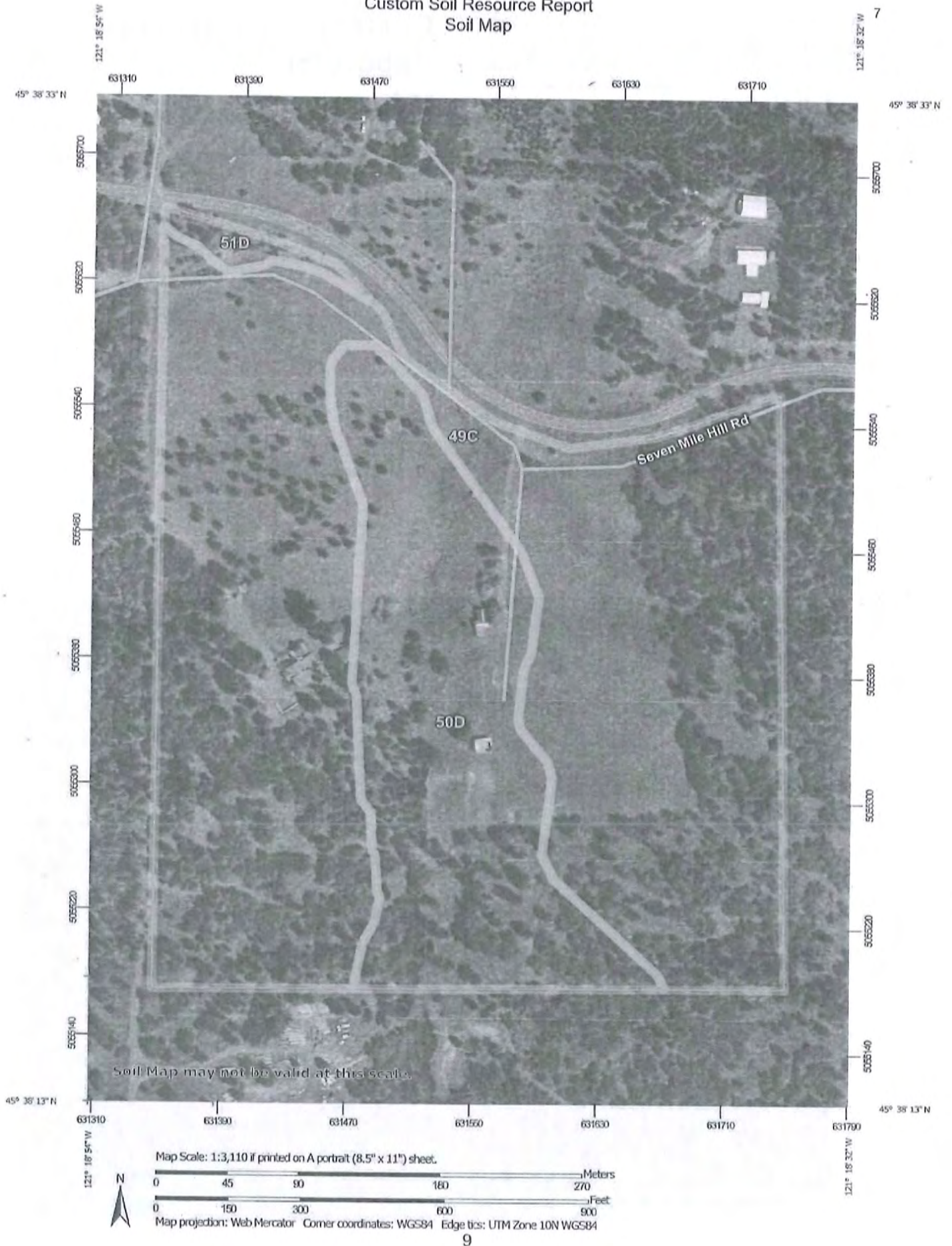
A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

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# Custom Soil Resource Report for Wasco County, Oregon, Northern Part



# Custom Soil Resource Report Soil Map





## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49C	Wamic loam 5 to 12 percent north slopes	28.6	72.0%
50D	Wamic loam, 12 to 20 percent slopes	10.7	26.8%
51D	Wamic-Skyline complex, 2 to 20 percent slopes	0.5	1.3%
<b>Totals for Area of Interest</b>		<b>39.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

- Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion.

### Report—Land Capability Classification

Land Capability Classification—Wasco County, Oregon, Northern Part				
Map unit symbol and name	Pct. of map unit	Component name	Land Capability Subclass	
			Nonirrigated	Irrigated
49C—Wamic loam 5 to 12 percent north slopes				
	90	Wamic, north	4e	—
50D—Wamic loam, 12 to 20 percent slopes				
	90	Wamic	4e	—
51D—Wamic-Skyline complex, 2 to 20 percent slopes				
	60	Wamic	4e	—
	20	Skyline	7s	—



Wilson

T2N R12E Sec. 23C TL# 4400

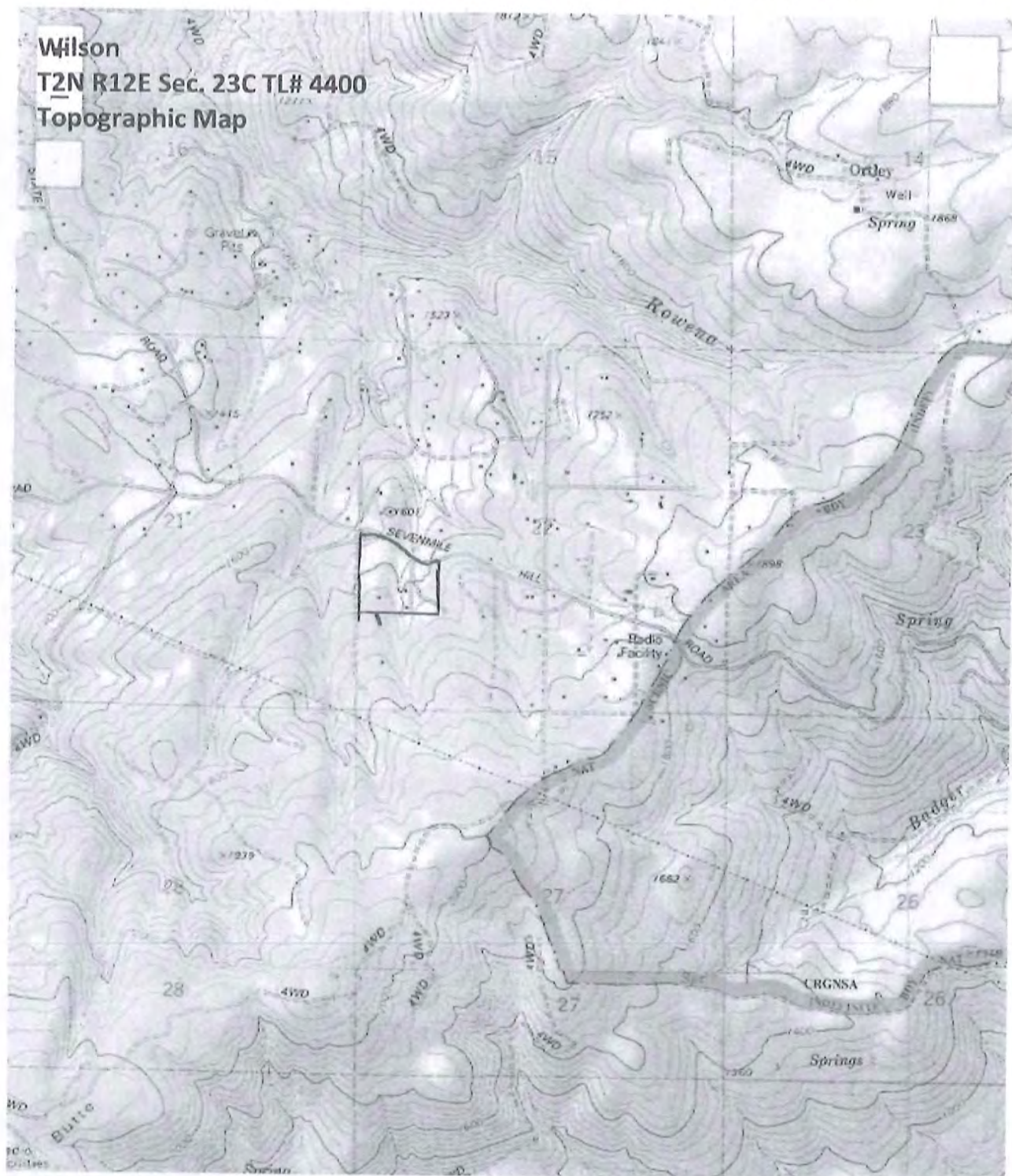
Site Control Map






## The Dalles Topo Map in Wasco County Oregon

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 [Print this map](#)

Map provided by TopoZone.com







# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



### Legend

Capability Class    Acreage

#### Generally Unsited Soils

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

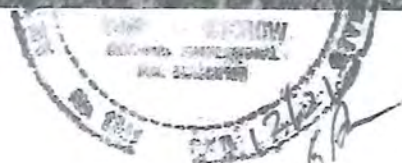
Generally Unsited Soils = 20.79 Acres

#### Generally Sited Soils

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Sited Soils = 19.34 Acres

Total Acres: 40.13 Acres  
Percentage of Generally Unsited Soils: 51.8%





# Growing Soils Environmental Associates

impermeable below 15" <sup>14</sup>  
 - 15" poor

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (1) Location SW extreme corner  
 GPS Coordinates see report  
 Slope 5 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees ~ HW

### BRIEF PROFILE DESCRIPTION

good roots to 15"  
 then abrupt stop

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR	+	L	14	10	cm 1-15	yes	1 1/2	fr	+	+	x= mod
---	-----	------	---	---	----	----	---------	-----	-------	----	---	---	--------

BA	6-12	10YR	+	L	10	10	cm 1-15	yes	2	fr	+	+	x= mod
----	------	------	---	---	----	----	---------	-----	---	----	---	---	--------

CB	12-15	10YR	+	L	11	10	cm 1-15	yes	2	fr	+	+	x= mod
----	-------	------	---	---	----	----	---------	-----	---	----	---	---	--------

2CR	15"												x= None
-----	-----	--	--	--	--	--	--	--	--	--	--	--	---------

consolidated Not cemented

													x=
--	--	--	--	--	--	--	--	--	--	--	--	--	----

unified description

Remarks

poor soil below 15"

Basalt  
 Diagnostic hor

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Loamy  
 Soil Drainage Class w Soil Erodibility Index + .29+ Series Skyline  
 Hydrologic Group D/K Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # 2 Location SW extreme corner Area  
 GPS Coordinates see report  
 Slope \_\_\_\_\_ Elevation \_\_\_\_\_ Landform uplands / hills / Plateau  
 Geology/Genesis ash over sediment  
 Vegetation HW trees, xerophyte

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-5	10YR 3/2	A	L	1x9	10	cm 12	yes 1 1/2	fr	A	A	x= mod
AB	5-6	10YR 1/1	A	L	1x10	10	cm 1	yes 1	fi	A	A	x= mod
BC	6-21	10YR 4/4	A	L	11	10	soft	yes 1	fi	A	A	x= mod
2CR	21"+				fractured + saprolitic						(1+)	x= A
					Sediments (Alkrent?)							

abrupt geologic contact

Remarks

⊕ Abbreviated  
⊖ Andic

⊕ Cemented  
⊕ Indurated

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Abruptic xerochryd Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.7+ Series SKyline  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralitic contact  
 Flooding Potential A Wetland Conditions A

## 16

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # (3) Location SW corner  
GPS Coordinates see report  
Slope 16 Elevation — Landform uplands / hills  
Geology/Genesis ash over sediment  
Vegetation —

[illegible]

Remarks

- ⊕ highly erodible
- ⊖ Diagnostic hor.
- ⊕ soft frags in control section

Classification \_\_\_\_\_ Family Loamy  
Soil Drainage Class WD Soil Erodibility Index 130+ Series SKyline  
Hydrologic Group D Depth to Mottles A Effective Rooting Depth <10 cm  
Depth Current Water Table A Est Depth Seasonal High Water Table A  
Runoff Potential mod due to shallow paralithic contact  
Flooding Potential A Wetland Conditions A



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # (4) Location Western mid Limb  
 GPS Coordinates see report  
 Slope 7 Elevation ~ Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees - hws & upland shrubs

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-2 10YR	$\theta$	L	1G	10	cm	yes	1 1/2	fr	$\theta$	$\theta$	x=
AB	6-18 10YR	$\theta$	L	1m	10	cm	yes	2 1/4	fi	$\theta$	$\theta$	x=
BW	8-24 10YR	$\theta$	L	1m	10	cm	yes	2 1/4	fi	$\theta$	$\theta$	x=
2CR	(24) 10YR	$\theta$	L	1m	10	cm	yes	2 1/4	fi	$\theta$	$\theta$	x=
Paralimic contact hardness at 2.5-3												x=

Remarks

Borderline  
skyline / warm

Capability Class 7b Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification fine loamy, Andic Xerochrept Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 120 F Series SKYLINE / warm  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10 cm  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralimic contact  
 Flooding Potential 0 Wetland Conditions 0

freely drained

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzou  
 Stop # 5 Location NW 1/4 near access Rd  
 GPS Coordinates see enclosed report  
 Slope 7 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	A	L	1+fr	<15	yes	1"	fr	0	0	mod
BW	6-17"	10YR 4/3	0	L	1m, f	<10	yes	1"	fr	0	0	mod
BW	17-24"	10YR 4/3	0	L	"	10	yes	1"	fr	0	0	mod
BC	24-29"	10YR 5/4	0	L	"	12	yes	1 1/2"	fr	0	0	mod
R	29"	basalt (fractured)										X
		⊕ Lithic										X

Remarks

-AP  
BT but close  
mineral medial properties  
No low BD

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index  Series Wamak  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table A Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



## SOIL PROFILE DOCUMENTATION SHEET

East facing slope  
somewhat protected

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
Stop # 6 Location NW 1/4 - Above steep drop off  
GPS Coordinates see enclosed report  
Slope 10% Elevation → Landform upland / low rolling hill / Basin  
Geology/Genesis residual / colluvium  
Vegetation monocots, scattered trees (open grown)  
Hardwoods

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-8	10YR <sup>3/2</sup> 3/2	0	L	1m	9	cm 1	yes	1"	fr	0	0 x= mod
BW	8-16	10YR <sup>4/3</sup> 4/3	0	L	16m	5	cm 1	yes	1"	fr	0	0 x= mod
BW	16-31	10YR <sup>5/4</sup> 5/4	0	L	11	15	yes	2"	fr	0	0 x= mod	
BC	31-37	10YR <sup>7/4</sup> 7/4	0	HL	11	10	yes	2"	fr	0	0 x= mod	
R	37"	basalt										X

Remarks

-AP  
-BT

HL = ~ 28-30" clay

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification mesic, Xerochrepts Family Fi-Isamy  
Soil Drainage Class WD Soil Erodibility Index → Series Wamuk  
Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth →  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to basalt rock  
Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

20

1D slope" north of house (SOD)

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # 7 Location West central Edge  
 GPS Coordinates see report  
 Slope 7 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation trees - conifers + HW

### BRIEF PROFILE DESCRIPTION

DNA

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-6	10YR	A	L			cm			A	A	X= mol
AB	6-9	10YR	A	L			cm			A	A	X= mol
BW	9-30"	10YR	A	L			cm			A	A	X= mol
2CR	30"			Saprolitic							1+ X= A	
				Sediment							2+	
											X=	
											X=	

Remarks

borderline

Wanna

Capability Class 7/b Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification fine loamy, mixed, mesic Typic xerochrept Family Loamy  
 Soil Drainage Class wp Soil Erodibility Index 24-26 Series Skyline/wenny  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
 Depth Current Water Table A Est Depth Seasonal High Water Table A  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential A Wetland Conditions A

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

steep, dry  
East face slope

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzeron  
Stop # 8 Location Worm control portion  
GPS Coordinates see report  
Slope 14 Elevation --- Landform Low hillslopes  
Geology/Genesis resistant basalt  
Vegetation V ferns Hardwoods (xerophytes) - Mostly open  
Monocots Shrubs

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-3	10YR 3/3	D	CB 1m9r	cm L	25	yes	11	f <sub>1</sub>	0	0	x= mod
BC	3-11	10YR 4/3	D	CB 1c	cm L	30	yes	11	f <sub>1</sub>	0	0	x= mod
BC	11-18	10YR 5/4	D	CB (mass)	cm L	35	yes	21	f <sub>1</sub>	0	0	x= mod slow
R	18" +	Basalt / Geo. contact									0	x=
												x=
												x=

Remarks → A clay 2° To Din PM to basalt

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification --- Family Lo-skeletal  
Soil Drainage Class WD Soil Erodibility Index .27 Series Bodell  
Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to rocky, shallow soils  
Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/18/20 Preparer K. Tzrow  
 Stop # (9) Location mid property  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hill slopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

1'6" surface Rock

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR	2/2	CB	1/yr	25	cm 1/2	yes	1 1/2"	0	0	X= mod
BC	6-12	10YR	4/3	9/1	1/yr	30	cm 4	yes	f	0	0	X= mod
BC	12-18	10YR	4/4	CB	"	35	yes	f	f	0	0	X= mod slow
R	18"			Basalt / Geo. contact							0	X=
												X=
												X=

Remarks

next to old house

skip microsit

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification \_\_\_\_\_ Family Lo-Sk/le/2  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (10) Location mid south East Ave  
 GPS Coordinates see report  
 Slope 10 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees w/ Nat'l open area w/ forbes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR <sup>3/2</sup>	2.5	L	1C	cm	1	yes	1 1/2	(fr)	1.5	0 x=
Bw	* 6-14	10YR <sup>4/1</sup>	3.5	L	1C	cm	1	yes	1 1/2	fi	1.5	0 x=
Bw	14-30	10YR <sup>4/1</sup>	3.5	L	1C	cm	1	yes	1 1/2	fi	1.5	0 x=
2CR	30"										1+ x=	0
											2+	0
											x=	
											x=	

Remarks

Wanna on steep  
10' slope

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2"

Classification fine loamy mixed mesic Family Loamy

Soil Drainage Class wp Soil Erodibility Index .24-2 Series Skylark

Hydrologic Group D Depth to Mottles 0 Effective Rooting Depth <10"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralitic contact

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

Clay content  $\bar{X} = 20-22\%$  Strong Cc 7  
SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # 11 Location SE corner of property  
GPS Coordinates see report  
Slope 11 Elevation --- Landform uplands / hills  
Geology/Genesis ash over sedimentary Andesite basalt  
Vegetation solid trees HW & a few conifers

284° Aspect

## BRIEF PROFILE DESCRIPTION

POOR SITE

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------	------------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-4	10YR	0	L	1+9/10	cm	1	10	yes 1 1/2	fr	0	0	X= mod
---	-----	------	---	---	--------	----	---	----	-----------	----	---	---	--------

AB	4-6	7.5YR	0	L	1 f.m	cm	5	10	yes 1 1/2	fi	0	0	X= mod
----	-----	-------	---	---	-------	----	---	----	-----------	----	---	---	--------

BC	6-5	7.5YR	0	L	11	5	yes 1"	fi	0	0	0	0	X= mod slow
----	-----	-------	---	---	----	---	--------	----	---	---	---	---	-------------

2CX vs 2CR	15				distinct	(CR)	X	X			1+ X= 2+	0	
------------	----	--	--	--	----------	------	---	---	--	--	----------	---	--

CR	14-5												X=
----	------	--	--	--	--	--	--	--	--	--	--	--	----

	2 to 3												X=
--	--------	--	--	--	--	--	--	--	--	--	--	--	----

Remarks: duripin @ 15"  
No rooting Ability

folded Diagnostic ARD = 19"

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Entic Abruptic Durocherts Family Loamy

Soil Drainage Class WD Soil Erodibility Index .24 Series SKyline

Hydrologic Group D/C Depth to Mottles 0 Effective Rooting Depth <10"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralithic contact

Flooding Potential 0 Wetland Conditions 0

BRE 22"



# Growing Soils Environmental Associates

25

Small Inclusion  
slope Area

Completed into

Transition between 49C &  
50D

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 12 Location South Central Area - 100' N of S. 1st  
 GPS Coordinates see enclosed report border  
 Slope 16 Elevation — Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum only  
 Vegetation tree mixed monocots - 15% hardwoody  
≡ No v few cmh

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-6	10YR 3/3	0	L			cm	1"	fr	0	0	x= mod
---	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>1</sub>	6-9	10YR 3/3	0	L			cm	1"	fi	0	0	x= mod
-----------------	-----	----------	---	---	--	--	----	----	----	---	---	--------

BW <sub>2</sub>	9-15	7.5YR 5/4	0	9L			15	yes	1"	fi	0	0	x= mod
-----------------	------	-----------	---	----	--	--	----	-----	----	----	---	---	--------

BC	15-20	7.5YR 5/4	0	9L			15	yes	2"	fi	0	0	x= mod
----	-------	-----------	---	----	--	--	----	-----	----	----	---	---	--------

2R	20"	basalt										x= xstn
----	-----	--------	--	--	--	--	--	--	--	--	--	---------

R begins @ 50" & between 20 & 50" xstn perm to

Remarks

Borderline Wamic & SKyline

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index

Series Wamic/SKylm

Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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ARD=27" ~~mod~~ warm but a little shallow

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzeron  
 Stop # 13 Location SE Edge of hay field  
 GPS Coordinates see enclosed report  
 Slope 4-6 Elevation      Landform upland / Low rolling hill / Basin  
 Geology/Genesis residual - basalt  
 Vegetation monocots

near steep "E" slope where there is a major soil change

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-5	10YR 3/2	+	L	1 fm	cm 6-2	yes	1"	fr	+	+	mod
BW <sub>1</sub>	5-14	10YR 4/3	+	L	1+ SBK	cm	yes	1"	fr	+	+	mod
BW <sub>2</sub>	14-20	10YR 5/4	+	9L	"	15	yes	1"	fr	+	+	mod
BC	20-28	7.5YR 5/6	+	19L	"	15	yes	1"	fr	+	+	mod
2CR	28-4	basalt - highly weathered - saprotic										

Remarks: ~~Even distribution from top to bottom~~  
 good moderately deep soils  
 possibly mod in upper 1'

~~Even not distribution top to bottom~~

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification Vtrandi Xerochrepts Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth       
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rocks  
 Flooding Potential + Wetland Conditions +

~~+~~ parallel, there contact



# Growing Soils Environmental Associates

27

Model B-1011

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 14 Location East Limits near opening  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes, dissected

ARD = 22"

### BRIEF PROFILE DESCRIPTION

dissected  
landscape =  
Floral Diversity

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-4	10YR 3/2	D	stony Hg	cm 1	25	yes	2 1/4	fr	0	0	x= mod
BC	4-17	10YR 3/4	D	CB	1 m	30	yes	2 1/4		0	0	x= mod
BC	17-24	10YR 3/4	D	CB	11	35	yes	2 1/4		0	0	x= mod to slow
# CR/R	21"	Basalt / Geo. contact									0	x= X
		Fractured large										x=
		Lithic contact boulders										x=

Remarks

Operational

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lithic, Abruptic Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25-30 Series Badel (10E)  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5 ft  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils, dissected  
 Flooding Potential 0 Wetland Conditions 0 landscape



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzrow  
 Stop # 15 Location NE 1/4 ~ 80' west of prop. limits  
 GPS Coordinates see report  
 Slope 15° Elevation ~ Landform low hillslopes (west face)  
 Geology/Genesis resistant basalt  
 Vegetation Denise Hardwoods, Xerophytes, no monocots  
Balsam root

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	2	VCB	1M9	25	yes	24	fr	0	0	x= mod
BC	6-14	10YR 4/3	0	CB	1C	30	yes		fr	0	0	x= mod
BC	14-20	10YR 4/4	0	stony	(DNA)	35	yes			0	0	x= mod slow
R	20"	Basalt / Geo. contact									0	x=
												x=
												x=

Remarks

ARD = 18"

Diagnostic horizon

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification LD-Skeletal Family Lo-Skeletal  
 Soil Drainage Class WD Soil Erodibility Index 25 Series Bode  
 Hydrologic Group A Depth to Mottles 4 Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



highly skeletal :: CC 7 V Wt

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 16 Location NE extreme corner  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR	D	VCB	L	25	yes	fr	fr	14	0	x= mod
BW	7-20	10YR	D	VCB	L	40	yes	fr	fr	14	0	x= mod
BC	20-25	10YR	D	VCB	L	35	yes	fr	fr	6	0	x= mod slow
R	25+										0	x=
												x=
												x=

Remarks

Strongly skeletal

ARD=25"

Overtly convex

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal, Andic Xerodry Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 27 Series Bode  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth 45"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

49C

Job Name Wilson Date 12/19/10 Preparer K. T. Zou  
 Stop # 17 Location SE 1/4 open way field  
 GPS Coordinates See Report  
 Slope 5 Elevation  Landform upland  
 Geology/Genesis residual basalt  
 Vegetation no trees; dead grasses + mums

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	7.5YR 3/2	L	1M gr	5	cm	yes 1/2"	fr	wk	0	0	x= total
Bw	6-11	4/3	L	1C sbk	5	cm		fr	wk	0	0	x= mod
Bw	11-18	5/4	L	1M blk	5			fr	0	0	0	x= mod
BC	18-29		L	1C (blk)	5		2"	vg	0	0	0	x= mod
CR	29 1/4			saprolitic sediment								x=

Remarks geologic contact close by  
medial??

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" x2"

Classification Andic Xerochrepts Family fi lo  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wamuk  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth 10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential Low due to soil depth  
 Flooding Potential 0 Wetland Conditions 0



## 31

## hargh site

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzrow  
 Stop # 18 Location NE 1/4  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes (microsite)  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

✓ Thin topsoil

[illegible]

Remarks

~~X~~ Perched Hoff  
table due to  
hard rock

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Capability Class 7 Suitability 1  
 Classification \_\_\_\_\_ Family Lo-Sk/et2  
 Soil Drainage Class WD Soil Erodibility Index 12.2 Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5 ft  
 Depth Current Water Table 2 ft Est Depth Seasonal High Water Table 20 ft  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential A Wetland Conditions A



# Growing Soils Environmental Associates

49<sup>32</sup>

Suitel

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. Tzrow  
 Stop # 19 Location Mud Property  
 GPS Coordinates see enclosed report  
 Slope 3 Elevation --- Landform upland / low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots only (slight depression nearby = localized relief)

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-7	10YR 2/6	0	L	1f, m	<15	yes	1"	fr	0	0	x= mod
BW	7-14	10YR 2/6	0	L	1m	SBK	yes	1"	fr	0	0	x= mod
BW	14-21	7.5YR 5/4	0	L	1m, c	SBK	yes	1"	fr	0	0	x= mod
BW	21-29	7.5YR 5/4	0	L	mass vs. SBK	10	yes	1"	fr	0	0	x= mod
CR	29"	basalt fractured -					X			0	0	x=
R	>45"	borderline saprolitic										x=

Remarks

ARD 225 to 30" Good Modest Wamuc  
 No Argillite but good cambic

Capability Class 4/6 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification --- Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index --- Series Wamuc  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth ---  
 Depth Current Water Table --- Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Tzerow  
 Stop # 20 Location North end  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2	0	stony		25	yes	24	fr	0	0	x= mod 22
BC	7-11	10YR 4/3	0	CB		30	yes		fr	0	0	x= mod slow
BC	11-20	10YR 4/4	0	CB		35	yes		fr	0	0	x= mod slow
CR	20'4			Basalt / Geo. contact								x= individual
				M. h. s. hard ~ 2.5-3								x=
				can chip with tile spade								x=
Remarks												

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Bode 1/5K/4  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <5"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

**Wilson****T2N R12E Sec. 23C TL# 4400****Typifying Pedons****Wamic**

A 0-8" loam; 10YR 3/2; weakly smeary, low bulk density weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

Bw1 8-16" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

Bw2 16-26" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

BC 26-38" loam; 10YR 5/4; weak fine, coarse sub angular structure parting to blocky; firm; slightly sticky, non plastic; 5% cobbles; few fine roots; pH. 7.6

38"+ Paralithic contact, indurated but non-cemented basalt; non-calcareous

**Bodell**

A 0-5" stony loam, 10YR3/3, 20% gravels, 15% cobbles; friable, weak fine granular structure; few fibrous roots, non-sticky, non-plastic, clear wavy boundary pH=7.7

Bw 5-10" very cobbly loam, 10YR5/4, 10% gravels, 25% cobbles; friable consistence, weak fine, medium sub angular-blocky structure; no roots; slightly sticky, non- plastic, pH=7.9

BC 10-16" cobbly loam, 10YR5/4, 5% gravels, 25% cobbles; very firm consistence, weak medium subangular blocky structure; common interstitial and tubular pores; slightly-sticky, non- plastic, pH=7.9

16"+ hard, Massive Basalt; non-saprolitic, lithic

**Skyline**

A 0-3" loam; 10YR 3/2; non-smeary, weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

BC1 3-11" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

BC2 11-18" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

18"+ Paralithic contact, sedimentary origin



# Growing Soils Environmental Associates

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49C#

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
 Stop # 23 Location North central extreme  
 GPS Coordinates see enclosed report  
 Slope < 4 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-5	10YR <sup>3/2</sup>	0	L	1fM	cm L	yes	1 1/2	f	0	0	mod
BW	5-18	10YR <sup>2/4</sup>	0	L	1C	cm	yes	1 1/2	f	0	0	mod
BW	18-30	10YR <sup>5/6</sup>	0	L	1C	cm	yes	1 1/2	f	0	0	mod
B	30-35	10YR <sup>5/6</sup>	1F	L	1C	cm	yes	1 1/2	f	0	0	mod
CR	35	basalt - Saprolitic (Mottles = 3 or 2)										

Estimated  
 Remarks: Transient Water table  
not SBK

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = > 2" < 2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Warmic wet  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

49C\* = wet phase<sup>35</sup>

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzrow  
 Stop # 22 Location North central extreme limits  
 GPS Coordinates see enclosed report  
 Slope <2 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots isolated Pac Wet forbs

\* DTM = 35"

### BRIEF PROFILE DESCRIPTION

Lowest elevation  
in parcel +  
lowest landscape

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con-	Andic	Indur	Set
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2	+	L	1f m/c	cm	yes	1 1/4	f	+	+	mod
BW	7-14	10YR 3/3	+	L	1m c	cm	yes	2 1/4	f	+	+	mod
BW	14-30	10YR 5/4	+	HL	1c	cm	yes	2 1/4	f	+	+	mod slow
BC	30-35	10YR 1/1	+	HL	??	cm	yes	2 1/4	f	+	+	mod slow
CR	35"				basalt fracture							X
					about geo contact							16-2" / hr

Remarks Browner than upslope Areas  
no rock

Capability Class 4 Suitability = Gen. suited, Gen. unsuited WHC = >2" <2"

Classification  Family Fi-loamy  
 Soil Drainage Class MWD Soil Erodibility Index 128+ Series Wanuk Wet  
 Hydrologic Group A/A Depth to Mottles 10" Effective Rooting Depth <10"  
 Depth Current Water Table 50" Est Depth Seasonal High Water Table 40-50"  
 Runoff Potential mod due to basalt rocks  
 Flooding Potential + Wetland Conditions +



# Growing Soils Environmental Associates

34

hydrology alteration area  
20 to 7 mile Hill Rd

Border de pression  
Area

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
Stop # 21 Location North Central extreme  
GPS Coordinates see enclosed report  
Slope 43 Elevation  Landform upland / Low rolling hill / Basin  
Geology/Genesis residuals + some colluvium  
Vegetation monocots, isolated Pac monocots

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A		10YR <sup>3/4</sup> 6	L	16m	cm	1"	yes	1"	fr	0	0	x= mod
BW <sub>1</sub>		10YR <sup>3/4</sup> 6	L	16m	cm	2"	yes	2"	fr	0	0	x= mod
BW <sub>2</sub>		10YR <sup>4/4</sup> 6	L	"	10	yes	2"	fr	0	0	0	x= mod
BC		22	(10) H	"	5	yes	1 3/4"	fr	0	0	0	x= mod
R	55"	basalt weathered										

Remarks

254-  
inter pore  
locations

Highly erodible

Wet warm  
Hot fall

Capability Class 4/6 Suitability = Gen. suited, Gen. unsuited WHC = >2" x 2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index 27-35 Series Wamuk

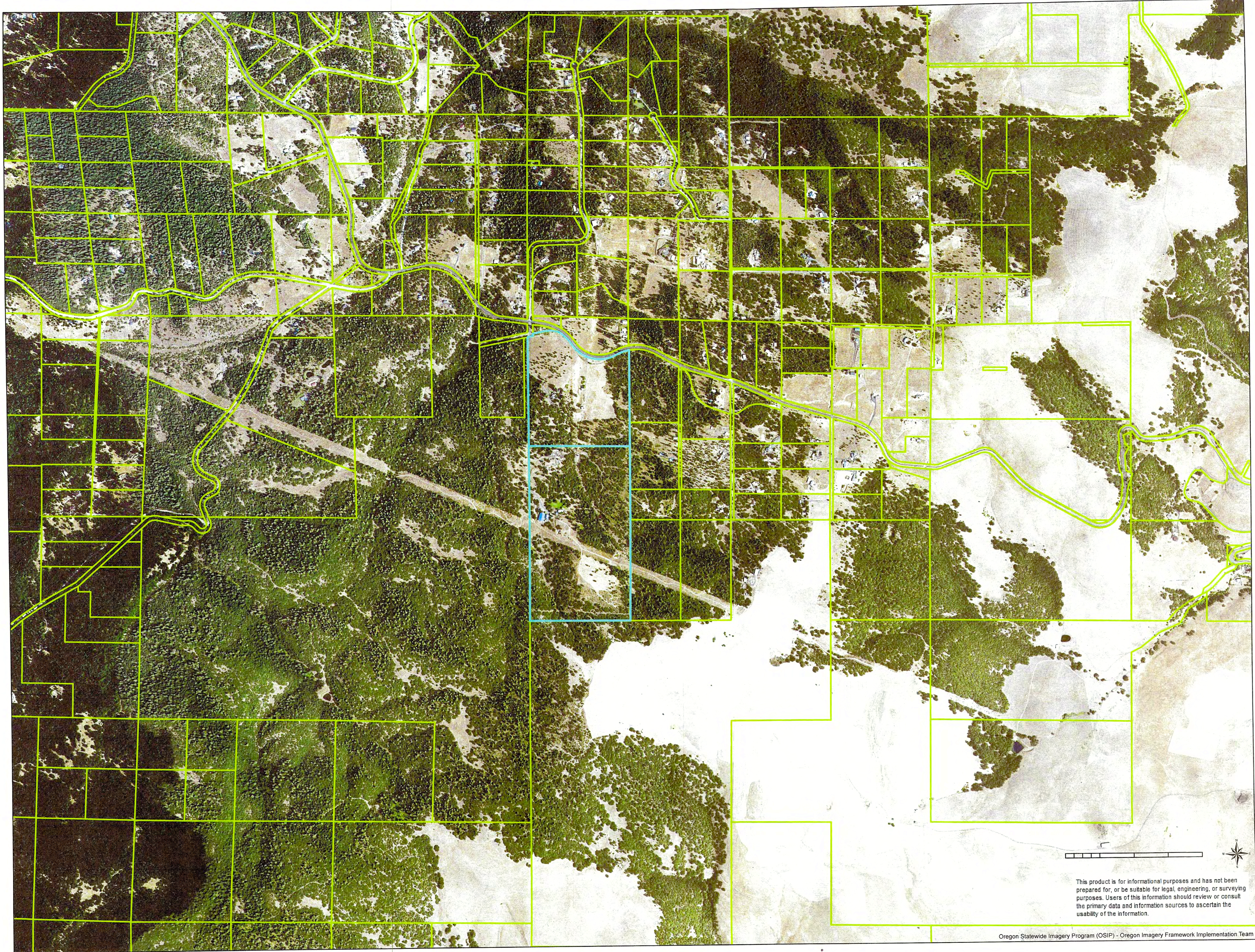
Hydrologic Group A Depth to Mottles 38" Effective Rooting Depth

Depth Current Water Table 50" Est Depth Seasonal High Water Table 50" or less

Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0 to 1





This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team









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Audio Recording Files:

**6-5-2019\_Board\_of\_Commissioner\_Audio**

**PC\_Audio\_4\_2\_19\_Part\_One**

**PC\_Audio\_4\_2\_19\_Part\_Two**



AGENDA: REGULAR SESSION

WEDNESDAY, JUNE 5, 2019

WASCO COUNTY BOARD OF COMMISSIONERS

WASCO COUNTY COURTHOUSE 511 WASHINGTON STREET, SUITE 302, THE DALLES, OR

**PUBLIC COMMENT:** Individuals wishing to address the Commission on items not already listed on the Agenda may do so during the first half-hour and at other times throughout the meeting; please wait for the current speaker to conclude and raise your hand to be recognized by the Chair for direction. Speakers are required to give their name and address. Please limit comments from three to five minutes, unless extended by the Chair.

**DEPARTMENTS:** Are encouraged to have their issue added to the Agenda in advance. When that is not possible the Commission will attempt to make time to fit you in during the first half-hour or between listed Agenda items.

**NOTE:** With the exception of Public Hearings, the Agenda is subject to last minute changes; times are approximate – please arrive early. Meetings are ADA accessible. For special accommodations please contact the Commission Office in advance, (541) 506-2520. TDD 1-800-735-2900. If you require and interpreter, please contact the Commission Office at least 7 days in advance.

Las reuniones son ADA accesibles. Por tipo de alojamiento especiales, por favor póngase en contacto con la Oficina de la Comisión de antemano, (541) 506-2520. TDD 1-800-735-2900. Si necesita un intérprete por favor, póngase en contacto con la Oficina de la Comisión por lo menos siete días de antelación.

9:00 a.m.	<b>CALL TO ORDER</b> Items without a designated appointment may be rearranged to make the best use of time. Other matters may be discussed as deemed appropriate by the Board. <b>Corrections or Additions to the Agenda</b> <u>Discussion Items</u> (Items of general Commission discussion, not otherwise listed on the Agenda) <u>Janitorial Agreement for Annex A</u> ; <u>Building Codes Vehicle Purchase</u> ; <u>Dispute Resolution Grant Award Selection</u> ; <u>Prosecution Services Agreement</u> ; <u>NACo Delegate</u> <u>Consent Agenda</u> (Items of a routine nature: minutes, documents, items previously discussed.) <u>Minutes: 4.11.2019 Work Session</u> ; <u>4.17.2019 Regular Session</u> ; <u>5.15.2019 Regular Session</u>
9:30 a.m.	<u>Planning Ordinance Update</u> – Kelly Howsley-Glover
9:50 a.m.	<u>Tygh Valley Road Vacation Hearing</u> – Arthur Smith
10:15 a.m.	<u>Planning Commission Appeal Hearing</u> - Will Smith
11:10 a.m.	<u>FEMA Grant Application</u> – Angie Brewer/Will Smith/Kristin Dodd
11:20 a.m.	<u>Forest Classification IGA</u> – Kristin Dodd
11:30 a.m.	<div><div><u>MCEDD: Transportation Grant IGA</u> <u>Transportation Services Contract</u></div><div>} Jessica Metta</div></div>
11:40 a.m.	<u>Qlife Budget</u> – Mike Middleton
11:50 a.m.	<u>Community Development Block Grant Final Hearing</u> – Barbara Seatter
12:00 p.m.	<u>Executive Session</u> – Pursuant to ORS 192.660(2)(h) Conferring with Legal Counsel regarding litigation
1:00 p.m.	<u>Work Session</u> – To be held in the Deschutes Room (B08) located in the basement of the Courthouse
	<b>COMMISSION CALL</b>
	<b>NEW/OLD BUSINESS</b>
	<b>ADJOURN</b>



**WASCO COUNTY BOARD OF COMMISSIONERS  
REGULAR SESSION  
JUNE 5, 2019**

**PRESENT:** Steve Kramer, Chair  
Scott Hege, Vice-Chair  
Kathy Schwartz, County Commissioner

**STAFF:** Kathy White, Executive Assistant  
Tyler Stone, Administrative Officer

At 11:00 a.m. Chair Kramer opened the Regular Session. Changes to the Agenda::

- The Hearing listed as an appeal is actually a Zone Change Review

<b>Discussion Item – Janitorial Service Contract</b>
--

Facilities Manager Fred Davis explained that the Health Department needs a higher level of sanitation than the rest of the County offices. He stated that he has worked with our current service provider to try to achieve the necessary medical standards but they have not been able to meet the need. He stated that he will be moving their work from the Health Department to the Harding House and bring in Helping Hands to do the cleaning at the Health Department. He reported that Helping Hands already does the cleaning at Annex C; he expects to see an improvement in the level of cleaning once they are on board. He added that the Health Department approves of the new vendor.

Vice-Chair Hege said that there was a lot of disappointment with the work that had been done and he is hopeful that Helping Hands will be able to deliver what is needed for a medical facility.

Chair Kramer asked why the County is paying for cleaning services at the Health Department. Vice-Chair Hege replied that it is part of the in-kind services. He said that it is what we have been doing but not necessarily what we need to continue to do. He said that we also provide IT services to the Health Department.

Further discussion ensued regarding the Health Department staff reporting to the Board on a more regular basis. Commissioner Schwartz reported that she has



spoken to the Health Department's Director who talked about coming to give us a report.

**{{{Vice-Chair Hege moved to approve the Personal Services Contract for janitorial services at 419 E. 7<sup>th</sup> Street, The Dalles, Oregon, between Wasco County and Helping Hands Janitorial. Commissioner Schwartz seconded the motion which passed unanimously.}}}**

**Discussion Item – Building Codes Vehicles**

Finance Director Mike Middleton reviewed the memo included in the packet saying that since we need immediate delivery of the vehicles, the selection will have to be what is available on the lot. The Jeep is the least expensive option and has an average rating through Consumer Reports. He stated that the payment will come from the Capital Acquisition fund which will be reimbursed by the Building Codes fund when we take over the program July 1<sup>st</sup>.

Vice-Chair Hege asked if the vehicles will bear the County logo. Mr. Middleton replied affirmatively. Vice-Chair Hege pointed out that we usually acquire vehicles through the fleet process with the Sheriff. Mr. Middleton responded that the Sheriff ordered from the Fleet last August and we have still not gotten the vehicles. We need to have the cars for the program now. In addition, the State currently does not have a fleet contract as they are waiting for the new model.

**{{{Vice-Chair Hege moved to approve the purchase of four Jeep Compass Sport 4x4's for \$94,560 from C.H. Urness Motors. Commissioner Schwartz seconded the motion which passed unanimously.}}}**

**Discussion Item –Community Dispute Resolution Grant Award**

Ms. White explained that this is the final step in the five-county grant process to solicit and select an organization to receive grant funding for the provision of community dispute resolution services. She reported that Gilliam, Wheeler, Sherman and Hood River Counties have already approved 6 Rivers which is the only applicant. Once Wasco County expresses final approval, the State will work directly with 6 Rivers to contract for the services.

**\*\*\*The Board was in consensus to approve the selection of 6 Rivers to be awarded the Community Dispute Resolution Grant.\*\*\***

**Discussion Item –Prosecution Services IGA**

Mr. Stone explained that this is the final piece of the discussion regarding Municipal

Court cases coming to the County for prosecution. The intergovernmental agreement formalizes the arrangement and provides for annual renewal and payment.

Vice-Chair Hege asked if anything changed in the agreement. Mr. Stone replied that the annual increase is 3% rather than 2% and some of the language was modified to make it clear that it is a long-term agreement as that was the intent.

Vice-Chair Hege noted that the agreement states that the City will pay the County starting July 1<sup>st</sup>. He asked if we know what the additional work will cost us and if that expense is recognized in the budget. Mr. Middleton responded that it is not recognized in the budget; we will work on that in the new fiscal year. Mr. Stone added that he believes the District Attorney has an idea of what level of staff he will need to hire to meet the demand. He said that his guess is that it will be a paralegal as not a lot of the cases go to trial; many will be pled but that still takes a good deal of administrative work. The agreement provides for \$80,000 annually.

Vice-Chair Hege asked if this will be added to the budget when it is adopted next week. Mr. Middleton replied that we could make that change; however, he hesitates to predict the expense side and would prefer to make that adjustment after the budget is adopted. Vice-Chair Hege commented that his hope would be that the revenue will come close to meeting the expense.

**{{{Vice-Chair Hege moved Commissioner Schwartz seconded the motion which passed unanimously.}}}**

**Discussion Item – National Association of Counties (NACo) Delegate**

Ms. White explained that each year the County is asked to designate a delegate to vote on behalf of Wasco County at the NACo annual conference. Generally, we have one attending Commissioner who is the voting delegate along with the Administrative Officer who is designated as the alternate. This year we have two elected officials – Vice-Chair Hege and County Treasurer Preston - attending along with the Administrative Officer. She said that the staff recommendation would be to designate Vice-Chair Hege as the voting delegate and then select either Mr. Preston or Mr. Stone as the alternate.

Chair Kramer commented that he does not think Mr. Preston would be comfortable with the assignment; the alternate should probably be Mr. Stone.

**\*\*\*The Board was in consensus to designate Vice-Chair Hege as the County's**

**voting delegate at the 2019 NACo Conference and designate Mr. Stone as the alternate.\*\*\***

**Consent Agenda – 4.11.2019, 4.17.2019 & 5.11.2019 Minutes**

**{{Vice-Chair Hege moved to approve the Consent Agenda. Commissioner Schwartz seconded the motion which passed unanimously.}}**

**Agenda Item – Planning Ordinance Update**

At 9:30 a.m., Chair Kramer opened a legislative hearing to consider approving amendments to the Wasco County Comprehensive Plan primarily relating to policies and implementation strategies for Natural Resources, Scenic and Historic Areas and Open Spaces and Transportation. Amendments also include the adoption of a new format for the plan. These amendments relate to work task 9 and 11 of Wasco County's Periodic Review to update the Comprehensive Plan.

He reminded those present that the process for this amendment has been consistent with the notice procedures required by Chapter 2 of the Land Use and Development Ordinance; the hearing was advertised for today, June 5, 2019, 9:30 a.m. in this room. Notice was provided in the newspaper and on the County's website. He then briefly explained the criteria for approval and today's procedure and asked the following questions:

Does any Commission member wish to disqualify themselves for any personal or financial interest in this matter? There were none.

Does any member of the audience wish to challenge the right of any Commission member to hear this matter? *There were none.*

Is there any member of the audience who wishes to question the jurisdiction of this body to act on behalf of Wasco County in this matter? *There were none.*

Wasco County Long-Range Planner Dr. Kelly Howsley-Glover reviewed the presentation included in the Board Packet. She noted that the Public Works Director had input on the transportation section to give clarity regarding road maintenance responsibilities. In addition, references to MCCOG have been removed as that organization no longer exists.

Mr. Stone asked how close we are to goal in the 2040 process overall. Dr. Howsley-Glover stated that we are a little more than halfway with a hope to conclude the process in the fall of 2020. Mr. Stone commented that it is impressive that the work is being completed at this pace – he would have expected it to take

more than twice that amount of time.

Vice-Chair Hege noted that Goal 5 includes maintaining an Historic Landmarks Commission. Dr. Howsley-Glover responded that we have not had that for 20 years; the Planning Commission has acted as proxy in that capacity. She stated that it needs to be a distinct body and part of the work plan is to identify a new process. The suggestion to the Board of Commissioners several months ago was to reform the Historic Landmark Commission with cities annually appointing representatives from their City Councils. She said that we are working on that with the incorporated cities throughout the County.

Commissioner Schwartz read the title of the Ordinance into the record as follows:

In the matter of the Wasco County Planning Commission's request to approve proposed periodic review legislative amendments to update the Comprehensive Plan related to land use planning Goals 5 and 12 or Wasco County 2040, the Comprehensive Plan (File Numbers 921-18-000109, 921-18-000215).

Chair Kramer closed the hearing at 9:48, announcing that the second hearing would take place on July 3, 2019.

#### **Agenda Item – Tygh Valley Road Vacation Hearing**

Chair Kramer opened the hearing at 9:49 a.m. regarding a petition to vacate certain roads and parts of roads in Tygh Valley, Oregon and reviewed the hearing process.

Public Works Director Arthur Smith reported that in the fall of 2018 a land owner came in to begin the process to vacate some roads in Tygh Valley. In February of 2019, the Board of Commissioners ordered Mr. Smith to investigate and produce a report with a recommendation. That report was completed and submitted to the Board on April 17, 2019. He stated that nothing has changed since that time; however, since not all adjoining property owners signed the petition, the process requires a public hearing.

He reported that after several iterations of the application, the petitioner has submitted a plan that allows access from their property to the remaining roads; portions of Church and St. Charles would stay. He explained that statute required him to notice the public hearing through three different means. He stated that it was published in The Dalles Chronicle in two separate editions, posted copies in Dufur, Maupin and Tygh Valley as well as along the local roads; a certified copy was sent to the one adjacent landowner.



Chair Kramer opened the floor to anyone in support of the application. *There were none.*

Chair Kramer opened the floor to anyone in opposition to the application. Harold Lindell of Tygh Valley and owner of the adjacent property said that he is not completely opposed to the vacation but does not understand why the applicant should just be given the land. He said he thinks the County should survey the land where it borders his land; he believes there will be conflict. Chair Kramer commented that he would think the property owner would have to have the land surveyed through the planning process.

Associate Planner Brent Bybee, assigned to this application, said that the land will have to be surveyed as part of the subdivision process. Ms. Brewer stated that the lots have to be larger to accommodate drain fields and wells.

Mr. Lindell said that he just wants to make sure it is done correctly as he already has a mess on his hands with another adjoining property.

Vice-Chair Hege asked about the past development. Mr. A. Smith stated there is significant encroachment on Lawrence. In addition, there are some underground items that were placed on other people's property and in the public right-of-way.

Vice-Chair Hege said that looking at St. Charles, the right-of-way goes right through structures. Mr. A. Smith concurred saying there will definitely be a lot of surveying needed.

Commissioner Schwartz asked what happens when we discover an encroachment. Mr. Stone replied that it is a civil matter.

Ms. Brewer stated that the Planning Commission is not aware of the encroachment issues; land owners can come to Planning for help fixing the issues – it can go through the courts.

Chair Kramer reminded the Board that the matter before them today is the vacation petition.

Vice-Chair Hege observed that looking at the County's GIS map in that area, Leonard comes into the area, vacates and starts up again up the hill. Mr. A. Smith responded that there were some hodge-podge vacations, but sometimes all he had to go on was the original 1892 information. He said he wants to fix what he can and do it correctly. The portion of Leonard being vacated is past everyone's lot

line.

Vice-Chair Hege said that the vacation won't preclude making it right; the roads platted don't make a lot of sense. He said he wants to make sure it will be cleaned up.

Mr. A. Smith said the applicant has to leave legal access to others and has done so. He went on to say that as Road Master, his job is to make sure the vacation is in the public interest. He stated there are no conflicts with utilities and no land locking of others. Outside of that, he makes no judgement. He noted that since 1892, the County has done nothing with this right-of-way.

Mr. Lindell asked that if it is vacated and Mr. Coburn is given that land, will he (Mr. Lindell) get the other part that is vacated. Vice-Chair Hege asked if it is standard practice to divide the land.

Mr. A. Smith replied that it is unless the right-of-way is entirely out of one lot which in this case it is. Mr. Coburn owns all the land that has a right-of-way.

Vice-Chair Hege asked if our surveyor has looked at this. Mr. S. Smith stated that the surveyor will look at it as part of the Planning process. It will be his job to review the survey submitted by the applicant.

Vice-Chair Hege asked if there is a process for this subdivision. Ms. Brewer replied that there is an application on file pending today's action. Mr. Bybee added that some of the standards in the planning process look at if neighboring properties have adequate access. He said from what he has seen, there is adequate access but no conclusions have been drawn. He stated that Mr. Coburn will also have to get DEQ approval.

Chair Kramer expressed disappointment at Mr. Coburn's absence, saying that it would have been useful to have him here.

Ms. Brewer said Planning will have to look at the encroachment issue. She pointed out that if the roads are not vacated today, Mr. Coburn will have to alter his proposal. Planning cannot do much without some direction today.

Mr. Stone asked if the Board can approve the vacation pending the planning process. Mr. A. Smith replied negatively.

Chair Kramer asked if the planning process will guarantee getting proper lines and resolve the encroachment issue. Ms. Brewer responded that would be the

goal . . . if not resolved, they will not approve the application.

Mr. Lindell asked who owns the land. Mr. A. Smith replied that the County does not own the land, the private home owner gets the reversion. Ms. Brewer stated that public roads are not necessarily owned by the County. She said Mr. Coburn is not getting land from the County; he is just not being required to provide public access to those portions of roads being vacated.

Vice-Chair Hege said he thinks Mr. Coburn is trying to develop land that might not otherwise go forward. He will have to go through the legal process with Planning; this is just making sure that other landowners have adequate access.

Mr. Lindell said Mr. Coburn will have to fence. Chair Kramer replied that issue will have to be worked out between Mr. Lindell and Mr. Coburn.

**{{{Vice-Chair Hege moved to approve Order 19-078 in the matter of the vacation of certain roads and sections of roads in Tygh Valley, Oregon. Commissioner Schwartz seconded the motion which passed unanimously.}}}**

<b>Agenda Item – Wilson Rezoning Hearing</b>
--

At 10:24 a.m., Chair Kramer opened a hearing:

“We will now open the Board of Commissioners Quasi-Judicial Hearing on agenda item 921-18-000086-PLNG, a request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10).

The property involved is described as Tax Lot 2N 12E 22 4400; Account Number 884.

The criteria for approval of the land use decisions includes: Review Criteria: Oregon Administrative Rules (OAR) Division 4, Interpretation of Goal 2 Exception Process and Division 6, Goal 4 Forest Lands; Oregon Revised Statute (ORS) 197.732, Goal Exceptions; Wasco County Comprehensive Plan Chapter 11 – Revision Process, Sections A, B, C, E, H, I, and J; and Wasco County Land Use & Development Ordinance (LUDO) Chapter 2 – Development Approval Procedures, and Chapter 9 – Ordinance Amendments, Sections 9.010, 9.020, 9.030, 9.0404, 9.050, 9.070, and 9.080.

The proposal must comply with applicable provisions contained in the Wasco County Comprehensive Plan, and State Law. Generally, unless otherwise noted, if

a request is found to be consistent with the LUDO it is considered consistent with the Comprehensive Plan.

This is a record review hearing, and is not de novo. This means only those who have previously submitted comments on the record are permitted to participate, and their comments must be limited to what they previously put on the record. No new evidence or testimony will be accepted.

The procedure I would like to follow is:

- Disclosure of Interest, Ex Parte Contact or Potential Conflicts (see below)
- Reading of the Rules of Evidence (see below)
- Planning department staff will present their report
- Those who are already on the record who wish to speak in favor of the proposal
- Those who are already on the record who wish to speak in opposition of the proposal
- Applicant rebuttal
- Questions by Commissioners of staff, proponent, or opponent
- Close the hearing and record and begin deliberation (only Commissioners, or staff if questioned, may contribute to this discussion)

DISCLOSURE OF INTEREST, EX PARTE CONTACT OR POTENTIAL CONFLICTS:

- a. Does any commissioner wish to disqualify themselves for any personal or financial interest in this matter? ***There were none.***
- b. Does any commissioner wish to report any significant ex parte or pre-hearing contacts? ***Commissioner Schwartz disclosed that she met with Sheila Dooley to discuss and issue regarding notification. She reported that she directed Ms. Dooley to Planning. She further disclosed that she received emails this week from Ms. Dooley and Jill Barker but read neither.***  
  
***Chair Kramer Disclosed that he has read letters from Ms. Dooley and Ms. Barker. He stated that at a recent meeting, he also recommended Ms. Dooley contact the Planning Department.***
- c. Does any member of the audience wish to challenge the right of any commissioner to hear this matter? ***There were none.***
- d. Is there any member of the audience who wishes to question the jurisdiction of this body to act on behalf of Wasco County in this matter? ***There were***



***none.***

COMMISSIONER DISCLOSURE OF SITE VISIT

For the record have any Commissioners conducted a site visit to the subject property? ***Vice-Chair Hege disclosed that he lives in this neighborhood and has been aware of the issue for some time.***

PARTY RECOGNITION

Only those who have already contributed verbal or written testimony can speak for or against the proposal today. Only those who have “party” status will be able to appeal a decision reached by this commission.

A party is defined in Section 1.090 as:

- a. The applicant and all owners or contract purchasers of record, as shown in the files of the Wasco County Assessor's Office, of the property which is the subject of the application.
- b. All property owners of record, as provided in (a) above, within the notification area, as described in section 2.080 A.2., of the property which is the subject of the application.
- c. A Citizen Advisory Group pursuant to the Citizen Involvement Program approved pursuant to O.R.S. 197.160.
- d. Any affected unit of local government or public district or state or federal agency.
- e. Any other person, or his representative, who is specifically, personally or adversely affected in the subject matter, as determined by the Approving Authority.

And in ORS 197.830 (7)(b) as:

**(B)** Persons who appeared before the local government, special district or state agency, orally or in writing.

THE RULES OF EVIDENCE ARE AS FOLLOWS:

- No person shall present irrelevant, immaterial, or unduly repetitious testimony or evidence.
- Evidence received shall be of a quality that reasonable persons rely upon in the conduct of their daily affairs.
- Testimony and evidence must be directed toward the criteria applicable to the subject hearing or to criteria that the party believes apply to the decision.
- Failure to raise an issue with sufficient specificity may preclude raising it before the Land Use Board of Appeals.

- Failure to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow Wasco County to respond to the issue precludes an action for damages in circuit court.”

Senior Planner Will Smith reviewed the presentation included in the Board Packet. He explained that the potential impact of the rezoning would be as many as three new dwellings where there is now only one. He explained that in staff's presentation to the Planning Commission, they provided different perspectives for them to approve or deny findings.

Vice-Chair Hege stated that the practice of providing dual perspectives for findings seems fairly unusual. He asked why they chose to do that. Mr. W. Smith replied that they were trying to be pro-active with draft language for both decisions. He said they wanted to bolster two of the findings to support that this is a special case.

Commissioner Schwartz said she went through the packet several times and did not see the dual findings language.

Ms. Brewer said, for the record, all of the information is on the record, online and available. What is in the County Board of Commissioners' packet is the Planning Commission's recommendation. Mr. Stone noted that the dual finding language was part of the Planning Commission decision, not part of the Board of County Commissioners' decision.

Mr. W. Smith continued to review his presentation. He stated that the land has not been used for forestry during Mr. Wilson's ownership. It has two wells, each of which can support two homes. He said the Planning Commission wants to make sure it is clear that there are special circumstances – this property is surrounded on three sides by rural residential property and meets the standards to be irrevocably rezoned. He concluded by saying no conditions are included but can be added.

Commissioner Schwartz asked how it would impact the language if she has concerns. Mr. W. Smith replied that her concerns would have to be specific to a criteria – she would have to change the findings. For instance, she may determine there is not enough evidence to support a particular finding.

Mr. W. Smith concluded his presentation. Chair Kramer opened the floor to the applicant, Mr. Wilson, and his attorney, Mr. Summerfield.

Mr. Summerfield stated that he has never seen a staff report presented with dual findings. However, he pointed out, the Planning Commission approved all of the favorable findings with the only changes making the findings more favorable. He said the land is impracticable for use as resource land.

Mr. Summerfield went on to say that in the five to one Planning Commission decision, the one dissenting vote was concerned that Mr. Wilson would use this exception as a stepping stone for rezoning another area. Mr. Summerfield pointed out that you cannot use one exception to qualify for another exception.

Mr. Summerfield went on to say that the application stands on its own and is singular; zone changes are hard and they should be. He said the County is not being asked to convert a resource; it is being asked to look at the land and determine if it is still a resource. He stated that it is only borderline from the standpoint that there are so many applicable rules. He pointed out that this is the only land that touches Seven Mile Road still zoned as resource. He said they do not know how that happened, but it stands out.

Mr. Summerfield continued by saying that looking at it holistically, this land is developed. It has structures and wells and the structures are placed in such a way as to not be practical to create a commercial forest – it really is an anomaly. He stated that the impracticable standard does not mean it is impossible, but that it is not practical. It has never been used in its known history as timber resource, dating back to the early 1900's.

He said that he believes there was a mistake made in the Comprehensive Plan; the Planning Commission agreed. He reported that there are two wells on the property, each certified to produce 50-60 gallons a minute. He observed that the Board is not being asked to approve houses; development is a separate process. He said that he and Mr. Wilson ask that the Board affirm the Planning Commission's decision.

Mr. Wilson stated that there is a home in the ravine that he started cleaning up 20 years ago. He had noticed that the old 1880's homestead was failing and started blocking it up. He said he was allowed to continue just enough to keep it from falling. He stated that he cannot get a permit to do anything unless the rezoning goes through. He said the reason he has not pursued this previously is because Ken Thomas was pursuing a rezoning that would have also encompassed his land. That process has concluded and he is now pursuing the rezoning for just his own piece of property. He stated that the property does not support a stand of trees; there are only oaks and pines on the perimeter. He said the valley behind the

house must have been farmed.

Commissioner Schwartz asked how his land got swept up in the Thomas process. Mr. Wilson explained that he shared a border with Mr. Thomas who was trying to have everything north of the power line rezoned; that included his property. He said it would have meant that nearly 70 or his acres could be developed.

County Counsel Brad Timmons asked Mr. Summerfield to address Exception A – does it mean there needs to be a development from the adoption of the Plan to present. Mr. Summerfield responded that the house that was built was subject to a conditional use permit; the rest would have been other structures. The Driveway went in and some outbuildings. Mr. Wilson added the others are a house, corrals and a log cabin. He said he built the driveway.

Mr. Timmons asked if the conditional use permit was after the Plan. Mr. Summerfield replied affirmatively.

Mr. Timmons asked what their position is with respect to the properties around the subject properties. Mr. Summerfield replied that they have mostly focused on the subject property. He said the lands around it make it harder to use as a resource land.

Commissioner Schwartz asked if there is any logging nearby. Mr. Wilson replied that a few miles to the southwest has had some logging.

Chair Kramer opened the floor to opposition remarks.

Sheila Dooley submitted and reviewed written comments (attached). She noted that the zone change was denied in the Thomas process; why even consider it now? She pointed out that although it is surrounded on three sides by rural residential land, there is development on only two sides. She added that the buildings are unusable and the wells could be used for fire suppression. She commented that just because it is not being used as forest, doesn't mean that it couldn't be used for that. She stated that most fires are caused by people – placing more humans there increases the danger.

Jill Barker stated that the aquifers are declining at the rate of two feet per year and there is wide spread concern about new residences. She said the north side has an excessive number of lots. Ms. Barker went on to say that the Oregon Department of Forestry has identified Seven Mile as high fire risk – residences are fire hazards. She observed that the soil type is Class 4 which can support commercial



forestry.

Ms. Barker referenced the denial language in the staff report provided to the Planning Commission which said it can be planted and support commercial timber; it is not impracticable. She said that just because he does not want to use it for forest, does not mean that it cannot be used for that. She reported that where there has been no mowing, it is now tree covered despite it previously being hay.

Ms. Barker continued by saying that the applicant asserts that just because adjoining properties are zoned rural residential, this should be the same. She said that practice should be halted. There is risk to the water supply. She said this is also a winter range for wildlife; the rezone would negatively impact that. Referencing several more of the Planning Commission's staff report's possible finding denials, she said that there are several criteria not met that should result in a denial. She stated she believes the Board should have had the same denial/approval information the Planning Commission had.

Vice-Chair Hege pointed out that the Planning Commission materials were available to the Board and he did review them.

Ms. Brewer said that staff is clearly presenting the Planning Commission's recommendation to the Board. The Planning Commission's recommendation was to remove all of the denials from the recommendation.

Mr. Summerfield stated that this site-specific request has not been before the Board before today. He pointed out that the DLCD and Oregon Department of Fish and Wildlife both commented on the Thomas application but did not comment on Mr. Wilson's application. He reiterated that in recent memory there has been no logging on this property. The well report shows output of 50-60 gallons per minute. He added that the reason the Board did not see the denial findings is because they were excluded by the Planning Commission. He stated that this decision is not precedent-setting because you cannot use one exception to support another.

Commissioner Schwartz asked if this piece of property is not resource land. Mr. Summerfield replied that it is currently zoned forest but was used for haying. He said it is impracticable for forest land.

Commissioner Schwartz asked for an explanation of the reference to a mistake in the Comprehensive Plan. Mr. W. Smith replied that the ordinance requires consideration of a mistake in the Comprehensive Plan. The debate was about the

Transition Land Study Area (TLSA) and a possible mistake when rezoning in the 1990's; the applicant argued that it was a mistake to not rezone this piece at that time.

Mr. Summerfield added that TLSA suggested a variety of zoning and they really just punted it by not making a decision at all. Our argument is that it is just a mistake. Mr. W. Smith commented that it is not necessarily a mistake but needs to be updated.

Commissioner Schwartz asked if there are pieces in the surrounding area zoned for development but currently undeveloped. Mr. W. Smith confirmed that there are, saying that there are dwellings on two sides with the third side zoned for development.

Vice-Chair Hege asked Mr. W. Smith to talk about FF10 and what the next steps would be. Mr. W. Smith replied that Mr. Wilson would have to apply for a division or subdivision. He said that new dwellings are conditional use permitting requiring Planning to review for special conditions.

Commissioner Schwartz asked for an example of those conditions. Mr. W. Smith stated that there is an entire chapter available for special conditions.

At 11:50 a.m. Chair Kramer recessed the hearing to open Mid-Columbia Center for Living's Community Development Block Grant's final hearing for the mental health clinic construction project.

#### **Agenda Item – Community Development Block Grant Final Hearing**

Mid-Columbia Center for Living Executive Director Barbara Seatter shared a picture of the completed building located on 10<sup>th</sup> and Webber in The Dalles, Oregon. She explained that Wasco County has supported the project by applying for the \$2 million grant and loaning MCCFL the funds necessary to complete the project. She reviewed the memo included in the Board Packet and expressed gratitude to the County for their support.

Vice-Chair Hege announced that Ms. Seatter will be moving on and thanked her for her nine years of service here. He also thanked County staff for their work on this project. Ms. White recognized the significant contributions of Wasco County's Finance Department and MCEDD.

Chair Kramer opened the floor to questions or comments from the public; there being none, he closed the hearing at 11:57 a.m. and re-opened the rezoning

hearing.

**Agenda Item – Wilson Rezoning Hearing Continued**

Mr. Wilson explained that water on Seven Mile is not exclusively dependent on an aquifer. He said that water runs through the basalt and he is not hitting an underground river to access water. He added that as far as fire risks, each property owner should be managing their property to mitigate that risk. Mr. W. Smith added that with new developments we have fire safety standards that are applied.

Commissioner Schwartz commented that when we talk about physically developed, it is relatively subjective . . . there is no criteria for that reflected in the percentages. She said that if the building is dilapidated, we could consider that as not a structure. Ms. Brewer stated that she is sure it has been challenged at LUBA, but at this point it is under the Board's discretion.

Chair Kramer asked if there was any further testimony. There being none, he closed the testimony portion of the hearing and opened deliberations.

Vice-Chair Hege commented that the two biggest issues he heard were fire risk and water supply which is always an issue. Regarding the fire risk, he said his thoughts are that a residence can be the source of fire but if property owners manage their property, they can do a lot to reduce the spread of fire. He said there actually could be a benefit to adding residences.

Vice-Chair Hege went on to say that he finds the water issue less concerning since there are already two wells. He said he spoke to Water Master Robert Wood regarding the possibility of three new residences on the property. He reported that Mr. Wood advised that three new residences would not affect the current situation. Vice-Chair Hege stated that he has lived there for 20 years and knew the former owner. He said the soils may be reasonably good, the problem is precipitation. He stated you don't see a lot of forest operations in that area – it is not viable.

Commissioner Schwartz noted that there is no guarantee that new wells won't be drilled. She said with two wells and a spring, you could probably grow a forest if you wanted to. She said she has not heard any compelling reason to take it out of resource and place it in residential.

Vice-Chair Hege asked if when going through the conditional use process could well-sharing be required. Mr. W. Smith replied that they do have the ability to

impose a condition on this decision to include easements for water. He said in a partition application, wells are on one property.

Vice-Chair Hege pointed out that wells are not water rights; you cannot irrigate trees with well water. Irrigated forest land is not a viable option.

Commissioner Schwartz said she feels any time we are taking land out of resource, we need to have a compelling reason to do so. She said this sets precedence. She stated we can talk about it in the context of today, but we cannot know what its value will be for future users.

Vice-Chair Hege stated he thinks this is more of an exception than anything else. He said he thinks the Planning Commission did a good job of vetting this.

Commissioner Schwartz commented that staff and commission membership change.

Chair Kramer stated he thinks this piece was overlooked in the 1990's and will help address our housing shortage.

**{{Vice-Chair Hege moved to approve Mr. Wilson's request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10) as presented by staff and recommended by the Wasco County Planning Commission. Chair Kramer seconded the motion. Chair Kramer and Vice-Chair Hege voted "Yay," Commissioner Schwartz voted "Nay." Motion passed.}}}**

The hearing was closed at 12:18 p.m.

#### Agenda Item – Executive Session

At 12:18 p.m. Chair Kramer opened an Executive Session pursuant to ORS 192.660(2)(h) – conferring with legal counsel regarding litigation. Representatives of the news media and designated staff shall be allowed to attend the executive session. All other members of the audience are asked to leave the room.

Representatives of the news media are specifically directed not to report on any of the deliberations during the executive session, except to state the general subject of the session as previously announced. No decision may be made in executive session. At the end of the executive session, we will return to open session and welcome the audience back into the room.



The regular session resumed at 12:45 p.m.

**Agenda Item – FEMA Grant**

Mr. W. Smith announced that the Wasco County Natural Hazards Mitigation Plan has been officially approved by FEMA. He said staff is ready to move on to the Community Wildfire Protection Plan. The grant application before the Board will fund that work and the money is available. He stated Planning is asking the Board's approval to move forward with the application which is due by July 9, 2019. He explained that the grant match requirement will be met with staff time. Additionally, they will be soliciting letters of support. He stated that staff will be working with the Oregon Department of Forestry on the update process which they were going to do anyway. It is great to be able to get funding to support the work.

Ms. White suggested the Board consider consensus on a letter of support now to allow the process to move forward without a second presentation to make that request at a future Board Session.

**{{Vice Chair Hege moved to approve Resolution 19-004 in the matter of submitting a grant application to the Federal Emergency Management Agency for the Community Wildfire Protection Plan Update Project. Commissioner Schwartz seconded the motion which passed unanimously.}}**

**\*\*\*The Board was in consensus to provide a letter of support for the Community Wildfire Protection Plan update process.\*\*\***

**Agenda Item – Forest Classification Agreement**

Chair Kramer reported that each Commissioner individually met with Unit Forester Kristin Dodd to learn more about this process which had been presented to them at a previous session.

Ms. Dodd said she is here to follow-up for support of convening jointly with Hood River County. She reported that Hood River has already approved the Intergovernmental Agreement. She said she would also like to move forward with Wasco County's appointment of an at-large member for the committee. She said if a Commissioner is interested in serving, they can determine that now. If not, she will look for a list of names to bring back to the Board for consideration.

Vice-Chair Hege asked if Mr. Stone is comfortable with the agreement. Mr. Stone replied affirmatively.

**{{{Vice-Chair Hege moved to approve the Cooperative Agreement between Wasco County Board of Commissioners, Hood River County Board of Commissioners and Oregon Department of Forestry, State Forester to reconvene the joint Wasco/Hood River Forestland Classification Committee. Commissioner Schwartz seconded the motion which passed unanimously.}}}}**

Chair Kramer said the initial concern was the geographical differences between the counties; but we are looking at ground, not lines. He said he would be willing to serve on the Committee.

**\*\*\*The Board was in consensus for Chair Kramer to serve as a Wasco County representative on the Wasco/Hood River Forestland Classification Committee.\*\*\***

<b>Agenda Item – MCEDD Transportation Agreements</b>
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Mid-Columbia Economic Development District Deputy Director Jessica Metta reminded the Board that they had approved applications for the grants associated with these two agreements. The agreements will provide the pass-through funding for the Special Transportation Fund (STF) and Statewide Transportation Fund (STIF) programs. She noted that the STIF program is new; the current 5310 grant agreement for the STF program expires June 30, 2019.

**{{{Vice Chair Hege moved to approve the Wasco County Statewide Transportation Improvement Fund Services Contract with Mid-Columbia Economic Development District for the implementation of the Wasco County Statewide Transportation Improvement Fund Plan as adopted by Wasco County. Chair Kramer seconded the motion which passed unanimously.}}}}**

**{{{Vice-Chair Hege moved to approve the Wasco County Transportation Agreement Mid-Columbia Economic Development District for the provision of public transportation to seniors, individual with disabilities and the general public in Wasco County, specifically in The Dalles area. Commissioner Schwartz seconded the motion which passed unanimously.}}}}**

Mr. Stone announced that the Link has just started its deviated fixed route which is a good thing for the community.

At 1:00 p.m. the Board and staff moved to the Deschutes Conference room where Chair Kramer opened a Work Session.

**Agenda Item – Work Session**

PINE HOLLOW FIREWORKS

Chair Kramer stated that Royd Brothersom had been invited to this session to discuss his concerns. He said it is unfortunate that Mr. Brothersom is not present but he would still like to move forward with the discussion.

Sheriff Lane Magill said that while it is in criminal statute, the intent of the fireworks laws is safety. District Attorney Eric Nisley added that the statute was heavily lobbied by the insurance industry.

Sheriff Magill said it is easy to have five or six thousand people in Pine Hollow over the 4<sup>th</sup> of July. He said he does not have the resources to enforce the statute county-wide and so he approaches it from an educational standpoint. He reported that he has seen at least one-thousand people by the boat ramp where it is paved and has never seen anyone there out of control. He said it is by the fire station and safe. He reported that the local fire department also runs patrols throughout the holiday celebrations.

Sheriff Magill went on to say that deputies do tell people it is illegal and we want them to be smart about it. He stated that if they were to see anyone in a big field, they would definitely go after that. One of the major challenges is that you can see the fireworks from a distance but by the time you get to the scene, either everyone is gone or there are too many people to know who is responsible – you cannot ticket them all. If someone is being reckless, a deputy will take action but likely not arrest based solely on the fireworks . . . . it is a waste of resources. He added that State patrols are not able to help.

Sheriff Magill said last year they placed flyers on doors and will do that again. The flyers explain that it is illegal and action will be taken. It is a systemic problem throughout the State. Klamath Falls has a big problem with it. In the last three years there have been 43 calls throughout the County related to fireworks.

**Agenda Item – QLife Budget**

Finance Director Mike Middleton reviewed the budget included in the Board Packet. Chair Kramer expressed his disappointment that there is not administrative support funding in the Maupin project.

**{{Vice-Chair Hege moved to approve the Fiscal Year 2020 QLife Budget as presented. Chair Kramer seconded the motion which passed unanimously.}}**

CODE COMPLIANCE

Ms. Brewer explained that she and Codes Compliance Officer Chris McNeel are here looking for policy direction for the Code Compliance Program. Traditionally, the program has been complaint-driven with one full-time employee handling 50-75 cases a year. Two-thirds of the cases are nuisance; the other one-third are land use violations requiring assistance from Planning.

Ms. Brewer went on to say that they started an abatement program to help people become compliant. Although the grant for that program has been expended, a partnership with Hazardous Waste has helped with getting steps and a lift gate for the abatement truck. We are able to get some labor through the Youth Services work-crew program.

Ms. Brewer explained there are several tools available to provide a mechanism for moving nuisance cases forward. The question is how much does the Board want staff to proactively use the available tools?

- Building Codes will be on board soon, providing another set of eyes in the field. They could report an additional 50-100 cases a year which would significantly increase the workload.
- Google Maps and Google Earth; online mapping tools are always getting better. Our surveyor has a drone and is going through the certification process.
- The Assessor wants to pursue pictography to accurately assess properties.
- Fire Boards report that they see a lot of illegal structures – they could be made safe and placed on the tax roll.
- Mr. McNeel has law enforcement credentials and experience to issue citations. The Gorge Commission is looking at code compliance throughout the Scenic Area.

Ms. Brewer said that neither the Code Compliance Officer nor the Planning staff has actively gone out to verify compliance through follow-up inspections; we just do not have the capacity. We could do that but it would slow the permitting process timeline. She said she is not suggesting that we do anything differently, just looking for guidance.

Mr. Stone commented that this is a really sharp edge and you can fall into the deep end very quickly. You can find yourself in neighbor against neighbor situations and be used as a mechanism to drive litigation. He advised caution and



thoughtfulness in the approach to the question.

County Assessor Jill Amery stated that there are reasons to support either side off the decision. She said we want access to as much information as possible. If appraisers are placed in a position of reporting, they will get less access to properties. She added that pictometry would make this a very different conversation, but they still could not get to the treed areas with that technology. She said they are finding unreported structures as well as the fact that some structures on the roll no longer exist. She stated that her appraisers want to build those relationships with the public.

Ms. Brewer pointed out that it can be very political and we are already more proactive than some counties that require more than one complaint before acting and do not accept anonymous complaints.

Vice-Chair Hege said these tools would increase cases beyond our capacity to respond. He suggested some criteria could be applied. Ms. Brewer stated that land use violations require a retroactive application that would go in line with all other applications. She said that in regard to the nuisance cases. They have discussed sending out flyers notifying residents of when Code Compliance would be in their area to give them a chance to mitigate their property.

Mr. McNeel said some of the cases are very old and take a good bit of research. He has to take the new cases first and work on the old ones as he can.

Building Official John Rodriguez said he has worked in more established counties that were more proactive. Regarding the buildings, safety was the driving factor. Ms. Brewer pointed out that when purchasing property, people look to see that it has been taxed but not whether it is legal or not. Ms. Amery concurred, saying the appraisers tax whatever they find, legal or not. Ms. Brewer added that Building Codes has Code Compliance separate from Planning; citizens could potentially be fined through both programs.

Further discussion ensued regarding the usefulness of the various tools and the consequences of their use. Commissioner Schwartz said she is not comfortable with the idea of drones flying over to find violations. Mr. McNeel stated there are regulations regarding how and why you can fly over private property.

Mr. Stone suggested spinning up a cross-functional team to assess the topic and return with recommendations. Chair Kramer said we need to consider equity; he is in favor of citations and requiring compliance.

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Commissioner Schwartz agreed that we should enforce the regulations but we need to decide if we are going to look for violations and if so, how.

Further discussion occurred regarding the differences between looking for violations and just coming across them as well as the response to the discovery. Ms. Amery restated the difference pictography would make to this discussion. Mr. Stone agreed that pictography is an important tool for assessment.

SPECIAL FUNDS

Chair Kramer stated that there is still \$174,000 in the Economic Development Fund. He said the Board has previously discussed supporting the Maupin projects and the Pine Hollow boat ramp project. He said he'd like to make the decision in this fiscal year with a caveat that we wait on the Maupin Clinic until the vote is in. He said he believes all three are viable projects and will be great for the southern portion of the county.

Vice-Chair Hege reported that he met with the South Wasco Park and Recreation District Board last night; they are moving forward with the boat ramp. He noted that the clinic is still raising money; he would prefer to commit the funds but not write the check until they actually break ground to build the clinic. HE added that while he supports these contributions, going forward he wants a process in place for these requests. Chair Kramer said he thinks MCEDD will provide that process.

**\*\*\*The Board was in consensus to provide \$125,000 in funding to three south county projects: \$50,000 to the City of Maupin for their Library/City Hall project, \$25,000 to South Wasco Park and Recreation District for the Pine Hollow boat ramp project and \$50,000 for the White River Health District for their clinic construction project; the White River Health District funding will be committed, but no check issued until the project begins construction.\*\*\***

Vice-Chair Hege left the meeting to attend a meeting in Hood River.

BUILDING CODES

Commissioner Schwartz asked how we are responding to Gilliam and Sherman County's letters regarding the Building Codes reserve funds. Mr. Stone said that Vice-Chair Hege asked to take over those negotiations. Staff's recommendation is that we do not provide Building Codes services for the other counties – it is a cost loser for us and not sustainable.

Mr. Stone continued by saying that we tried to address the reserves over eighteen

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months ago. Independently, Wasco and Gilliam County asked the State to make that determination. The State did that but Gilliam County did not like the answer. He stated that he supports the State allocation model in principal. He pointed out that Wasco County is spinning up a multi-million dollar program in just six days – those dollars are critical to that program. He commented that it is unfair that they threw this at us at the 12<sup>th</sup> hour. He said he does not know how to work this out and has asked County Counsel to look into it. We have not responded to the letter(s).

Mr. Stone said that Vice-Chair Hege has talked with the other counties regarding their plans for providing building codes services. They are considering their options. Mr. Stone said his opinion is they are better off going with the State which would mean there would be no reason for the reserves to be divided. Any of those funds that go to the state would not be applied to a specific county but would be spread across the State for any programs they manage.

Chair Kramer explained that in 2013, MCCOG staff asked their Board for a 40% increase in fees. MCCOG had depleted the reserves, largely built with wind turbine fees, by subsidizing the remote building permits. They were in jeopardy of closing their doors; Google permit fees came in and built back the reserves. The increase was reduced to 20%. Unfortunately, the new county commissioners are not familiar with that history. Mr. Stone added that he has the minutes from the increase request meeting where staff reported the reserves would be down to \$300,000 and they would be forced to close.

Mr. Stone stated that at the request of the other counties, Wasco County put together a proposal for services comparable to the services provided by MCCOG. That proposal was rejected.

Commissioner Schwartz asked how we can communicate that. Chair Kramer said he wants to work with our partner counties but he needs to look out for Wasco County. The other counties need to make a request. Mr. Stone concurred saying that if they do not like the State proposed distribution, they need to tell us what they think it should be.

Further discussion ensued regarding Wasco County's preparations for taking over the Building Codes program.

Additional discussion around unprotected lands and a proposed central Wasco fire district were postponed to a future session.

The session was adjourned at 3:00 p.m.

Summary of Actions

**MOTIONS**

- **To approve the Personal Services Contract for janitorial services at 419 E. 7<sup>th</sup> Street, The Dalles, Oregon, between Wasco County and Helping Hands Janitorial. Commissioner Schwartz seconded the motion which passed unanimously.**
- **To approve the purchase of four Jeep Compass Sport 4x4's for \$94,560 from C.H. Urness Motors.**
- **To approve the Intergovernmental Agreement between City of The Dalles, Wasco County and the Wasco County District Attorney's Office for the provision of criminal prosecution services.**
- **To approve Order 19-078 in the matter of the vacation of certain roads and sections of roads in Tygh Valley, Oregon.**
- **To approve Mr. Wilson's request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10) as presented by staff and recommended by the Wasco County Planning Commission. (2-1 vote)**
- **To approve Resolution 19-004 in the matter of submitting a grant application to the Federal Emergency Management Agency for the Community Wildfire Protection Plan Update Project.**
- **To approve the Cooperative Agreement between Wasco County Board of Commissioners, Hood River County Board of Commissioners and Oregon Department of Forestry, State Forester to reconvene the joint Wasco/Hood River Forestland Classification Committee.**
- **To approve the Wasco County Statewide Transportation Improvement Fund Services Contract with Mid-Columbia Economic Development District for the implementation of the Wasco County Statewide Transportation Improvement Fund Plan as adopted by Wasco County**
- **To approve the Wasco County Transportation Agreement Mid-Columbia Economic Development District for the provision of public transportation to seniors, individual with disabilities and the general public in Wasco County, specifically in The Dalles area.**
- **To approve the Fiscal Year 2020 QLife Budget as presented.**
- **to approve the Consent Agenda – 4.11.2019, 4.17.2019 and 5.11.2019 minutes.**



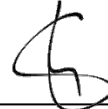
**CONSENSUS**

- **To approve the selection of 6 Rivers to be awarded the Community Dispute Resolution Grant.**
- **To designate Vice-Chair Hege as the County's voting delegate at the 2019 NACo Conference and designate Mr. Stone as the alternate.**
- **To provide a letter of support for the Community Wildfire Protection Plan update process.**
- **For Chair Kramer to serve as a Wasco County representative on the Wasco/Hood River Forestland Classification Committee**
- **To provide \$125,000 in funding to three south county projects: \$50,000 to the City of Maupin for their Library/City Hall project, \$25,000 to South Wasco Park and Recreation District for the Pine Hollow boat ramp project and \$50,000 for the White River Health District for their clinic construction project; the White River Health District funding will be committed, but no check issued until the project begins construction.**

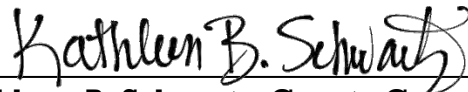
Wasco County  
Board of Commissioners



Steven D. Kramer, Board Chair



Scott C. Hege, Vice-Chair



Kathleen B. Schwartz, County Commissioner



## DISCUSSION LIST

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[JANITORIAL AGREEMENT FOR ANNEX A](#) – Fred Davis

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[BUILDING CODES VEHICLE PURCHASE](#) – Mike Middleton

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[DISPUTE RESOLUTION GRANT AWARD](#) – Kathy White

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[PROSECUTION SERVICES IGA](#)

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[NACO DELEGATE SELECTION](#) – Kathy White

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## DISCUSSION ITEM

### **Janitorial Agreement for Annex A**

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[STAFF MEMO](#)

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[HELPING HANDS PERSONAL SERVICES CONTRACT](#)

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[MOTION LANGUAGE](#)

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511 Washington St., Ste. 101 • The Dalles, OR 97058  
p: [541] 506-2550 • f: [541] 506-2551 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

*Pioneering pathways to prosperity.*

To: BOCC  
From: Fred Davis  
Re: Janitorial changes

After experiencing significant problems with our current Janitorial vendor (CleanNet of the Northwest), NCPHD staff and Wasco County Administration met with the vendor on multiple occasions to address service delivery shortcomings. After specifically addressing the issues, the vendor committed to correcting the problems. In spite of their agreement the vendor was not able to deliver the cleanliness required for a healthcare service provider. The vendor did not solve the issues that were addressed in our meetings.

We do plan on continuing to use them in in other buildings that do not require that level of cleaning. We are currently negotiating on regular janitorial services for the Harding House.

Fred Davis  
Facilities Operations Manager





## **WASCO COUNTY PERSONAL SERVICES CONTRACT**

### **Janitorial Services at 419 E. 7<sup>th</sup> Street, The Dalles, OR**

THIS CONTRACT is between Wasco County, an Oregon political subdivision ("County"), and Helping Hands Janitorial ("Contractor"). This Contract shall be effective when signed by both parties.

#### **RECITALS**

- A. Contractor has the training, ability, knowledge, and experience to provide services desired by the County.
- B. County selected Contractor to provide services pursuant to a solicitation process consistent with its public contracting rules.
- C. The services described below are to be provided by the Contractor in connection with a project identified as follows: Janitorial Services at 419 E. 7<sup>th</sup> Street, The Dalles.

#### **AGREEMENT**

##### **1. Services to be Provided**

Contractor shall provide the janitorial "Services" described in Contractor's proposal (**Exhibit A** to this Contract).

##### **2. Term**

Contractor shall begin Services on May 1, 2019. This Contract shall expire, unless otherwise terminated or extended, on June 30, 2020.

##### **3. Compensation**

County agrees to pay Contractor \$1,250.00 per month based on a five day per week, Monday-Friday schedule excepting all federal holidays, averaging ten hours per week, for performance of those Services described in paragraph 1 inclusive of all parts, materials and supplies, for which payment shall be based upon the following applicable terms:

- a. Payment by County to Contractor for performance of Services under this Contract includes all expenses incurred by Contractor.
- b. Payment by County shall release County from any further obligation for payment to Contractor, for Services performed or expenses incurred as of the date of the invoice. Payment shall not be considered acceptance or approval of any work or waiver of any defects therein.

##### **4. Assignment/Delegation**

Neither party shall assign or transfer any interest in or duty under this Contract without the written consent of the other.

**5. Status of Contractor as Independent Contractor**

Contractor certifies that:

- a. Contractor acknowledges that Contractor is an independent contractor as defined by ORS 670.600 and not an employee of County, shall not be entitled to benefits of any kind to which an employee of County is entitled and shall be solely responsible for all payments and taxes required by law. Furthermore, in the event that Contractor is found by a court of law or any administrative agency to be an employee of County for any purpose, County shall be entitled to offset compensation due, or to demand repayment of any amounts paid to Contractor under the terms of this Contract, to the full extent of any benefits or other remuneration Contractor receives (from County or third party) as a result of the finding and to the full extent of any payments that County is required to make (to Contractor or to a third party) as a result of the finding.
- b. Contractor represents that no employee of the County, or any partnership or corporation in which a County employee has an interest, has or will receive any remuneration of any description from Contractor, either directly or indirectly, in connection with this Contract, except as specifically declared in writing.
- c. Contractor is not an officer, employee, or agent of the County as those terms are used in ORS 30.265.

**6. Indemnification**

Contractor agrees to indemnify and defend the County, its officers, agents, employees and volunteers and hold them harmless from any and all liability, causes of action, claims, losses, damages, judgments or other costs or expenses including attorney's fees and witness costs (at both trial and appeal level, whether or not a trial or appeal ever takes place) that may be asserted by any person or entity which in any way arise from, during or in connection with the performance of the work described in this Contract, except to the extent that the liability arises out of the negligence of the County and its employees. Contractor's indemnification shall also cover claims brought against the County under state or federal workers' compensation laws. If any aspect of this indemnity shall be found to be illegal or invalid for any reason whatsoever, the illegality or invalidity shall not affect the validity of the remainder of this indemnification.

**7. Insurance**

Contractor shall provide all insurance called for below under the heading "Insurance Coverage Required." As evidence of the insurance coverages required by this contract, the Contractor shall furnish a certificate of insurance to County. The certificate will specify parties who are Additional Insured and must include a notice provision regarding cancellations. Insurance coverages required under this contract shall be obtained from insurance companies authorized to do business in the State of Oregon.

**INSURANCE COVERAGE REQUIRED**

Contractor shall not commence any work until Contractor obtains, at Contractor's own expense, all required insurance as specified below. Such insurance must have the approval of Wasco County as to limits, form and amount. The types of insurance Contractor is required to obtain or maintain for the full period of the contract will be:

- A. **COMMERCIAL GENERAL LIABILITY** insurance coverage with a combined single limit of not less than \$2,000,000 for personal injury, bodily injury, advertising injury, property damage, premises, operations, products, completed operations and contractual liability. The insurance coverages provided for herein must be endorsed as primary and non-contributory to any insurance of County, its officers, employees or agents. Each such policy obtained by Contractor shall provide that the insurer shall defend any suit against the named insured and the additional insureds, their officers, agents, or employees, even if such suit is frivolous or fraudulent. Such insurance shall provide County with the right, but not the obligation, to engage its own attorney for the purpose of defending any legal action against County, its officers, agents, or employees, and that Contractor shall indemnify County for costs and expenses, including reasonable attorneys' fees, incurred or arising out of the defense of such action. The policy shall be endorsed to name Wasco County, its officers, agents, employees and volunteers as an additional insured. The additional insured endorsement shall not include declarations that reduce any per occurrence or aggregate insurance limit. Contractor shall provide additional coverage based on any outstanding claim(s) made against policy limits to ensure that minimum insurance limits required by the County are maintained. Construction contracts may include aggregate limits that apply on a "per location" or "per project" basis. The additional insurance protection shall extend equal protection to County as to Contractor or subcontractors and shall not be limited to vicarious liability only or any similar limitation. To the extent any aspect of this Paragraph shall be deemed unenforceable, then the additional insurance protection to County shall be narrowed to the maximum amount of protection allowed by law.
- B. **AUTOMOBILE LIABILITY** insurance coverage with a combined single limit of not less than \$500,000 for bodily injury and property damage resulting from operation of a motor vehicle. Commercial Automobile Liability Insurance shall provide coverage for any motor vehicle driven by or on behalf of Contractor during the course of providing Services under this contract. Commercial Automobile Liability is required for contractors that own business vehicles registered to the business. Examples include: plumbers, electricians or construction contractors. An example of an acceptable personal automobile policy is a contractor who is a sole proprietor that does not own vehicles registered to the business.
- C. **WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY** as statutorily required for persons performing work under this contract. Any subcontractor hired by Contractor shall also carry Workers' Compensation and Employers' Liability coverage.
- D. **ADDITIONAL INSURED PROVISIONS.** The Commercial General Liability Insurance and other policies the County deems necessary shall include the County as an additional insured with
- E. **NOTICE OF CANCELLATION.** There shall be no cancellation, material change, exhaustion of aggregate limits or intent not to renew insurance coverage without 30 days written notice to the County. Any failure to comply with this provision will not affect the insurance coverage provided to the County. The certificates of insurance provided to the County shall state that the insurer shall endeavor to provide 30 days' notice of cancellation to the County
- F. **CERTIFICATES OF INSURANCE.** As evidence of the insurance coverage required by the Contract, the Contractor shall furnish a Certificate of Insurance to the County. No contract shall be effected until the required certificates have been received and approved by the County. The certificate will specify and document all provisions within this Contract. A renewal certificate will be sent to the above address no less than 10 days prior to coverage expiration.

- G. **PRIMARY COVERAGE CLARIFICATION.** The parties agree that Contractor's coverage shall be primary to the extent permitted by law. The parties further agree that other insurance maintained by the County is excess and not contributory insurance with the insurance required in this section.

The procuring of required insurance shall not be construed to limit Contractor's liability under this Contract. Notwithstanding said insurance, Contractor shall be obligated for the total amount of any damage, injury, or loss caused by negligence or neglect connected with this Contract.

## **8. Method and Place of Submitting Notice, Bills and Payments**

All notices, bills and payments shall be made in writing and may be given by personal delivery or mail. Payments may be made by personal delivery, mail, or electronic transfer. The following addresses shall be used to transmit notices and other information:

### **To County:**

Tyler Stone, Administrative Officer  
Wasco County  
511 Washington Street, Suite 101  
The Dalles, OR 97058  
Business Phone: 541-506-2550

### **To Contractor:**

Helping Hands Janitorial  
414 Washington St., Ste. 1D  
The Dalles, OR 97058

Notices mailed to the address provided for notice in this section shall be deemed given upon deposit in the United States mail, postage prepaid. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery.

## **9. Merger**

This writing is intended both as a final expression of the Contract between the parties with respect to the included terms and as a complete and exclusive statement of the terms of the Contract. No modification of this Contract shall be effective unless and until it is made in writing and signed by both parties.

## **10. Ownership of Work Documents**

All work performed by Contractor and compensated by County pursuant to this Contract shall be the property of County upon full compensation for that work performed or document produced to Contractor, and it is agreed by the parties that such documents are works made for hire. Contractor hereby conveys, transfers and grants to County all rights of reproduction and the copyright to all such documents.

## **11. Labor and Material**

Contractor shall provide and pay for all labor, materials, equipment, tools, transportation, and other facilities and Services necessary for the proper execution and completion of all Contract work, all at no cost to County other than the compensation provided in this Contract.



**12. Termination for Convenience**

This Contract may be terminated by mutual consent of the parties upon written notice. In addition, County may terminate all or part of this Contract upon determining that termination is in the best interest of County by giving seven (7) days' prior written notice of intent to terminate, without waiving any claims or remedies it may have against Contractor. Upon termination under this paragraph, Contractor shall be entitled to payment in accordance with the terms of this Contract for Contract work completed and accepted before termination less previous amounts paid and any claim(s) County has against Contractor. Pursuant to this paragraph, Contractor shall submit an itemized invoice for all unreimbursed Contract work completed before termination and all Contract closeout costs actually incurred by Contractor. County shall not be liable for any costs invoiced later than thirty (30) days after termination unless Contractor can show good cause beyond its control for the delay.

**13. Termination for Cause**

County may terminate this Contract effective upon delivery of written notice to Contractor, or at such later date as may be established by County, under any of the following conditions:

- A. If County funding is not obtained and continued at levels sufficient to allow for purchases of the indicated quantity of Services. The Contract may be modified to accommodate a reduction in funds.
- B. If federal or state regulations or guidelines are modified, changed, or interpreted in such a way that the Services are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract.
- C. If any license or certificate required by law or regulation to be held by Contractor to provide the Services required by this Contract is for any reason denied, revoked, or not renewed.
- D. Contractor may have contact with the public in the course of performing this Contract and shall maintain good relations with the public. Failure to maintain good relations with the public shall constitute a breach of the Contract. The County may treat the failure to maintain good relations as a non-curable breach allowing the County to terminate the Contract and to disqualify Contractor from future work for the County.

**14. Termination for Default**

Either County or Contractor may terminate this Contract in the event of a breach of the Contract by the other. Prior to such termination, the party seeking termination shall give to the other party written notice of the breach and intent to terminate. If the party committing the breach has not entirely cured the breach within fifteen (15) days of the date of the notice, then the party giving the notice may terminate the Contract at any time thereafter by giving a written notice of termination.

If Contractor fails to perform in the manner called for in this Contract or if Contractor fails to comply with any other provisions of the Contract, County may terminate this Contract for default. Termination shall be effected by serving a notice of termination on Contractor setting forth the manner in which Contractor is in default. Contractor shall be paid the Contract price only for Services performed in accordance with the manner of performance as set forth in this Contract.

**15. Remedies**

In the event of breach of this Contract the parties shall have the following remedies:

- A. If terminated under paragraph 13 by County due to a breach by Contractor, County may complete the work either itself, by agreement with another contractor, or by a combination thereof.
- B. In addition to the above remedies for a breach by Contractor, County also shall be entitled to any other equitable and legal remedies that are available.
- C. If County breaches this Contract, Contractor's remedy shall be limited to termination of the Contract and receipt of Contract payments to which Contractor is entitled.
- D. County shall not be liable for any indirect, incidental, consequential, or special damages under the Contract or any damages arising solely from terminating the Contract in accordance with its terms.
- E. Upon receiving a notice of termination, and except as otherwise directed in writing by County, Contractor shall immediately cease all activities related to the Services and work under this Contract. As directed by County, Contractor shall, upon termination, deliver to County all then existing work product that, if the Contract had been completed, would be required to be delivered to County.

**16. Nondiscrimination**

During the term of this Contract, Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or national origin.

**17. Governing Law; Jurisdiction; Venue**

This Contract shall be governed by and construed in accordance with the laws of the state of Oregon without regard to principles of conflicts of law. Any claim, action, suit or proceeding (collectively "Claim") between County and Contractor that arises from or relates to this Contract which results in litigation shall be brought and conducted solely and exclusively within the Circuit Court of Wasco County for the state of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States Court for the State of Oregon.

**18. Compliance with Laws and Regulations**

Contractor shall comply with all state and local laws, regulations, executive orders and ordinances applicable to this Contract or to the delivery of Services hereunder.

**19. Experience, Capabilities and Resources**

By execution of this Contract, the Contractor agrees that Contractor has the skill, legal capacity, and professional ability necessary to perform all the Services required under this Contract, and Contractor has the capabilities and resources necessary to perform the obligations of this Contract.

**20. Access to Records**

For not less than three (3) years after the Contract expiration and for the purpose of making audit, examination, excerpts, and transcripts, County, and its duly authorized representatives shall have access to Contractor's books, documents, papers, and records that are pertinent to this Contract. If, for any reason, any part of this Contract, or any resulting construction contract(s) is involved in litigation, Contractor shall retain all pertinent records for not less than three years or until all litigation is resolved, whichever is longer. Contractor shall provide full access to these records to County, and its duly authorized representatives in preparation for and during litigation.

**21. Representations and Warranties**

Contractor represents and warrants to County that (1) Contractor has the power and authority to enter into and perform this Contract, (2) when executed and delivered, this Contract shall be a valid and binding obligation of Contractor enforceable in accordance with its terms, (3) Contractor shall, at all times during the term of this Contract, be duly licensed to perform the Services, and if there is no licensing requirement for the profession or services, be duly qualified and competent, (4) the Services under this Contract shall be performed in accordance with the professional skill, care and standards of other professionals performing similar services under similar conditions. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

**22. Attorney Fees**

In case a suit or action is instituted to enforce the provisions of this Contract, the parties agree that the losing party shall pay such sums as the court may adjudge reasonable for attorney fees and court costs, including attorney fees and costs on appeal.

**23. Confidentiality**

Contractor shall maintain the confidentiality of any of County's information that has been so marked as confidential, unless withholding such information would violate the law, create the risk of significant harm to the public or prevent Contractor from establishing a claim or defense in an adjudicatory proceeding. Contractor shall require similar agreements from County's and/or Contractor's subcontractors to maintain the confidentiality of information of County.

**24. Force Majeure**

Contractor shall not be deemed in default hereof nor liable for damages arising from its failure to perform its duties or obligations hereunder if such is due to causes beyond its reasonable control, including, but not limited to, acts of God, acts of civil or military authorities, fires, floods, windstorms, earthquakes, strikes or other labor disturbances, civil commotion or war.

**25. Waivers**

No waiver by County of any provision of this Contract shall be deemed to be a waiver of any other provision hereof or of any subsequent breach by Contractor of the same or any other provision. County's consent to or approval of any act by Contractor requiring County's consent or approval shall not be deemed to render unnecessary the obtaining of County's consent to or approval of any subsequent act by Contractor, whether or not similar to the act so consented to or approved.

**26. Severability**

Any provisions of this Contract which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof, and such remaining provisions shall remain in full force and effect.

**27. Headings**

The captions contained in this Contract are for convenience only and shall not be considered in the construction or interpretation of any provision hereof.

**28. Integration**

This Contract, including the attached exhibits contains the entire agreement between the parties regarding the matters referenced herein and supersedes all prior written or oral discussions or agreements regarding the matters addressed by this Contract.

**29. Amendments**

This Contract shall not be waived, altered, modified, supplemented, or amended in any manner without a duly executed Amendment. Any amendments to this Contract shall be effective only when reducing to writing and signed by both parties as below.

**30. Authority**

The representatives signing on behalf of the parties certify that they are duly authorized by the party for which they sign to make this Contract.

**31. Compliance with Oregon Tax Laws**

The undersigned is authorized to act on behalf of Contractor and that Contractor is, to the best of the undersigned's knowledge, not in violation of any Oregon Tax Laws.

APPROVED this 5<sup>th</sup> day of June, 2019.

Helping Hands Janitorial – Contractor

Wasco County Board of Commissioners

\_\_\_\_\_  
Printed Name: \_\_\_\_\_

\_\_\_\_\_  
Steven D. Kramer, Chair

Title: \_\_\_\_\_

\_\_\_\_\_  
Scott C. Hege, Vice-Chair

\_\_\_\_\_  
Kathleen B. Schwartz, County Commissioner

APPROVED AS TO FORM

\_\_\_\_\_  
Brad Timmons, County Counsel





## MOTION

**SUBJECT:** Personal Services Contract – Janitorial Services

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I move to approve the Personal Services Contract for janitorial services at 419 E. 7<sup>th</sup> Street, The Dalles, Oregon, between Wasco County and Helping Hands Janitorial.



## DISCUSSION ITEM

### Building Codes Vehicle Purchase

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[STAFF MEMO](#)

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5294/2019

To: Board of County Commissioners  
From: Mike Middleton – Finance Director  
Re: Vehicle Purchase for Building Codes

The Building Codes Department is intended to be fully active as of July 1<sup>st</sup>. Part of ensuring this happens is to provide vehicles for the Building Official and the Inspectors. This will require four (4) vehicles.

Specifications were developed to meet the expected needs. The primary concerns were mileage, ride height and 4WD or AWD. A complete list of the specifications is attached to this memo. Based on the MSRP of the vehicles reviewed while setting the specifications; this purchase will be under the \$150,000 threshold for goods and services in the County procurement policy. This makes it an “intermediate Procurement”. To comply with the rules in this category, at least three competitive quotes need to be requested. Four (4) local vendors have been requested to provide quotes. Each of these vendors covers multiple brands which will ensure a wide review of vehicles.

The bids are due in to Finance by 1 pm on Monday, May 3<sup>rd</sup>, 2019. Payment will be made out of the Capital Acquisition Reserve Fund as there is appropriation available and it is an appropriate place for the expense. These funds will be reimbursed to the General Fund by the Building Codes Funds as of July 1<sup>st</sup>, 2019. This is planned in the Approved Budget from the Budget Committee. The budget hearing and budget adoption are scheduled to occur on June 12<sup>th</sup>, 2019.

Since the bids are not due until June 3<sup>rd</sup>, the recommendation is not included in the memo. However, it will be sent to the BOCC before the meeting. I apologize for the tight timeline, but it has become necessary as the rapidly approaching start date is right around the corner.

The intention is to receive and pay for the vehicles the week of 6/10/19. Approval of this purchase at the 6/5/19 BOCC meeting will allow the issuance of the Purchase Order to the winning bid.



To whom it may concern:

Wasco County is procuring four (4) vehicles for the new Building Codes Department. These vehicles will be used for Building Inspectors to travel to sites for inspections. Due to the nature of the use, the vehicles must meet the following specifications:

1. New – not used, preowned, or lease return; the vehicle can be 2018 or newer model year as long as it is new.
2. All Wheel Drive or Four Wheel Drive (AWD or 4WD)
3. Minimum Ground Clearance of 8.2 inches
4. Fuel Type: Gas
5. Minimum EPA rated Mileage: 22 City/30 Highway
6. Minimum 50 cu.ft cargo space
7. Three (3) year warrantee
8. Same make and model – the year does not need to be the same
9. Color – any stock color – the vehicles can each be a different color
10. Delivery available the week of June 10<sup>th</sup>, 2019
11. The bid must include all applicable costs

Steps in the process:

1. Submit the bid offered either in writing or by email to Mike Middleton, Finance Director Wasco County; 511 Washington St suite 207; The Dalles, OR 97058; [mikem@co.wasco.or.us](mailto:mikem@co.wasco.or.us) by 6/3/2019
2. The Finance Director will have the Board of County Commissioners approve the selected bid on 6/5/2019
3. A purchase order will be issued immediately after approval
4. A check will be cut & paid the week of 6/10/2019.

Please direct any questions to:

Mike Middleton – Finance Director, Wasco County; 541-506-2770;  
[mikem@co.wasco.or.us](mailto:mikem@co.wasco.or.us)





## DISCUSSION ITEM

### Dispute Resolution Grant Award Selection

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[STAFF MEMO](#)

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[6 RIVERS RFP GRANT NARRATIVE](#)

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[OOC DR NOTICE OF ELIGIBILITY](#)

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[SELECTION LETTER](#)

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## MEMORANDUM

**SUBJECT: Community Dispute Resolution Grant Award Selection**

**TO: BOARD OF COUNTY COMMISSIONERS**

**FROM: KATHY WHITE**

**DATE: 5/28/2019**

### BACKGROUND INFORMATION:

This is a biennial grant process for community dispute resolution funding. We have partnered with Gilliam, Sherman, Wheeler, and Hood River Counties for this funding with Wasco County managing the process. A Joint Participation Resolution starts the process which concludes with the selection of a grantee by the Boards/Courts of the participating counties. As expected, our only applicant and qualified provider is 6 Rivers Community Mediation. Gilliam, Sherman, Wheeler, and Hood River Counties have all approved the selection of 6 Rivers as our grant recipient.

With final approval from the Wasco County Board of Commissioners, a notification letter will be sent to the Oregon Office for Community Dispute Resolution at the University of Oregon. Upon receipt, OOCDR will enter into a grant agreement with the selected Grantee.

## **2019-2021 Grant Application Narrative**

### **Six Rivers Dispute Resolution Center Mission Statement**

By establishing a forum where each party is heard, we teach listening.

By creating an environment where each party can speak, we teach communication.

By developing processes that seek resolution, we teach the importance of dialogue.

By building these processes into a method of mediating disputes we teach citizenship.

### **Six Rivers Goals and Objectives**

We invite you to support our mission and build better communication skills for the people of our region. We have proudly served this 5 county region and Oregon over the past 18 years as a team of peacemakers. For the past five and a half years, we have built a strong non-profit organization that remains flexible to your needs. Please take a look at the letter of support and let us know what support your individual community or family needs in the years ahead.

#### **A. Expand Capacity of our Community to productively resolve interpersonal disputes**

1. Strengthen partnerships with local governments and agencies that specialize in issue management and complaint driven processes.
2. Coordinate and cooperate with Counties and Cities to identify local needs and design approaches to build solutions.
3. Continue to create new leaders from schools and civic groups, Rotary and Service Club members to spearhead future direction of communication Trainings and identify places for advancement of communication skills.

#### **B. Increase Collaboration within Local Government, State and Federal Agencies.**

Work with cities and counties during the annual planning processes, to identify needs and issues where mediation can be helpful. Reach out to Federal Agencies in our region to connect on needs analysis for training, mediation and facilitation. Federal Agencies we intend to work with include all USDA affiliated agencies, State Agricultural Agencies and Tribal Governments. Partner with Association of Oregon Counties and Regional Solutions to make the most impact out of resources for rural counties.

#### **Description of Services:**

Six Rivers seeks to inspire civic engagement through meaningful volunteer experiences! Community Mediation continues to fill a unique need in the dedication of volunteerism. We train, mentor and build camaraderie amongst volunteers. They, in turn, nurture organic and inspired learning. Volunteers are utilized in all aspects of the program outside of grant administration. Volunteers engage in conflict coaching; participate in co-mediations, facilitations, advanced training delivery, outreach presentations and co-teaching of workshops. The emotional reward and intellectual challenge of guiding people through collaborative change creates lasting and life changing impacts.

#### **Conflicts to be addressed include:**

Neighbor to neighbor cases involving boundary disputes between residents of the region. Typical cases involve conflicts arising from sounds, landscaping, animal behavior, race, culture, age, gender, language, schedules, lifestyles, as well as communication breakdowns. Migrating populations

from urban to rural areas and rural to urban often experience culture shock. Small communities adapt to change, but the pace of change is often different between the individuals.

Restorative Practices in Families and Schools: by building or re-building relationships that are essential for emotional support as families and kids grow, our goal is maintaining the home as a safe atmosphere by fostering dialogue between family members. Many topics in conflict feel too difficult or dangerous for the family members to handle without the guidance of a third party.

NEW IN 2019: Our staff has completed over 280 hours of training in Restorative Practices and are certified to Train the Trainers for schools who wish to take this Trauma Informed Care approach to discipline in the schools.

USDA Certified Agricultural Mediations and Agricultural Credit Cases:

Federal Agency Mediation provider throughout Oregon: Six Rivers DRC operates the Oregon USDA Certified Agricultural Mediation Program. The program is funded in part by a Federal Grant for cases specified under 7CFR 785.

Six Rivers location is relevant to the clients: Eastern Oregon is home to a majority of the Agricultural producers of our state. Sherman County alone receives one of the largest percentages of USDA funding in Oregon.

Federal funding helps to stabilize the small but diverse rural program, in an area where the population density is low and case types are varied by each community.

Benchmarks for upcoming biennium:

Mediator training: Targeting 20 people per year for 6 hours or more of training. 6 new mediators completing 40 hour training and enrolling in our Practicum.

Community Trainings: Workshops and outreach presentations will target 200 residents per year. Mediation services: Improve the lives of 450 people regionally each year through direct participation as stakeholders in the mediated solutions.

Financial impact on participants and the savings generated through collaborative agreements are also in the works for being tracked through a collaborative project with the Evans School of Public Policy and Governance at University of Washington.

Types of Disputes that will be handled:

Neighbor to neighbor	Family decisions	Restorative Justice
Community dialogue	Housing: Roommates	Nuisance
Parenting plans	Foreclosure and other Loans	Farmer to farmer
	Landlord Tenant	Organic Certification
Agricultural Mediation	Consumer Credit	<b>Family Farm Transition</b>
USDA program compliance	Federal Forest	
Rural Development Loans	Crop Insurance	

Types of dispute resolution services that will be offered: Case Development, Conflict Analysis, Conflict Coaching, Mediation, Facilitation, and Customized training and skill based workshops: workplace conflict resolution training seminars, school based conflict resolution



skills training. School based Restorative Practices training and services. Specialty Mediation as appropriate to mediator skills and program capacity. Agricultural Mediation, Foreclosure Mediation, Facilitation and Mediation, Domestic Relations Mediation.

#### Publicity and Outreach.

RADIO: 12 appearances on local radio morning civic informational talk show. 25 minutes in education on conflict resolution spot. Listening audience 8,000. Press releases or similar public notices will be issued each year; 4 -one per quarter, announcing trainings and collaborative efforts in the community.

Listening booth: we participate in county fairs and other special events in spring and summer to allow people to vent about whatever is bothering them. Trained Compassionate listeners sit and listen attentively as anyone who wants to talk can talk.

Listen UP! A series of courses for community participation. Non-violent communication and compassionate listening as well as emotional intelligence are 3 areas continuing education courses in professional development areas for counselors, attorneys, and mediators. We bring in outside professional trainers to provide a variety of access to intellectual and emotional approaches to communication studies.

Website presence and access through texting as a portal for both client access and community education: [www.6rivers.org](http://www.6rivers.org)

Social Media Networking through Six Rivers Dispute Resolution Center's Facebook page and Twitter accounts- trainings, mediator spotlights, program highlights are updated twice a week.

Case (access) restrictions to be imposed: Six Rivers case intake workers are trained in screening calls for appropriateness of services. Screening includes extensive analysis of any history of Domestic Violence and the impact on negotiations.

#### ADA facilities:

The home office in Hood River is compliant with ADA accessibility requirements and we have relationships with County and City facilities throughout the region to accommodate the large region and reduce travel whenever possible. Any client requiring additional accommodations will be provided with all services necessary to ensure equal access. Spanish and other language interpreters are available with advance notice.

#### Mediator Recruitment:

Given the broad geographical diversity of our region, it makes the most sense to have mediators who live in many different communities, available to volunteer. We will focus recruitment of new volunteers on Sherman, Wheeler and Gilliam Counties, hosting at least One of our 40 hour basic mediation trainings on location in one of those 3 counties. There is an ongoing challenge in the low population areas, to find mediators who can serve as neutral to disputes in those communities. We will seek to develop a mediator sharing concept for those counties, working to ensure confidentiality of disputes and services.

Social media and social services will be utilized to nominate people who are already natural go-between's and trusted confidants in their communities. With an apprenticeship training program and the co-mediator model, we can develop stronger community problem-solving.

Goal in volunteer recruitment is: 4-6 new volunteer mediators per year.

#### Mediator Training:

Quality control measures for volunteer mediators continue to grow and be validated throughout the Northwest. Six Rivers Executive Director is actively engaged in the development of the highest standards for mediator certification. We will offer at least one (typically 2) 40 hour

Basic Mediation training(s) each year. We add a minimum of 3 volunteer mediators per training. The 40 hour training activities and supervision plans meet the requirements for community mediators in UO Policy CDRP Section Q.

#### Current Volunteers

32 active volunteer mediators are currently in our pool. Continuing education courses are offered once a month at varying locations. Guest speaker and professionals throughout the area enhance training opportunities with topics such as Ethics in Mediation, Contract Law, Counseling vs. Mediation as a practice, Working Effectively with Juveniles, Family Law, etc. Succession planning indicates we will host a Basic Mediation Training every Fall and Spring. The average span of time for mediators with Six Rivers is 7 years. Current volunteer pool is comprised of mediators with specialty areas in Family Law, Foreclosure and Facilitation

#### Evaluation

##### Mediation Services:

Evaluation of appropriateness for mediation is conducted during intake. Cases involving any history of domestic violence or mental illness are screened at additional levels and referred to other services as appropriate.

Written evaluation data is gathered in person at the end of a mediation session and submitted to the mediators directly. Follow up evaluation is sent out by email to the parties within 3 months of the conclusion of the mediation. Volunteer mediators conduct follow up phone calls and verbally survey the parties following the OOCDR questionnaire.

Six Rivers is interested in a deeper collaboration with the University of Oregon School of Law to explore with previous mediation clients- the impact of our services. In 2019-2021 we hope to include a model of evaluation surveys that contribute to the data driven effectiveness of mediation and conflict resolution in our state.

Training participants complete a self-evaluation at the end of the mediation trainings. Evaluation data is submitted to OOCDR every six months, using the aggregation tools provided by the grantor. Grantor provides an excel database that enables the collection and presentation of data in a statewide effort to demonstrate and ensure quality of services.

Annual program evaluation plans: Board of Directors will conduct an Annual Executive Director evaluation by February of each year. The Board works with the Executive Director to update the Annual Program Development Plan. The Annual Plan will be reviewed and expanded upon each year in May along with budget planning based on grant progress and opportunities within the region and the Northwest. Board of Directors expansion and recruitment goals include maintaining equity in board representation and diversity of stakeholders to reflect our community.

#### Affirmative Action Statement:

Six Rivers supports Equal Opportunity for all. Please see our attached Employee Handbook for the full policy of Affirmative Action. Pages 5 & 6.

**Internal Control Structure** is included in the attached Fiscal Policy. There are particular oversight roles for the Board of Directors, each staff member and the contracted bookkeeping service.

You will find the additional information requested on Affirmative Action statements, Internal Control, Letters of Support, Budget, and Consent to Mediate in the following attachments.

Training of Mediators and Qualifications  
of the Lead Trainer: Master Quality  
Assurance Program Lead Trainer  
Resume for Marti Dane  
Basic Mediation Training Objectives  
Basic Mediation Training Application Basic  
Mediation Training Agenda

Letters of Support x 5

Budget addendums:  
Fee Schedule  
Sliding Fee schedule  
Previous biennium financial reports

Documents regarding client interaction in mediation:  
Consent to Mediate/Voluntary Nature of Mediation/Confidentiality  
Statement/Consent to mediate form  
Evaluation post session  
Evaluation 3 months later

Policy:  
Personnel Policy Manual  
Fiscal Policy Manual

Respectfully Submitted,



Marti Kantola Dane  
Executive Director



May 3, 2019

Gilliam, Hood River, Sherman, Wasco, Wheeler Counties  
Board of Commissioners  
511 Washington, Room 302  
The Dalles, OR 97058  
Attention: Kathy White

RE: 2019-2021 Community Dispute Resolution Grant

Dear Board of Commissioners:

I am pleased to inform you that the Oregon Office for Community Dispute Resolution (OOCDR) has completed its review of applications for grant funding under the Oregon Community Dispute Resolution statute and University of Oregon policy. The eligible program in your County(ies) is:

\* Six Rivers Dispute Resolution Center

In determining the entity's eligibility for funding, OOCDR requested a few clarifications from the applicant. The additional information submitted from the grant applicant is attached to the same email that transmitted the letter of eligibility. Hard copies will be mailed to you upon request.

At this point we ask that the County Board of Commissioners take action on or before June 14, 2019 to officially select the eligible grantee to receive OOCDR funds and that you notify me once that action has been taken.

After I receive notice of your selection, I will work directly with the eligible applicant to sign a grant agreement and award the grant. A copy of the grant agreement will be provided to you. Please note that the final grant award will be subject to authorization of ongoing funding by the Oregon Legislative Assembly for the 2019-2021 biennium.

These grants help make it possible to educate the citizens of Oregon about mediation and assist them in finding effective ways to resolve their disputes peacefully. Thank you for the ways in which you support these important community engagements.

Sincerely,

Patrick Sponsler, MPA  
Administrator

cc: Marti Dane, Six Rivers Dispute Resolution Center

Oregon Office for Community Dispute Resolution  
1515 Agate Street, Eugene, OR 97403  
1221 University of Oregon, Eugene, OR 97403  
541-346-1623 [oocdr.uoregon.edu](http://oocdr.uoregon.edu)





**BOARD OF COUNTY COMMISSIONERS**

511 Washington St, Ste. 101 • The Dalles, OR 97058  
p: [541] 506-2520 • f: [541] 506-2551 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

***Pioneering pathways to prosperity.***

Patrick M. Sponsler, MPA  
Administrator  
Oregon Office for Community Dispute Resolution  
University of Oregon School of Law  
1221 University of Oregon  
Eugene, OR 97403

June 5, 2019

Dear Mr. Sponsler-

As Community Dispute Resolution Coordinator for Wasco, Hood River, Sherman, Gilliam and Wheeler Counties, we are pleased to notify you that we have approved the selection of Six Rivers Community Mediation Services as Grantee to receive Oregon Office for Community Dispute Resolution (OOCDR) funding for all five counties for the 2019-2021 biennium.

Please contact us should you have any questions or concerns.

Thank you,  
WASCO COUNTY BOARD  
OF COMMISSIONERS

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Steven D. Kramer, Commission Chair

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Scott C. Hege , Commission Vice-Chair

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Kathleen B. Schwartz, County Commissioner



## DISCUSSION ITEM

### IGA for Prosecution Services

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[STAFF MEMO](#)

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[IGA FOR PROSECUTION SERVICES](#)

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[MOTION LANGUAGE](#)

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## MEMORANDUM

**SUBJECT:** IGA for the Provision of Criminal Prosecution Services

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**TO:** BOARD OF COUNTY COMMISSIONERS

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**FROM:** KATHY WHITE

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**DATE:** 5/28/2019

### **BACKGROUND INFORMATION:**

At the April 3, 2019 Session of the Board of County Commissioners, City of The Dalles Representatives proposed the transfer of Municipal Court Cases to Wasco County for prosecution. It is the City's prerogative to choose whether or not to prosecute their own criminal cases; however, during the discussion, they recognized the drain on County resources that would result from the transfer. The City proposed an agreement that outlined responsibilities and provided for compensation to the County for the provision of prosecution services. The agreement included in today's packet has been vetted by both City and County Attorneys and approved by The Dalles City Council.

**INTERGOVERNMENTAL AGREEMENT BETWEEN  
THE CITY OF THE DALLES, WASCO COUNTY, AND  
THE WASCO COUNTY DISTRICT ATTORNEY'S OFFICE  
FOR THE PROVISION OF CRIMINAL PROSECUTION SERVICES**

This Agreement is made this 5<sup>th</sup> day of June, 2019, by and between the City of The Dalles, a municipal corporation of the State of Oregon, hereinafter referred to as the "CITY", and Wasco County, a political subdivision of the State of Oregon formed under the Oregon Constitution and ORS Chapter 203, hereinafter referred to as the "COUNTY"; and the Wasco County District Attorney, hereinafter referred to as "DISTRICT ATTORNEY".

**WHEREAS**, the State of Oregon has declared it to be a matter of statewide concern to promote intergovernmental cooperation for the purpose of furthering economy and efficiency in local government; and

**WHEREAS**, the legislature has given general authority for intergovernmental agreements by units of local government pursuant to the provisions of ORS 190.101 et. seq; and

**WHEREAS**, pursuant to Chapter V, Section 23(7) of the City Charter, the City Council adopted Resolution No. 19-010 on the 13th day of May, 2019, transferring certain functions associated with misdemeanor criminal cases in the Municipal Court to the Wasco County Circuit Court; and

**WHEREAS**, the DISTRICT ATTORNEY has responsibility for prosecution of misdemeanor cases filed in the Wasco County Circuit Court; and

**WHEREAS**, the CITY has presented a proposal to Wasco County to provide compensation to assist the COUNTY with the additional costs of prosecution of misdemeanor criminal charges in the Wasco County Circuit Court by the DISTRICT ATTORNEY, as a result of the adoption by the CITY of Resolution No. 19-010; and

**WHEREAS**, the City has reflected evidence of its good faith intent to consider this Agreement to be long term in nature by including a line item in the City's proposed 2019-2020 budget for compensation to be paid pursuant to this Agreement; and

**WHEREAS**, the DISTRICT ATTORNEY acknowledges the intent of this Agreement is to have the DISTRICT ATTORNEY assume prosecution of the criminal misdemeanor cases to be transferred from the Municipal Court to the Wasco County Circuit Court, subject to the DISTRICT ATTORNEY'S exercise of prosecutorial discretion;

**NOW, THEREFORE, IN CONSIDERATION OF THE RECITALS ABOVE, THE PARTIES AGREE AS FOLLOWS:**

Section 1. County and District Attorney Duties. In consideration of the compensation to be paid to the COUNTY under Section 2, the COUNTY agrees to provide funding for prosecution services to be provided by the DISTRICT ATTORNEY's office of misdemeanor criminal offenses which have been prosecuted previously in the CITY Municipal Court. CITY,



COUNTY and DISTRICT ATTORNEY understand and agree the COUNTY shall have the discretion to determine how the funds provided by CITY under Section 2 shall be expended in accordance with COUNTY budget procedures, and that the DISTRICT ATTORNEY shall have prosecutorial discretion to determine what cases are prosecuted by the DISTRICT ATTORNEY'S Office.

Section 2. City's Duties. Beginning on July 1, 2019, CITY shall pay COUNTY the sum of eighty thousand and no/dollars (\$80,000). Said sum shall be paid annually each year that this Agreement remains in effect.

Section 3. Increase in Compensation. Beginning with the term which commences on July 1, 2020, the amount of compensation paid by the CITY pursuant to Section 2 of this Agreement shall be increased by three percent (3%). This additional increase in compensation shall continue to apply during any renewal term of this Agreement.

Section 4. Term. The initial term of this Agreement shall commence upon July 1, 2019, and shall continue until June 30, 2020. Thereafter, this Agreement will be renewed on an annual basis with the term that begins on July 1, 2020, unless any one of the parties provides written notice of intent to terminate this Agreement at least one hundred eighty days (180) days prior to June 30th of each year thereafter. This Agreement may also be terminated at any time by mutual agreement of all the parties.

Section 5. Status as Independent Contractor. In the performance of the work duties and obligations required of the DISTRICT ATTORNEY'S Office under this Agreement, it is mutually understood and agreed that said office is at all times acting and performing as an independent contractor. No relationship of employer/employee is created by this Agreement. The CITY shall neither have, nor exercise, any control over the methods by which the DISTRICT ATTORNEY'S Office shall perform its work and functions. The sole interest and responsibility of the CITY is to assure the services covered by this Agreement shall be performed and rendered in a competent, efficient, and satisfactory manner. The COUNTY and DISTRICT ATTORNEY'S Office shall not have any claims under this Agreement against the CITY for vacation pay, sick leave, retirement benefits, Social Security benefits, worker's compensation benefits, unemployment or other employee benefits of any kind.

Section 6. Non-appropriation. The obligation of each party to perform their duties under this Agreement is conditioned upon the party receiving funding, appropriations, limitation, allotment, or other expenditure authority sufficient to allow the party, in the exercise of its reasonable administrative discretion, to meet its obligations under this Agreement.

Section 7. Notices. Any notice required to be given under this Agreement or required by law shall be in writing and delivered to the parties at the following addresses:

**CITY OF THE DALLES**  
City Manager  
313 Court Street  
The Dalles, OR 97058

**WASCO COUNTY**  
Administrative Officer  
511 Washington Street  
The Dalles, OR 979058

**DISTRICT ATTORNEY**  
Wasco County District Attorney  
511 Washington Street  
The Dalles, OR 97058

Section 8. Applicable Laws. The law of the State of Oregon shall be used in construing this Agreement and enforcing the rights and remedies of the parties.

Section 9. Merger. There are no other undertakings, promises or Agreements, either oral or in writing, other than that which is contained in this Agreement. Any amendments to this Agreement shall be in writing and executed by both parties.

**IN WITNESS WHEREOF**, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement on the respective dates shown below.

CITY OF THE DALLES

WASCO COUNTY

By: \_\_\_\_\_  
Julie Krueger, City Manager

By: \_\_\_\_\_  
Tyler Stone, Administrative Officer

Date: \_\_\_\_\_

Date: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Izetta Grossman, CMC City Clerk

Approved as to form:

Approved as to form:

\_\_\_\_\_  
Gene E. Parker, City Attorney

Date: \_\_\_\_\_

\_\_\_\_\_  
Bradley V. Timmons, Wasco County  
Counsel

Date: \_\_\_\_\_

WASCO COUNTY DISTRICT ATTORNEY

\_\_\_\_\_  
Eric Nisley, District Attorney

Date: \_\_\_\_\_



## MOTION

**SUBJECT: Prosecution Services Agreement**

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I move to approve the Intergovernmental Agreement between City of The Dalles, Wasco County and the Wasco County District Attorney's Office for the provision of criminal prosecution services.



## DISCUSSION ITEM

**NACo Delegate**

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[STAFF MEMO](#)

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[NACO MEMO](#)

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## MEMORANDUM

**SUBJECT: NACo Delegate**

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**TO: BOARD OF COUNTY COMMISSIONERS**

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**FROM: KATHY WHITE**

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**DATE: 5/28/2019**

### **BACKGROUND INFORMATION:**

Each year we are asked to designate a delegate to vote on behalf of Wasco County at the NACo annual conference. Generally, we have one attending Commissioner who is the voting delegate along with the Administrative Officer. This year, we have two elected officials (Vice-Chair Hege and County Treasurer Preston) attending along with the Administrative Officer. Staff recommends designating Vice-Chair Hege as Wasco County's voting delegate and then either Mr. Stone or Mr. Preston as the alternate.



## MEMORANDUM

### ELECTION OF NACo OFFICERS AND VOTING ON POLICY

To: County Board Chairpersons, Parish Presidents, Borough Mayors,  
County Judges, Elected County Executives and County Clerks  
From: Greg Cox, NACo President  
Date: May 16, 2019  
Subject: Voting Credentials – 2019 Annual Conference

NACo is preparing for the 84th Annual Conference to be held July 12-16, 2019, in Clark County, Nev. It is important that your county participates in the association's annual election of officers and voting on policy. **In order to participate, a county must have paid its membership dues and have one paid registrant for the conference, according to NACo bylaws.**

Please read the enclosed information carefully. Indicate on the credentials form the name of the county voting delegate and alternate authorized to pick up your county's voting materials.

A checklist is enclosed to assist you in filling out the voting credentials form. Additionally, **the chief elected official of your county must sign the form.** A chief elected official may be a:

- board chair/president
- mayor
- county judge
- **elected** county executive

*Please fill out this form in advance and scan and e-mail, mail or fax the enclosed form by **FRIDAY, JUNE 28.***

**If no one from your county is planning to register for the conference, you do not have to turn in the credentials form.**

Email: [credentials@naco.org](mailto:credentials@naco.org)  
Mail: Credentials Committee  
Attn: Lauren Wilson  
National Association of Counties  
660 North Capitol St, NW  
Suite 400  
Washington, DC 20001  
Fax: 866.370.9421

For questions, please contact Lauren Wilson, Credentials Committee Liaison, at [credentials@naco.org](mailto:credentials@naco.org) or 888.407.NACo (6226), direct line: 202.661.8840. We look forward to seeing you in Clark County.



## 2019 Credentials Process Frequently Asked Questions

### **On what issues or for which candidates do counties/parishes/boroughs vote?**

Counties vote on resolutions that set NACo legislative and association policy for the coming year. Delegates also elect NACo officers for the coming year. The second vice president is typically the only contested position.

### **How can my county vote?**

A county must be a NACo member "in good standing" in order to vote. This means your county's dues for 2019 must be paid before the voting occurs. Also, the county must have at least one paid registration for the annual conference and have proper credentials.

### **What are credentials?**

Credentials attest to a county's eligibility to vote. Credentials contain information on the number of votes a county is eligible to cast, as well as the identity of the delegate that is authorized to cast the county's vote.

### **How is the credentials form distributed?**

The form is mailed in May to the clerk and chief elected official of member counties so that the county can provide the name of the voting delegate to NACo. Conference registrants will receive an e-mail with a link to the credentials form as well. Only counties that have paid their 2019 NACo dues will receive a credentials form. Please return this form by Friday, June 28, 2019.

### **Why did I receive a credentials form?**

You are receiving this form because you are the chief elected official at your county, your county's clerk, or you registered for the 2019 NACo Annual Conference. If you wish to vote, please bring the credentials form to your chief elected official to fill out and return to NACo. Please see this packet for more instructions on the form.

### **My county has misplaced the credentials form. What should I do?**

The credentials form is available in the Elections and Voting Credentials section of the NACo website ([www.naco.org/credentials](http://www.naco.org/credentials)). After you download, print, and fill out the form correctly, you can return it to NACo. Please call Lauren Wilson at 202.661.8840 if you need assistance.

### **If my county is not registering for the Annual Conference, does my county have to send in the credentials form?**

No. Only counties who register may vote. Please do not return the credentials form to the NACo office if your county does not plan to register for the Annual Conference.

### **What is a voting delegate?**

A voting delegate is someone authorized by your county/parish/borough board to pick up a ballot and cast your county's votes at the annual conference. The delegate must have a paid registration to the conference.





**Who may be a voting delegate?**

Any elected or appointed official or staff member from your county/parish/borough may be a voting delegate. That decision is up to your county board.

**What is an alternate?**

An alternate is another elected or appointed official or staff member from the county delegated by the county to pick up and cast its ballot. The alternate must have a paid registration to the conference. The delegate or alternate listed on the credentials form may pick up your county's ballot.

**My county has only one person attending the conference. Does my county have to designate an alternate?**

No. It is not necessary to list an alternate if a delegate is named.

**Whose ballots may the state associations of counties/parishes/boroughs receive?**

Your state association of counties/parishes/boroughs is allowed to pick up any unclaimed ballots from counties/parishes/boroughs that have registered delegates. The pick-up time for state associations is Sunday afternoon (2 to 5 p.m.) during the conference. The state association may then cast those ballots in the election.

**My county does not want our state association to pick up our votes. How does my county go about indicating this decision?**

You must check the box that says *"If my ballot is not picked up, I DO NOT AUTHORIZE my state association to pick up or cast my county's vote. I understand that my county's votes will NOT be cast if I select this option."* Please remember that your county's votes will not be cast at all with this option if your delegate does not pick up the ballot.

**If I do not get my credentials form into the NACo office by June 28, may I become credentialed on site at the conference?**

Yes. You may bring the original credentials form signed by your chief elected official or fill out the on-site ballot form. By signing the on-site ballot form you declare that you and the other conference attendees from your county have agreed that you are the voting delegate for your county. You must be registered for the conference to be able to vote.

**What happens if multiple registered attendees from my county completes the on-site ballot form?**

If there is uncertainty as to who the authorized delegate is, and more than one person claims to be your county's authorized delegate, officials from your county will need to resolve the dispute by 1 p.m. PDT on Sunday July 14, 2019. Unless the dispute is resolved, your county's votes will not be counted.

To resolve the dispute, all registrants who filled out the on-site ballot form are required to agree as to who is the individual authorized to cast their county's votes and communicate that to Lauren Wilson, Credentials Committee Liaison, at the Credentials Desk by 1 p.m. PDT on July 14, 2019.



**How do I get my ballot?**

When you submit your credentials form NACo staff prints out a paper ballot to bring to the NACo Annual Business Meeting. In order to vote you will need to pick up this paper ballot at the NACo Credentials Desk. Your county has until 1 p.m. on Sunday, July 14 to come to the Credentials Desk and pick up your ballot. If you do not pick it up by 1 p.m. your state association can then pick up your vote until 5 p.m. unless you check the box on the form to not permit them. If you check that box and do not pick up your own ballot your county will not be permitted to vote.

**What would happen if I have picked up my ballot, but need to leave before the election?**

If you have picked up the ballot for your county but will not be present to cast it at the NACo Annual Business Meeting on Monday morning, you can give that ballot to a delegate from your same county, from another active member in your state, the head of your state delegation, or your state association president or president's designee. To do this, you (transferer) and the person you are handing the ballot to (transferee) must sign the Record of Ballot Transfer form on the back of your ballot.

**If county won't be attending this year's Annual Conference, can we still vote?**

Yes. Your county can still have its votes counted without attending the conference, but one person from your county still needs to register. You must have at least one person registered by 12 PM PDT on July 9. If you register, do not plan to attend and wish to vote, you must designate your state association president as your delegate on the Credentials Form. Your state association president or his/her designee will pick up and cast your ballot.

**How does NACo determine the number of votes each county receives?**

The number of votes is determined by the amount of dues a county pays. Dues are based on population. All counties are entitled to at least one vote. Members with more than \$1,199 in dues are entitled to one additional vote for each additional \$1,200 in dues or fraction thereof paid in the year the meeting is held.

- Counties with dues of \$450 to \$1,199 receive one vote.
- Counties with dues of \$1,200 to \$2,399 receive two votes, and so on.
- The maximum number of votes a county can receive is 51.

**My county has 10 votes. How can our 25 commissioners divide or share the votes?**

That is up to your county. NACo has no rule as to how counties decide to allocate their votes. Counties may split their vote amongst the candidates running for second vice president if it is desired.

**I've heard the term "unit vote" used. What is that?**

Some states, by custom or policy, cast all of their votes as a block or "unit." State associations typically have a meeting before the election to determine how they will handle the voting process.

- Check with your state association regarding the time, date and location of this meeting.
- NACo bylaws permit each county to cast its vote as it chooses. Your county does not have to vote with your state association should you so choose.

**When does the voting take place?**

This year's election is on Monday, July 15, 2019 at 9:30 a.m. at the NACo Annual Business Meeting.

**How does the voting occur?**

Votes are cast by state, not by state association. Counties from a state sit together as a delegation. The reading clerk will call out states at random. A state appointed representative will approach the microphone and call out that state's vote. This will continue until one of the candidates has a majority of the total number of votes being cast. Voting may still continue after a majority has been reached.

**What is a roll call?**

Roll call is a way of voting for NACo resolutions to be passed. If a roll call is necessary, the names of the states will be read out in alphabetical order by the reading clerk. A state appointed representative will approach the microphone and call out that state's vote as "yes" or "no." This will continue until all votes have been cast.

**What happens if there is a dispute over the election process?**

It is rare, but sometimes irregularities occur with how votes are cast or counted, or how the credentialing process is conducted. As a safeguard, elections may be challenged during the voting process at the NACo Annual Business Meeting. Challenges are allowed under two circumstances. A voting delegate may challenge the vote for his/her state, and his/her state only. A candidate running to become a NACo officer may challenge the vote of any state. If a challenge is made, the NACo Credentials Committee may audit the ballots of a state delegation to ensure that the number of votes the state is casting matches the number of ballots the state has. The committee may also audit the ballot transfer records on the back of each ballot and the State Voting Totals Form, which is a form states fill out showing the number of votes cast for each candidate.

For questions, please contact Lauren Wilson, Credentials Committee Liaison, at [credentials@naco.org](mailto:credentials@naco.org) or 888.407.NACo (6226), direct line: 202.661.8840.



## CONSENT AGENDA

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[MINUTES: 4.11.2019 WORK SESSION](#)

[4.17.2019 REGULAR SESSION](#)

[5.15.2019 REGULAR SESSION](#)

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**WASCO COUNTY BOARD OF COMMISSIONERS  
WORK SESSION  
APRIL 11, 2019**

**PRESENT:** Steve Kramer, Chair  
Scott Hege, Vice-Chair  
Kathy Schwartz, County Commissioner

**STAFF:** Kathy White, Executive Assistant  
Tyler Stone, Administrative Officer

At 9:00 a.m. Chair Kramer opened the Work Session.

### **Boat Ramp**

Vice-Chair Hege reported that he spoke to the Oregon State Marine Board. He explained that South Wasco Park and Recreation District is bound to work with the lowest bidder for the boat ramp project; unfortunately, the lowest bidder is still over their budget. He said they can now try to negotiate prices; the Marine Board has done that before and they are happy to facilitate that discussion. He stated that there are a number of items that could potentially reduce costs for the project.

Further discussion ensued regarding funding and timelines. County Clerk and SWPRD Liaison Lisa Gambie stated that SWPRD has worked very hard to get this project off the ground; this is probably the closest they will ever get. She said that if each group could put in a little money and costs could be reduced, we could reach the finish line.

Vice-Chair Hege said bids have a life span – time is of the essence. Further discussion occurred regarding the logistics of negotiations.

### **County Counsel**

Mr. Stone said that we have until October 31<sup>st</sup> to give notice to Timmons Law. With more time-sensitive matters at the forefront, putting out a request for qualifications is not his current priority; Timmons can continue to provide legal counsel for now.



Vice-Chair Hege suggested that the Management Team or some subset of the Management Team with a higher level of interest could finish the draft RFQ and run the process of vetting and interviewing applicants.

#### **Municipal Court**

Mr. Stone pointed out that this is the City's decision. He said there is a stakeholder meeting this afternoon. He observed that Circuit Court will experience the greatest impact due to the conflict with the Wolfs which means Judge Stauffer will see 99% of the new cases in her courtroom. He stated that Circuit Court will take whatever cases come to them, but it will extend the time it takes for cases to come to trial. He added that it will likely mean additional staff in the District Attorney's Office.

Vice-Chair Hege commented that, like Building Codes, this is coming to us whether we like it or not. He noted that the city is keeping Traffic Court which generates funds.

#### **NORCOR Budget**

Commissioner Schwartz stated that the NORCOR budget includes a 16% subsidy increase over last year; they are asking for more staff, increased medical services, insurance, filling the gap from lost grant funding and other cost increases. She said that as she understands it, Hood River has already said they cannot fund additional subsidy payments. She stated that she wants to be clear about Wasco County's position before the next NORCOR meeting.

Discussion ensued regarding the consequences of various positions. Mr. Stone stated that it is important to maintain parity among the counties; if one pays – all pay. He said that they are getting more in rental fees and yet continue to ask for more funding. Somewhere along the way the philosophy shifted from having services to offset costs; instead of reducing costs to counties, costs are increasing.

Further discussion ensued regarding the perceived problems at NORCOR. Commissioner Schwartz commented that one of the weaknesses of the organization is that it is not easy to get information. She said she will continue to ask questions. Vice-Chair Hege commented that we need to maintain the partnership with all the counties. Commissioner Schwartz agreed, saying this is a good time to dig into the philosophy and clarify the mission of the organization. She said she would like to get the NORCOR Board to commit to a process.

Mr. Stone said that the NORCOR Board went through a process at AOC two years ago to get on track; it was a miserable failure – almost nothing came from the task force's recommendations. He said this is very important as NORCOR is the County's single biggest expense. The Board encouraged Commissioner Schwartz to continue to press for answers.

Juvenile Director Molly Rogers offered to answer any NORCOR questions she could. Commissioner Schwartz explained that the Board has decided to give the same response to NORCOR as Hood River and wait for the response. She said they want to be equitable.

Ms. Rogers stated that in the past Juvenile and Adult budgets were done separately at NORCOR. Now, they are trying to look at costs across the facility – medical director, IT, finance, legal maintenance – to identify shared services that can be covered out of shared revenue. They are able to meet approximately 89% of shared expenses out of shared revenue.

Further discussion ensued regarding the management of the number of inmates. Ms. Rogers explained that the facility is the purview of the Board; the supervisory authority for the inmates lies with the Sheriff.

#### Union Agreement

Human Resources Director Nichole Biechler reported that the union contract mediation was successful with a 3.1% increase which will be what all staff receives this year. She said union staff will move off of the matrix once this agreement is completed . . . they prefer to negotiate rate increases.

Vice-Chair Hege asked what the impact of that separation will be. Ms. Biechler replied that there is concern that there will be issues when the arrangement becomes common knowledge among staff. Mr. Stone commented that if WCLEA negotiates higher increases than market, there will be a problem. Ms. Biechler observed that we have invested in a culture that should support open conversations with staff. Mr. Stone said we need to have informal meetings with staff to get their feedback on benefits – we will need to do that to be competitive in any case.

Further discussion ensued regarding the compensation program and union negotiations. Mr. Stone stated that we have some work to do around compensation; it needs to be updated in general and in response to the Pay Equity

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Act. Some of the items mentioned for review were the tiered system, training, job descriptions, discipline, comparables, compensation and the reclassification process. Ms. Biechler noted that compared to other counties around the state, we are in a good position to address changes required by the Pay Equity Act. She announced that we are bringing in professionals to help us evaluate our philosophy and processes. Vice-Chair Hege commented that the market does not seem to keep pace with COLA – 3% over three years seems low.

The session adjourned at 11:48 a.m.

Wasco County  
Board of Commissioners

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Steven D. Kramer, Board Chair

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Scott C. Hege, Vice-Chair

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Kathleen B. Schwartz, County Commissioner



**WASCO COUNTY BOARD OF COMMISSIONERS  
REGULAR SESSION  
APRIL 17, 2019**

**PRESENT:** Steve Kramer, Chair  
Scott Hege, Vice-Chair  
Kathy Schwartz, County Commissioner

**STAFF:** Kathy White, Executive Assistant  
Tyler Stone, Administrative Officer

At 9:00 a.m. Chair Kramer opened the Regular Session with the Pledge of Allegiance. Additions to the Discussion List:

- Eden Award of Excellence
- Mosier Funding Support Letter
- Certificate of Appreciation – Veterans Services Advisory Committee
- Oregon Water Resource Support Letter – Badger Irrigation District piping project

**Discussion Item – Eden Award of Excellence**

Finance Director Mike Middleton stated that his staff attended Tyler Technology's conference last week where they received an award for excellence for the work they have done this past year in implementing three new Eden modules – time-keeping, asset management and contract management. He noted that this is national recognition from a company that does more than just Eden products. Although Eden is phasing out over time, they wanted these systems in place to help with the migration to new software in the next couple of years.

The Board congratulated the team and thanked them for their superior work.

**Introduction**

Chair Kramer introduced Meredith Barnes as Timmons Law representative here on behalf of the County.



**Discussion Item – Pacific Source Mental Health MOU**

Dr. Kristen Dillon, Director of Pacific Source, said that their Coordinated Care Organization manages care programs for the region. She explained that this agreement articulates how we will work together for the provision of mental health services in Wasco County. She said that the work will include a community health assessment and work plan; they are committed to working with the local mental health authority. She went on to say that they will commit funding and engage in contracting for services and collaboration. She stated that the agreement was drafted by Pacific Source and negotiated with Mid-Columbia Center for Living; it meets with their approval. She is here today to ask for County signatures.

Commissioner Schwartz asked if the Behavioral Health Plan is specific to the Medicaid population and separate from the overall County Behavioral Health Plan. Dr. Dillon replied that they try to not do things separately whenever possible; she said that she is open to input. She said they will take a high-level look at near-term action items.

Commissioner Schwartz asked if the Executive Director for the local mental health authority will sign this. Dr. Dillon responded that Center for Living will have a parallel agreement. Commissioner Schwartz noted that there had been some disagreements with Center for Living on this agreement; she asked if those had been resolved. Dr. Dillon replied that they were able to work those out at a Center for Living board meeting. Vice-Chair Hege, Center for Living Board Member, confirmed that all the issues were satisfactorily resolved.

Commissioner Schwartz pointed out that the memo references services provided by the local Health Department. Dr. Dillon replied that the statute is all-encompassing but includes mental health. She said she also wanted to recognize the CCO's commitment to public health.

Vice-Chair Hege said that there is some question about Mental Health vs. Public Health. He commented that the County thought MCCFL had been designated by the County as the local mental health authority but apparently did not as it was not in the original agreement. He went on to say that the Oregon Health Plan is different than Medicaid. Dr. Dillon responded that the Oregon Health Plan was how we did Medicaid in Oregon but the program grew with the Affordable Care Act and the Children's Care Program. She said in some states it is treated separately, but Oregon rolled it into the CCO. She said that the CCO also covers undocumented children with the Cover All Kids Program.

Vice-Chair Hege reported that some of the discussion at MCCFL is about the specific requirements they will work to cover. He said that Executive Director Barbara Seatter would tell you that they do more than just the basics required by the agreement. They want to make sure that we address the entire population that is served. He stated that they have worked out a compromise to collaborate on shared goals; the plan creation will be a good vehicle for that work.

Dr. Dillon said that she appreciates coming to the Board of Commissioners with this agreement; it is important for the Board to understand the role it plays and how it fits in with other roles. She said that the free-standing model for mental health has worked well; if there are breakdowns in mental health, it will affect other systems.

Community Corrections Manager Fritz Bachman commented that coming up with plans that fill the gaps will be good for everyone.

**{{Vice-Chair Hege moved to approve the Memorandum of Understanding between Pacific Source Community Solutions and Wasco County for the purpose of documenting Parties' commitment to work together to support and improve health through shared behavioral health system planning and provision of clinical services. Commissioner Schwartz seconded the motion which passed unanimously.}}**

<b>Discussion Item – Mosier Deep Well Letter of Support</b>
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Wasco County Soil and Water Conservation District Manager Shilah Olson said that they have been working in the Mosier community trying to understand and address the issue of the impact improperly dug wells have been having on the water table in the area. She said that several projects are ongoing including this one to drill down to a lower water table. She stated that although the first two wells went over budget, they were successful in getting one of the leaking wells off of the system. They are now trying to remove the second largest commercial water user from the leaking system and have broad support from the community.

**\*\*\*The Board was in consensus to provide a letter of support for the Mosier Deep Well project.\*\*\***

Chair Kramer asked if the District is involved with the Bader Irrigation District piping project. Ms. Olson replied that they are aware of the project but not directly involved. She said that they are hoping to pipe water from Badger Lake to end users downstream. Chair Kramer added that the purpose of the piping project

is to not leach water into ditches along the way – similar to the Wolf Run Project.

**Discussion Item – Community Corrections DHS IGA**

Mr. Bachman said that this is a massive intergovernmental agreement with the Department of Human Services for the simple implementation of a small service. He explained that this is our first interface with DHS, although he has ideas for more. He reported that in the past six months, they have successfully placed fifteen people into residential care – each has been through DHS. He explained that in addiction cases, every day counts and insurance status is critical. He said that the addiction beds are their highest need, but without the Oregon Health Plan in place for a client they are inaccessible; those beds are Community Corrections highest priority when dealing with addiction cases.

Mr. Bachman continued by saying that there are Oregon Health Plan Assisters – NORCOR has one and he sometimes can get that paperwork in place prior to release, but not always. He said that even though we can rely on community Assisters, every little gap brings challenges. He explained that if they have someone in the office with needs and insurance presents a barrier, it can derail the client and Community Corrections loses them.

Mr. Bachman explained that the intent of this agreement is to allow Substance Abuse Treatment Counselor Steven Seely to be an OHP Assister to expedite the process. He would participate in a four-hour training after which he can access the system to work with clients entering their information. They can then get a client on OHP and navigate they system with them rather than hoping to get them to go to another location to wait for an assister to help them get back on the path to treatment.

Mr. Bachman said that he recognizes the perceived liabilities of working in the DHS system; he has been assured that no OHP Assister has been held liable for errors – their role is to broker the information, not to be the decision-maker . . . the system responds to the input with the decision. He stated that out of the fifteen they have gotten into residential treatment, at least 25% needed to get through an Oregon Health Plan barrier. Having an in-house Assister would help them move forward same-day.

Chair Kramer said that he and Mr. Stone have met a few times around this agreement. Mr. Stone stated that he is satisfied with how it sits now; we had some concerns, but all have been addressed. He said that he sees no reason to not move forward. Mr. Bachman added that this is not a community service; it will only be

for Community Corrections clients.

Commissioner Schwartz commended Mr. Bachman for taking this on saying that it is a good service. Mr. Bachman responded that this addresses the root problems rather than the system – we want to distinguish criminality from drug addiction.

**{{Vice-Chair Hege moved to approve the Department of Human Services Intergovernmental Agreement #15 9086-0 for Wasco County to provide application assistance to clients applying for DHS services. Commissioner Schwartz seconded the motion which passed unanimously.}}**

#### Agenda Item – Fee Schedule Ordinance Revisions

Ms. White explained that Wasco County updates its Fee Schedule Ordinance annually. This usually takes place at the end of the calendar year in order to capture increases in State fees which take effect on January 1<sup>st</sup> each year. As a result of incorporating the Building Codes program into Wasco County's direct services, we are updating the Fee Schedule Ordinance mid-year to recognize the fees for that program in our Ordinance by the time we assume responsibility for that program on July 1, 2019. She added that further revisions, if necessary, based on State and/or internal cost increases will be made and presented to the Board of Commissioners later this year with a January 1, 2020 effective date.

Mr. Stone commented that the County is trying to spin up a new department; fees are currently set in software and we are carrying those fees across as-is. He said that we will be coming back at some point to look at the fees and how we structure them for providing long-distance service - probably sometime next year. He explained that we need to get the program up and running before addressing the fee structure. These fees, he said, are just for Wasco County.

Chair Kramer pointed out there is a 12% State surcharge in the schedule; he thought it was 12.5%. Mr. Stone replied that he is pretty sure it is 12% but he will check on it.

Commissioner Schwartz read the title of the Ordinance into the record: Ordinance 19-003 In the matter of amending Wasco County's Uniform Fee Schedule for various County Departments.

#### Agenda Item – Building Codes Ordinance

Mr. Stone explained that we need an Ordinance in place to take on the Building Codes program. The Ordinance sets up a hearings process and gives us statutory



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authority. Ms. White explained that some references to ORS have been adjusted due to a review by the State Building Codes office.

Vice-Chair Hege read the following message from Wayne Lease into the record:

Regarding ORDINANCE 19-002

I do not have a copy of the Mid-Columbia Council of Governments Ordinance Number 07-300 in my archives. I do however have a copy of the Mid-Columbia Council of Governments (MCCOG) Ordinance Number 10-001 adopted 3-30-2010 repealing Ordinance Number 07-300; and declaring an Emergency.

Wasco County Ordinance Number 19-002, an Ordinance continuing the assumption of administration of the building codes inspection program, and setting forth programs for the enforcement of the Oregon Building Codes including the Oregon Specialty Codes, Electrical and Plumbing, is now under review and consideration.

When comparing the two afore mentioned documents, their similarity is uncanny as they are almost verbatim. When reviewing the 138 month history of the Administration and Operation of Mid-Columbia Building Codes Services which culminated in the dissolution of MCCOG, it is suggested further evaluation be done before Wasco County assumes the building inspection, specialty codes, and the electrical and plumbing code compliance programs.

Emphasis should be placed on the review and understanding of ORS 455, 479, and OAR Chapter 918 Division 308 in their entirety to comprehend the complexities when administering a State Owned Building Code Compliance Program. The state legislature is the final authority and will always be subject to the influence of the impulses of the Citizens of Oregon; the west side versus the east side of the Cascade Range.

Other Considerations: Pending House Bill 2420, transparency, responsibility, accountability, compliance program costs, permit fees, and the consumer's opportunity to express their concerns to be heard.

Wayne D. Lease  
Oregon Master Electrician 21785

Commissioner Schwartz read the title of the Ordinance into the record:

**Ordinance 19-002 An ordinance continuing the assumption of administration of the Building Inspection Program and setting forth programs for the enforcement of the Oregon Building Codes, including the Oregon Specialty Codes, Electrical and**

Plumbing.

**Agenda Item – Board of Property Tax Appeals Report**

County Clerk Lisa Gambee reported that there was a bit of a learning curve this year with the departure of staff that had previously managed this process. She stated that they were able to improve some processes and will continue to look for those opportunities moving forward. She said the last step of the process is to report to the Board of Commissioners. She went on to say that Board of Property Tax Appeals did a great job in hearing the petitions; we appreciate the participation of the real estate professionals. County Assessor Jill Amery said that since she and Ms. Gambee began with the County, the Board has been very productive and we have found improvements each year.

Ms. Gambee recognized Chrissy Zaugg, who recently stepped into the role of Chief Deputy Clerk, for her contributions to the process.

Chair Kramer thanked the team as well as the volunteers who serve on the Board. Vice-Chair Hege noted that he has been on the Board for years. He said that Ms. Gambee kept the hearings on track and within the lines of the process. He stated that the volunteers get a nominal payment and have to go through a full day of training every other year. It is complicated and can be contentious but the Board is very engaged and does a good job helping the citizens to understand the process.

**Discussion Item – Veterans Service Advisory Committee Recognition**

Commissioner Schwartz said that Mathew Larsell served on the Veterans Services Advisory Committee for a number of years. Mr. Larsell has moved to Hawaii and therefore resigned his position on the Committee. She asked for the Board's support in sending him a certificate and County challenge coin in appreciation for the good work he did.

**\*\*\*The Board was in consensus to send a Certificate of Appreciation and County challenge coin to Mathew Larsell in recognition of his service to the veterans of Wasco County.\*\*\***

**Discussion Item – Mosier Funding Letter of Support**

Chair Kramer stated that Mosier Mayor Arlene Burns contacted the County regarding support for their request for HB 5030 capital improvements funding which is a program associated with lottery revenues. The Mosier City Council and Fire District are making the request to continue with their plans for a new City

Hall/Fire Station/Community Center.

**\*\*\*The Board was in consensus to send a letter of support for Mosier's request to be granted funding through the HB 5030 Capital Improvements program.\*\*\***

**Consent Agenda – 4.3.2019 Regular Session Minutes**

**{{{Chair Kramer moved to approve the Consent Agenda. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Departments – County Clerk**

Ms. Gambie reported that there is a Special District Election scheduled for May 21, 2019. Ballot insertion took place on April 15, 2019 for approximately 17,500 registered voters. That process is completed by a contracted vendor in Bend, Oregon. She said that this year, five of the seven special districts are on the ballot with community forums being held throughout the County.

**Agenda Item – CAFFA Grant Application**

Ms. Amery explained that the County Assessment Function Funding Assistance Program is an annual funding program through the Oregon Department of Revenue that assists counties to carry out their statutory duties of valuation and tax collection on behalf of our taxing districts. All counties submit to get funding for the program which includes administration, BOPTA, collection and distribution of taxes, cartography, GIS, etc. She said that the intention is to increase funding this year; we run at about 17% of our costs.

Mr. Stone asked if funding used to be much higher. Ms. Amery replied that in the 2010/2011 fiscal year, it was 20.63%; costs are going up and funding going down. She stated that HB 2104 would amend this but she is not sure how that will help the counties; it will help the State – counties need more funding.

Mr. Stone said that both the Association of County Administrators and the Association of Assessors/Tax Collectors have been working with the Governor's Office on this issue. He reported that there was not enough time in this session to complete the work; the two groups are supporting the current legislation with the caveat that it will be re-addressed in the next legislative session.

Commissioner Schwartz asked if the remainder of the funding for the program comes from our general fund. Ms. Amery replied affirmatively. Commissioner Schwartz asked if there was time when counties did not have to write for a grant to

support the work. Ms. Amery replied that this program was implemented in the 1980's; counties were on a six-year cycle for property assessment. When funding was not adequate to complete that work, this program was created. She reported that when she came in as the Assessor, the County had not been reassessed in over 20 years and we were not unique among Oregon counties.

**{{{Commissioner Schwartz moved to approve the County Assessment Function Funding Assistance Program Grant Application for the 2019-2020 Fiscal Year. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

#### Agenda Item – Lane County IGA

Ms. Amery explained that with the software program purchased years ago, we worked with a consortium of counties for software support from Lane County. She stated that some of the counties have stepped away from the consortium which has increased costs for the remaining counties. She explained that the agreement has the same scope of work as in years past but is now on an annual renewal to allow for more flexibility when looking at other solutions.

Vice-Chair Hege asked if the costs associated with this agreement are within the budget. Ms. Amery replied affirmatively.

**{{{Commissioner Schwartz moved to approve the Intergovernmental Agreement between Lane County and Wasco County for Ascend/Proval Software support. Chair Kramer seconded the motion which passed unanimously.}}}**

#### Agenda Item – Wasco County Owned Land Auction

Ms. Amery stated that it is time for an auction of County-owned properties – two of the pieces are being sold as one unit. She reported that there is already a lot of interest in some of the properties and there has been great reception for the process as a whole. She said that this gets the money back into the Districts.

Mr. Stone pointed out that when the County owns property, it is responsible for the upkeep which takes time away from core services; it is in the citizens' best interest to get them out of County ownership.

Vice-Chair Hege asked how we set a minimum bid for each property being auctioned. Ms. Amery replied that generally the minimum bid corresponds with the assessed market value unless there are mitigating circumstances. She noted



one property coming up for auction has a minimum bid that is well under market value because it has a codes enforcement complaint – the County could clean up the property but it would be costly and time-consuming as we really don't know what all is there. She explained that if it does not sell, we can do a sealed bid auction which is a process that was successful last year. She said that throughout the auction process it is stressed that properties are sold as-is. She stated that there is another property that is reduced as it has a septic failure; it is being sold as a contiguous lot to allow the prospective buyer the ability to address that failure.

Commissioner Schwartz asked if all the lots being sold are buildable. Ms. Amery replied that the bidders will have to research that with Planning. She added that if the list of properties for auction is approved by the Board of Commissioners, they will be listed on line today or tomorrow.

**{{Vice-Chair Hege moved to approve Order 19-080 directing the County Assessor/Tax Collector to sell certain County land at auction as provided in ORS 275.090. Chair Kramer seconded the motion which passed unanimously.}}**

<b>Agenda Item – All-Staff Training After-Action Report</b>
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Ms. Gambee stated that in the County's Strategic Plan from three-years ago, a need was identified for a County-wide training plan for staff development which has become critical as the hiring market has become tighter and more competitive. County Human Resources Director Nichole Biechler brought the idea of an all-day, all-staff training to the Cross Functional Team charged with evaluating training needs and developing programs to address those needs. The team is composed of herself, Public Works Director Arthur Smith, Human Resources Director Nichole Biechler and Executive Assistant Kathy White. The team supported the idea and brought it to the Board of Commissioners for approval. The first all-staff training took place on March 19, 2019 at the Fort Dalles Readiness Center; the Training Team conducted two staff surveys – a very brief 2-question group survey which was part of the event and a longer, online survey conducted within a few days of the event – both were anonymous. She said that one of the important questions was around support for repeating the event on an annual basis; there was overwhelming support for the training to be continued annually.

Ms. Gambee went on to say that the surveys provided great feedback on how we can improve the event and what we did this year that was successful – the keynote

speaker was hugely successful and delivered a great message that resonated with a lot of people. She reported that the Cross-the-River exercise also had a strong positive response. She said that the afternoon, breakout sessions were led by community leaders; many respondents felt that the topics were too big for the time allotted to them. She said that the team stayed within their budget and is hopeful that the Board will support an annual training day.

Commissioner Schwartz commented that the event helped staff to see themselves as part of the larger organization rather than just a member of a department. Ms. Gambee agreed, saying that Mr. Stone's message regarding the County's Vision, Mission, and Values had been well-received. She added that going into the event, many were nervous about the assigned seating but it turned out to be one of the most appreciated aspects of the event as it allowed staff to learn about what each department does and to build relationships outside of their own department. Commissioner Schwartz agreed, saying that it was brilliant to mix the staff that way.

Vice-Chair Hege thanked the Training Team saying that it was a huge endeavor. He added that instead of just doing it, the Team had done a good job of gathering feedback. He said there is resounding support for an annual event and he appreciates the after-action report. Chair Kramer concurred.

#### Agenda Item – Davis Cut-off Road Vacation Report

Public Works Director Arthur Smith reviewed the report included in the Board Packet saying that this is the third time since 2005 the petition has come forward; the first and second petitions were denied on the recommendation of the previous Public Works Director. He reported that the petitioner owns all the land surrounding the road which is impassable several months of the year. He said that it is a dirt road with a little bit of rock where people often go to dump garbage and leave hunting debris which the land-owner has had to clean up a number of times. He noted that there are some utilities that need a right-of-way; those will need to stay in place – an easement may need to be drawn-up to address that need. He said that County Public Works blades the road a couple of times each year.

Mr. Smith went on to say that the landowner has hundreds of acres around this road. Considering the limited pass-ability, the nuisance dumping and shooting of signs that occurs with public access to the road, he supports the petitioner's request to have the road vacated.

Chair Kramer said that he is glad to have to opportunity to do this.

Vice-Chair Hege asked what will happen on Hwy. 197 if this vacation is granted. Mr. Smith replied that ODOT has 240 feet of right-of-way which will continue to exist; but this will allow the petitioner to gate it off at the point where the ODOT right-of-way ends.

Vice-Chair Hege asked if the County built the road. Mr. Smith replied that we probably accepted a wagon trail but it is unlikely that we approved creation of the road.

Vice-Chair Hege asked if the bridge is ours. Mr. Smith responded that the bridge is ours but would become part of the vacated road; the petitioner understands that. He said that value is minimal and we do not have the funding to maintain the bridge – this will likely save the County about \$100,000 in coming years.

Vice-Chair Hege stated that he has used the road before; he wonders if there will be anyone upset by the vacation – are there any issues around this petition? Mr. Smith replied that there may be, but he contacted several people who had come forward in response to the 2005 petition. He reported that one neighboring landowner wanted to be able to work out something that would allow him to move large equipment; otherwise, he does not use it as it is not in good shape. He reported that the blading lasts about a month and then it deteriorates quickly; there are better, safe routes to use. He said that he is willing to take those calls if they come.

Vice-Chair Hege stated that he does not have a problem with the vacation; he just wants to make sure we are prepared to answer questions. Mr. Smith said that he put out traffic counters which indicated about 15 trips a day on the road – many of those are the landowner. The stretch is .85 miles.

Mr. Stone asked if we should hold a utilities easement for things such as fiber. Mr. Smith replied that North State and Bonneville Power would have to be granted access but the gate would be past that area. He added that he has not been approached for other access over the past 20 years; there are other, better avenues for access.

**{{{Commissioner Schwartz moved to approve Order 10-079 in the matter of the vacation of Davis Cut-off Road, located in Sections 28 and 29, T 1N, R 14E, Willamette Meridian, lying east of U.S. Highway 197 and West of Lower Eight Mile Road, Wasco County, Oregon with the addition of language for utility easements to be drafted by County Counsel as proposed. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Agenda Item – Tygh Valley Road Vacation Petition Report**

Mr. Smith stated that although the report is accurate, the photos are a bit off and do not capture the true intent of the vacation. He said that he asked the petitioner to modify his original request as it would have landlocked one landowner. He reported that the petitioner owns the land but not all the adjoining property. He said that he has talked to Mr. Lindell who owns adjacent property and is not totally in favor of the vacation; the petitioner has spent a good bit of time trying to work with Mr. Lindell to work this out.

Further discussion ensued regarding the configuration of properties and the impacts of the proposed vacation. Mr. Smith said that there are portions that would remain in County ownership to allow access for subdivisions and utilities. Senior Planner Will Smith added that even if there is access, the Lindell property does not have a lot of great places for development – septic is challenging in that area due to the steep slope.

Petitioner David Coburn stated that he has built and owns a property near to that with DEQ requirements, trying to make as many lots as possible because there is a lot of need in the area for housing. He said that he had to reduce the number and increase the size due to the requirements.

Mr. Smith continued by saying that according to statute, if less than 100% of the adjacent landowners sign the petition, there must be a hearing to complete the process; a date will need to be set at which time the Board can make a decision.

Chair Hege asked if the hearing notice would be posted in public areas. Mr. Smith replied that it would be posted at the Tygh Valley General Store, post office, etc. He added that the notice has to also be sent directly to adjacent landowners.

Mr. Coburn commented that Mr. Smith has been great to work with; the petition process began last May. He said that Mr. Lindell is opposed because he doesn't want his cows bothering residents. He said that he can appreciate that but there is plenty of access. He reported that he has tried to work with Mr. Lindell who is no longer communicating with him; this is delaying planning for the area. He said he wants to respect Mr. Lindell's needs but this has been a long process that he is anxious to see move forward. He said he is already going to have to ask the Planning Department for more time.

Mr. Smith said that this has shone a spotlight on a process that seems to be separate for Public Works and Planning but turns out is very connected. He said



that the two departments are working to improve the process so as not to keep each other and citizens from moving forward.

The Board directed staff to set a hearing for May 15, 2019.

**Agenda Item – Weed Control Contract**

Mr. Smith reported that the Bonneville Power Administration has asked to partner with Wasco County for the control of noxious weeds on their land. He stated that the agreement is for three years; he has spoken to the Weed Master who is planning for retirement; Mr. Keys has stated that he will be here for the term of the contract but may retire shortly thereafter. His current plan is to retire in September, 2021; the agreement runs through July, 2021.

Commissioner Schwartz asked how we would fulfill the agreement should something happen that Mr. Keys would not be able to do the work. Mr. Smith replied that there is an employee working with Mr. Keys and will be licensed but likely would not have the necessary experience. He said he would probably have to contract out for that service. He said that some time ago, we began this contracting process because we had the in-house expertise.

**{{Vice-Chair Hege moved to approve the Interagency Agreement between Bonneville Power Administration and Wasco County for noxious weed management through Fiscal Year 2021. Commissioner Schwartz seconded the motion which passed unanimously.}}**

**Agenda Item – Natural Hazards Mitigation Plan**

Senior Planner Will Smith said that the last update for our Natural Hazards Mitigation Plan (NHMP) was completed in 2012; the plan should be updated every five years. He said that a committee was formed and met several times to bring the plan into compliance and discuss how it would be implemented and maintained in coming years. He said that FEMA requires four meetings with one being a public meeting; the committee held six meetings with one public meeting as well as attending service club meetings for feedback. The plan has been pre-approved by FEMA pending adoption by the County. He said that the Plan includes the City of The Dalles. The Committee plans to hold two meetings each year to keep the NHMP alive and moving forward. They will meet with FEMA on June 12, 2019 to match the Plan with available opportunities.

Mr. Stone asked if the FEMA flood plain process will dramatically impact the NHMP. Mr. Smith replied that they are separate initiatives but the next NHMP may

incorporate information resulting from the flood plain process.

Chair Kramer said that he was part of some of this process; it was a lot of hard work by a lot of people. He said that he appreciates the investment of their time.

Commissioner Schwartz asked if we have engaged an Emergency Manager. Mr. Stone replied that one has been hired but does not start work until July. Mr. Smith said that Emergency Management work has a major role in this plan; the team will get him up to speed when he arrives.

Commissioner Schwartz noted that some of the other cities in the County did not participate in the process and asked if this plan encompasses those municipalities. Mr. Smith replied that Antelope did not want to participate, Shaniko and Dufur participated but not to a level that would include them in the plan. He said that if a disaster were to happen, there may be some funding for which they do not qualify, but they will not be ignored by FEMA.

Commissioner Schwartz pointed out that in the Plan under Governance, it lists one full-time and two part-time commissioners; that needs to be updated to reflect the current configuration of the Board.

**{{Vice-Chair Hege moved to Approve Order 19-005 adopting the Wasco County Multi-Jurisdictional Hazards Mitigation Plan. Commissioner Schwartz seconded the motion which passed unanimously.}}**

#### Agenda Item – Forestland Classification

Kristin Dodd, Unit Forester for Hood River and Wasco Counties, said that she would like support to reconvene the Forestland Classification Committee and identify potential representatives from Wasco County.

Mr. Stone said that he understands that she wants to move the process forward jointly for Hood River and Wasco County but the two are pretty diverse. He asked if that creates a challenge for each county when one is determining classifications for the other; he said that it seems like a conflict for both. He added that on the financial side, when we do this kind of broad landscape project, we should include pictometry as well as GIS as part of looking at these in detail. He noted that it would include an additional cost component but will help identify terrain and location of structures.

Ms. Dodd replied that we can look at that; they want to be as efficient as possible. She said that as far as conflicts, the Committee will have decision points for how

they look at the lands for classification. Last time they used data layers, aerial imagery, current vegetation and site classes for timber growth; they used those metrics to make the classifications so the two counties were looking through the same lense. She added that working together creates efficiencies for both the counties and the Oregon Department of Forestry.

Commissioner Schwartz asked what background would committee members need in order to serve. Ms. Dodd replied that they would look for someone familiar with the community, lands, vegetation and has some understanding of fire agencies. She stated that ultimately this concerns fire response, although there is a political component to it as well. Commissioner Schwartz said she would be interested in serving.

Chair Kramer asked if this has any tie in with the Forest Collaborative and would there be any benefit there. Ms. Dodd replied that there are certainly people at that table who would have some interest in the process and might be a good follow-up for it. Ms. Dodd said she would work with Ms. White to set up meetings with each Commissioner.

Ms. Dodd went on to say that ODF has a member on the Collaborative; at an agency level, it has been successful in getting projects through the Good Neighbor Authority. She stated they have also been successful in obtaining funding that increases the pace and scale of work on the forest. She said that the latest supplemental fuel request has been awarded for the Rocky Burn project; there will be other grants that ODF administers in the counties for fuel treatment to minimize risk through wildlife habitat improvement and fuel thinning. She said that she is also working with Will Smith to reconvene the Community Wildfire Protection Plan committee. In addition, ODF is working with other partners for fire prevention activities that include education and outreach efforts and ODF is staffing and participating on the Governor's Council for Wildfire Suppression.

#### **Agenda Item – Union Agreement**

Mr. Stone reviewed the memo (attached) submitted by Human Resources Director Nichole Biechler.

Commissioner Schwartz asked how we determine “competency.” Finance Director Mike Middleton responded that he clarified that there is a test for that. Mr. Stone stated that there will be interim bargaining around employee discipline and discharge. He said that we like to be on a three-year contract, but that is not always possible. This agreement is for two years.

Vice-Chair Hege commented that it is frustrating to pull this many people out of the compensation process for the entire County. Vice-Chair Kramer agreed, saying that conversations will need to happen moving forward – this is disappointing.

**{{{Commissioner Schwartz moved to approve the Collective Bargaining Agreement between Wasco County and Wasco County Law Enforcement Association effective through June 30, 2021. Vice-Chair Hege seconded the motion. Vice-Chair Hege and Commissioner Schwartz voted in favor of the motion; Chair Kramer opposed the motion which passed with a two to one vote.}}}**

**Discussion Item – Washington Ranch Fireworks Applications**

Ms. White explained that Young Life Washington Ranch has received permits for many years to hold a number of limited fireworks displays on their property as part of their guest experience. These permits require review and approval by local law enforcement and fire authority officials before being submitted to the State Fire Marshall.

She went on to say that statute requires that any fireworks display held outside the boundaries of any municipality or fire protection district shall be under the supervision of the county court of the county in which the display is to be held. She explained that although Washington Ranch has a fire response team, they are not within a municipality or fire district and therefore cannot act as the Fire Authority to approve the fireworks displays; that authority lies with the Board of Commissioners or their designee.

Ms. White observed that this year we have the opportunity to be on-site and inspect the storage facility at Washington Ranch; she asked that the Board approve the applications pending inspection.

Commissioner Schwartz said that fireworks are concerning to her; based on her research, she has reservations. She said that she understands that it is the Board's responsibility and liability. She reported that she talked to the Jefferson County fire district and they did not indicate that they would respond to a fire at Washington Ranch although they have no concerns and believe that Washington Ranch is adequately equipped and trained to respond.

Commissioner Schwartz went on to say that a local District Fire Chief recommends that we confirm that they have the expertise for pyrotechnics and fire suppression.



She said that the storage facility is not where her concerns lie.

Chair Kramer said that these events have been going on without incident for some time. Vice-Chair Hege said that we can look into it further but the applications list the pyrotechnical certification. He said that Washington Ranch is very concerned about safety and do it with the utmost safety in mind. He said that like Burning Man in Tygh Valley, they take it very seriously. He said that there is no harm in looking into it. He said that he personally has no concerns but understands the concerns Commissioner Schwartz has expressed. He said he is confident in their ability to manage this.

#### Discussion Item – BID Letter of Support

Chair Kramer said that he has received from Dan Van Vactor a request for a letter of support for their piping project to get more water down the hill to irrigators rather than having it leach out into ditches.

Vice-Chair Hege asked where the water is coming from and going to. Chair Kramer replied that it is going from Three Mile Canyon to Badger Lake to Pine Hollow.

**\*\*\*The Board was in consensus to provide a letter of support for Badger Irrigation District's piping project.\*\*\***

#### Commission Call

Commissioner Schwartz said that the Veterans Services Advisory Committee is looking for more members and for volunteers to staff the Veterans Service Office.

Mr. Stone commented that the VSAC was spun up for specific reasons and it may be time to spin it back down as the original purpose no longer exists. He said that there is another veterans committee in the area – perhaps the two could combine. He said that the committee is not a bad thing but may not be necessary as a County committee.

Vice-Chair Hege said that we don't want to have a committee just to have it. If the committee is having a hard time making quorums, it may be time to look at it. Mr. Stone said that the goals of the committee may be at a different level; as a County committee, there are certain requirements they may not want. Vice-Chair Hege said he would like to know their goals. Mr. Stone said that the Board may want to change the focus of the committee.

Vice-Chair Hege announced that next Wednesday, the tri-county courts will meet; he will be attending to update them on Building Codes and learn more about what they want to do regarding their own programs. Mr. Stone commented that we are actively building this program and will not be able to wait until June 30<sup>th</sup> for a decision.

Commissioner Schwartz stated that she has a revised NORCOR budget but has not yet been able to review it. She said that she will share the document and understands that it is quite different from the original.

Mr. Stone noted that Brad Timmons will be acting as the County's primary attorney as they and we evaluate needs.

The session was adjourned at 12:27 p.m.

#### Summary of Actions

#### MOTIONS

- **to approve the Memorandum of Understanding between Pacific Source Community Solutions and Wasco County for the purpose of documenting Parties' commitment to work together to support and improve health through shared behavioral health system planning and provision of clinical services.**
- **to approve the Department of Human Services Intergovernmental Agreement #15 9086-0 for Wasco County to provide application assistance to clients applying for DHS services.**
- **to approve the Consent Agenda – 4.3.2019 Regular Session Minutes.**
- **to approve the County Assessment Function Funding Assistance Program Grant Application for the 2019-2020 Fiscal Year.**
- **to approve the Intergovernmental Agreement between Lane County and Wasco County for Ascend/Proval Software support.**
- **to approve Order 19-080 directing the County Assessor/Tax Collector to sell certain County land at auction as provided in ORS 275.090.**
- **to approve Order 10-079 in the matter of the vacation of Davis Cut-off Road, located in Sections 28 and 29, T 1N, R 14E, Willamette Meridian, lying east of U.S. Highway 197 and West of Lower Eight Mile Road, Wasco County, Oregon with the addition of language for utility easements to be drafted by County Counsel as proposed.**
- **to approve the Interagency Agreement between Bonneville Power Administration and Wasco County for noxious weed management**

**through Fiscal Year 2021.**

- **to Approve Order 19-005 adopting the Wasco County Multi-Jurisdictional Hazards Mitigation Plan.**
- **to approve the Collective Bargaining Agreement between Wasco County and Wasco County Law Enforcement Association effective through June 30, 2021.(2 to 1 vote)**

**CONSENSUS**

- **to provide a letter of support for the Mosier Deep Well project.**
- **to send a Certificate of Appreciation and County challenge coin to Mathew Larsell in recognition of his service to the veterans of Wasco County.**
- **to send a letter of support for Mosier's request to be granted funding through the HB 5030 Capital Improvements program.**
- **to provide a letter of support for Badger Irrigation District's piping project.**

Wasco County  
Board of Commissioners

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Steven D. Kramer, Board Chair

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Scott C. Hege, Vice-Chair

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Kathleen B. Schwartz, County Commissioner



WASCO COUNTY BOARD OF COMMISSIONERS  
REGULAR SESSION  
MAY 15, 2019

PRESENT: Steve Kramer, Chair  
Scott Hege, Vice-Chair  
Kathy Schwartz, County Commissioner  
STAFF: Kathy White, Executive Assistant  
Jeff Wallace, County Counsel  
ABSENT: Tyler Stone, Administrative Officer

At 11:00 a.m. Chair Kramer opened the Regular Session. Additions to the Discussion List:

- Columbia Gorge Community College USDA Grant Letter of Support

**Discussion Item – STP Agreement**

Public Works Director Arthur Smith explained that this is a program in which the State receives the funding from the federal government and distributes it to the counties for road preservation work that includes chip sealing. He stated that since the federal government does not recognize that process, the Counties would not be able to use the funding for chip sealing were they to accept it directly from the federal government. Although, the state does take an administrative fee, it is still a great deal for the counties, allowing them to maintain their local road systems.

**{{{Commissioner Schwartz moved to approve the Oregon Department of Transportation Agreement #33386 2019 Fund Exchange Agreement for Pavement Preservation in Wasco County. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Discussion Item – NORCOR Inspection Resolution**

Ms. White stated that the Board recently inspected both the juvenile and adult portions of the Northern Oregon Regional Correctional facility as required by statute. The resolution is a formal documentation of that inspection stating that they



found nothing during the inspection to report to the District Attorney.

**{{Vice-Chair Hege moved to approve Resolution 19-004 in the matter of the annual inspection of the Northern Oregon Regional Correctional facility. Chair Kramer seconded the motion which passed unanimously.}}**

Vice-Chair Hege observed that this year they used an inspection questionnaire developed by our insurance company to conduct the inspection. He commented that he thought it made for a more thorough inspection and he hopes we continue to use that tool. Commissioner Schwartz agreed, adding that they were able to talk to anyone they chose, including inmates, during the inspection; it went well. Chair Kramer commended Mr. Lindhorst for the job he is doing at NORCOR.

#### Discussion Item – Regional Solutions Recommendation

Ms. White reminded the Board that in a previous communication, Nate Stice, Regional Director for Regional Solutions, asked the Board to make a recommendation for someone to represent the Cities of Wasco County on the Regional Solutions Committee for the North Central Oregon. The Board directed staff to reach out to all the municipalities in Wasco County to gauge interest in participation on that committee. In response to that outreach, Maupin Mayor Lynn Ewing and The Dalles Mayor Rich Mays expressed interest/willingness to serve in that capacity.

Chair Kramer pointed out that we have had a representative from the northern part of the county in that position for some time. He noted that both candidates are well qualified but he would like to recommend Mayor Ewing to give the southern part of the county an opportunity to participate.

**\*\*\*The Board was in consensus to recommend Mayor Lynn Ewing to serve as the Cities of Wasco County representative on the Regional Solutions committee and directed staff to notify Mr. Stice of that decision.\*\*\***

#### Discussion Item –Fireworks Applications/Hold Harmless Agreement

Ms. White stated that this is the third consideration of these applications as the Board worked to explore concerns and answer questions. She explained that the packet now includes a Hold Harmless agreement to indemnify the County from damages that could result from the fireworks displays. In addition, Washington Ranch has provided documentation of insurance naming the County as also insured. The questions raised by the State Fire Marshall's office have all been answered to their satisfaction. She reminded the Board that the first display is scheduled for June and they will need time to process the applications through the

state, should the Board approve the applications.

Vice-Chair Hege reported that he spoke with the Director of Washington Ranch to determine how important the displays are to their operation. He said that he learned that it is an important component of the camping experience. He stated that it is a great organization that is very responsible in their activities.

Commissioner Schwartz stated that she is satisfied with the answers and comfortable with the relationship.

**{{{Commissioner Schwartz moved to approve the applications submitted by Young Life Washington Ranch for nine Fireworks Display Permits associated with events taking place from June through August, 2019 and further move to approve the associated Hold Harmless Agreement between Young Life Washington Ranch and Wasco County contingent on Washington Ranch signing the Hold Harmless Agreement. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Discussion Item – Community College USDA Grant Letter of Support**

Vice-Chair Hege explained that the Columbia Gorge Community College is applying for a USDA Grant to support distance learning. They are asking for a letter of support (attached) to submit with their application.

**\*\*\*The Board was in consensus to send a letter of support for Columbia Gorge Community College's application for a USDA Grant.\*\*\***

**Discussion Item – Finance Report**

Finance Director Mike Middleton reviewed the report included in the Board Packet. He stated that they should reach 100% of budget for property taxes by the end of the fiscal year; investments are at 200% of budget. He pointed out that there is an appearance of a significant overspend in the Surveyor's budget and explained that it is not an actual overspend but an accounting error that has been corrected.

Chair Kramer thanked Mr. Middleton for his work, commenting that the budget work this year has been exceptional.

**Consent Agenda – 5.1.2019 Regular Session Minutes**

**{{{Chair Kramer moved to approve the Consent Agenda. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Agenda Item – Fee Schedule Ordinance**

Ms. White explained that the Fee Schedule Ordinance is reviewed annually and amended as necessary. This process usually takes place at the end of the year to capture any pass-through fees from the state which always take effect on January 1<sup>st</sup>. Since we will be taking on the Building Codes Program as of July 1<sup>st</sup>, it is necessary to recognize those fees in our Ordinance. Should there be internal or external fees needing adjustment, that will happen through the review at the end of the year at which time the Ordinance would come back to the Board for consideration.

Vice-Chair Hege said that he has received citizen input suggesting that it might be a good idea to have a separate Fee Schedule for Building Codes to keep the lines clear between that department and the rest of the County in case we move the program back to the State at some future date. He said that he thinks there may be some rules that allow constituents to call for a vote on Building Codes fees.

Mr. Wallace said that he thinks the Building Codes fees need to be recognized in the Ordinance but he will look into it further. Mr. Middleton said that he does not think that it would be a true separation; under that model the argument could be made that we need a separate ordinance for each department. He commented that it would only serve to complicate things and make more work without improving outcomes.

**{{{Commissioner Schwartz moved to adopt Ordinance 19-003 in the matter of amending Wasco County's Uniform Fee Schedule for Various County Departments. Vice-Chair Hege seconded the motion which passed unanimously.}}}**

**Agenda Item – Building Codes Ordinance**

Ms. White explained that Mr. Timmons may still have some questions regarding the Building Codes Ordinance; however, in order for it to be in effect when the County takes over the program on July 1<sup>st</sup>, it will need to be adopted today. She went on to say that she thinks the concerns are due to some miscommunication and that if changes need to be made, it can be brought back to the Board through this same process to adopt those amendments.

Vice-Chair Hege said that he received a comment suggesting that OAR Chapter 915 308 be added as a reference to the Ordinance. Ms. White responded that the Ordinance was reviewed by the State Building Codes office; they suggested that some references be removed as being too specific, while others were added. She said she thinks one that was removed at the State's suggestion was 308, but she

would have to research to be sure.

**{{{{Chair Kramer moved to adopt Ordinance 19-002, an ordinance continuing the assumption of administration of the Building Inspection Program and setting forth programs for the enforcement of the Oregon Building Codes, including the Oregon Specialty Codes, Electrical and Plumbing. Vice-Chair Hege seconded the motion which passed unanimously.}}}}**

Vice-Chair Hege reported that he met with the tri-counties and updated them on our progress in taking on the Building Codes Program. He said that there was not a lot of dialog; if they have interest in an arrangement with us, they will reach out. He said he believes that they are looking at their options.

#### Agenda Item – Title VI Plan

Ms. White explained that County Counsel has made a few revisions to the plan – mostly housekeeping items such as removing references to Washington State Department of Transportation or correcting the signature line references - none of the changes are substantive.

Finance Manager Kayla Nelson reported that the only finding in a recent Oregon Department of Transportation compliance review was that our Title VI Plan has not been updated in the last three years. She said that the plan before the Board today is basically the MCEDD Title VI plan reworked for Wasco County. Since we receive pass-through grant funding from ODOT, we are required to have a Title VI Plan in place; the plan must be updated every three years.

**{{{Vice-Chair Hege moved to approve the 2019 Wasco County Title VI Plan with corrections as stated. Commissioner Schwartz seconded the motion which passed unanimously.}}}}**

#### Agenda Item – Cyber Security Policy

Information Services Director Paul Ferguson explained that there have been processes and procedures the County has followed for cyber security but they have never been outlined in a formal policy. In order to renew our insurance, we need to have this policy in place. He said that they have been working on several policies that they will bring forward in the coming months, but this one has to be in place by June 15, 2019. He added that as they work on other aspects, this policy may be incorporated into a more encompassing policy. Much of what we practice is based on federal standards and CJIS (Criminal Justice Information System) requirements.



Commissioner Schwartz asked how someone would be able to identify a problem. Mr. Ferguson replied that most people know when something comes in that is out of the ordinary and they report it. He added that they offer trainings that cover it and about once each year he sends out information regarding phishing and suspicious emails. He said that it is not uncommon for his department to get calls from users saying that something is amiss.

Vice-Chair Hege asked what constitutes an incident. Mr. Ferguson responded that it is when something happens that requires a response. The form is used by IS to document the incident.

**{{Vice-Chair Hege moved to approve the Wasco County Cyber Security Incident Handling and Response Policy. Commissioner Schwartz seconded the motion which passed unanimously.}}**

Chair Kramer called a recess at 11:49 a.m.

The Session reconvened at 11:54 a.m.

#### Agenda Item – Transportation Grant Application

Mid-Columbia Economic Development District Transportation Operations Director Charlotte Sallee explained that MCEDD Deputy Director Jessica Metta had been called away and would be unable to attend today's meeting. She said that she was only brought in for this 30 minutes ago but will do her best to answer any questions.

Ms. Sallee said that the ODOT Transportation Grant offers annual assistance to support transportation and land use planning. She stated that MCEDD had unsuccessfully applied in 2018 but were encouraged to reapply this year. The funds would go to build on the 2016 feasibility study to create a full plan with short and long-term guidance for the provision of services, capital improvements, etc. for the next 20 years. She explained that the County is the eligible entity and then would become the pass through agency; MCEDD would administer the grant. She stated that the application is due June 6, 2019 and will be awarded in August. She added that Statewide Transportation Improvement Funds will be used as the match for the ODOT grant – no additional funds will be needed. The total cost is \$125,000.

Vice-Chair Hege asked if Mr. Stone has seen this. Ms. White replied that he has and approves. The intent is for the Board to agree to the application submission and authorize Mr. Stone to electronically sign as it is an online application process.

**\*\*\*The Board was in consensus to submit the ODOT Transportation Grant application and authorized Administrative Officer Tyler Stone to digitally sign the application.\*\*\***

#### Agenda Item – STIF Services Contract

Consideration of the Statewide Transportation Improvement Fund Services Contract was postponed to the June 5<sup>th</sup> Session in order to have Ms. Metta in attendance.

#### Commission Call

Vice-Chair Hege announced that Mid-Columbia Center for Living Executive Director Barbara Seatter is resigning. The Board is meeting next week to discuss next steps. He said that the construction project is proceeding well.

Chair Kramer reported that he recently attended a fire meeting in Wamic put on by Chief Magill and attended by representatives from the US Forest Service and Department of Forestry. He said that a citizen attending that meeting was upset about the illegal fireworks that are used in the Pine Hollow area. One of his complaints is a lack of response from local authorities. He said that he has offered to have a meeting and suggested that the next commission meeting work session might be a good opportunity for that.

Commissioner Schwartz asked what the specific concern is. Chair Kramer replied that people come to Pine Hollow with illegal fireworks and feel like they do not have to follow the rules. Vice-Chair Hege commented that no matter the outcome of the meeting, community education is in order.

Chair Kramer went on to say that the Crystal Creek restoration project got a summary judgement that allows the work to move forward for thinning. He said that it was not a project started with the Collaborative which is one of the reasons it ended up in court.

The session was adjourned at 12:11 p.m.

#### Summary of Actions

#### MOTIONS

- **To approve the Oregon Department of Transportation Agreement #33386 2019 Fund Exchange Agreement for Pavement Preservation in Wasco County.**
- **To approve Resolution 19-004 in the matter of the annual inspection of the Northern Oregon Regional Correctional facility.**

- **To approve the applications submitted by Young Life Washington Ranch for nine Fireworks Display Permits associated with events taking place from June through August, 2019 and further move to approve the associated Hold Harmless Agreement between Young Life Washington Ranch and Wasco County contingent on Washington Ranch signing the Hold Harmless Agreement.**
- **To approve the Consent Agenda.**
- **To adopt Ordinance 19-002, an ordinance continuing the assumption of administration of the Building Inspection Program and setting forth programs for the enforcement of the Oregon Building Codes, including the Oregon Specialty Codes, Electrical and Plumbing.**
- **To approve the 2019 Wasco County Title VI Plan with corrections as stated.**
- **To approve the Wasco County Cyber Security Incident Handling and Response Policy.**

**CONSENSUS**

- **To recommend Mayor Lynn Ewing to serve as the Cities of Wasco County representative on the Regional Solutions committee and directed staff to notify Mr. Stice of that decision.**
- **To send a letter of support for Columbia Gorge Community College's application for a USDA Grant.**
- **To submit the ODOT Transportation Grant application and authorized Administrative Officer Tyler Stone to digitally sign the application.**

Wasco County  
Board of Commissioners

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Steven D. Kramer, Board Chair

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Scott C. Hege, Vice-Chair

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Kathleen B. Schwartz, County Commissioner



## AGENDA ITEM

### Planning Ordinance Update

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#### STAFF PRESENTATION

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#### STAFF REPORT CHAPTER 5

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- ATTACHMENT A CHAPTER 5 PROPOSED AMENDMENTS
  - ATTACHMENT B GOAL 5 ANNOTATED
  - ATTACHMENT C GOAL 5
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#### STAFF REPORT CHAPTER 12

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- ATTACHMENT A CHAPTER 12 PROPOSED AMENDMENTS
  - ATTACHMENT B GOAL 12 ANNOTATED
  - ATTACHMENT C GOAL 12
- 

#### ORDINANCE 19-004 UPDATING CHAPTERS 5 & 12 OF WASCO COUNTY COMPREHENSIVE PLAN

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Wasco County  
Planning



# Wasco County 2040 Work Tasks 9 & 11

# Work Tasks 9 & 11

- Historic and Aggregate Inventories
- Transportation (Chapter 12)

# Meeting Goals

- Review proposed amendments
- Solicit any public feedback
- Recommendations to the BOC

# Timeline

- Work Tasks 9 - Due 7/31
- Work Task 11 – Due 9/30 (shift to 7/31)
- 1<sup>st</sup>/2<sup>nd</sup> BOCC Hearing: June 5<sup>th</sup> and 19<sup>th</sup>



9	<p><b>Update Goal 5 inventories</b>  Update aggregate and historic inventories.  Using technical advisors, adjust any Environmental Protection Districts (EPDs) that have experienced significant change.  <b>Products:</b> (1) Updated aggregate and historic inventories; (2) updated zoning map</p>	7/31/19
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# Aggregate Inventory

- Staff conducted an audit, 60+hours
- Checked for duplicates
- Cleaned up errors
- Staff identified three new significant operations and one expansion in 2017 that had been approved but not added to the inventory

171	7S 15E 0 600	A-1	J. Arlie Bryant Inc. (Hagen)			PLACUP-15-01-0001, 6/12/2015
172	6S 17E 0 2200, 2400	A-1	Jon Justesen			PLACUP-15-01-0002, 6/12/2015
173	5S 16E 0 3600	A-1	J. Arlie Bryant Inc. (Carver)			PLACUP-15-02-0003, 6/12/2015
174	3S 13E 0 4000	A-1	Jack Stevens		33-0051	CUP-06-112, CPA-06-102

# Historical/Cultural/Archeological Inventory

- Staff conducted an audit
- Checked for new additions to the National Register of Historic Places
- Identified one removal
- Staff identified one historic district (Imperial Stock Ranch Headquarters) and one cultural site (Mosier Mounds), which are on the NHR



# Future for Chapter 5/Goal 5

14	<p><b>Product:</b> Updated comprehensive plan natural hazards element</p> <p><b>Review process, Work plan, and language:</b> consistent with OAR 660-023-0200</p>	
18	<p><b>Big Game Habitat</b> Update big game habitat maps and environmental protection district. Ensure compliance with OAR 660-023-0110.</p> <p><b>Product:</b> Amendments to the comprehensive plan and LUDO regarding protection of big game wildlife habitat.</p>	6/30/20
19	<p><b>Aggregate Resources</b> Update the comprehensive plan and LUDO to be consistent with OAR 660-023-0180.</p> <p><b>Products:</b> (1) Updated comprehensive plan policies related to aggregate resource protection; (2) LUDO updates to implement new plan policies and OAR 660-023-0180</p>	3/31/20
	<p><b>Products:</b> (1) Amendments to existing comprehensive plan policies; (2) add policy that addresses uses in EPD 7 (Wild and Scenic Rivers Overlay); (3) Update supporting data and references to Wild and Scenic Rivers, including external partner plans; (4) appropriately identify development buffers and designations.</p>	

11	<b>Update Transportation Element</b> Update Goal 12 policies to align with Transportation Systems Plan (2009) and make recommendations for updates to the plan. Address funding gaps.  <b>Product:</b> Updated comprehensive plan transportation element	9/30/19
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# Transportation: Chapter 12

- Policies/Implementation updated in 2009 in conjunction with Transportation Systems Plan (TSP)
- Received feedback from the Roadmaster
- Remove references to MCOG Transportation
- Remove all references to funding

# Transportation: Chapter 12

- Added strategy for coordination on ROW and road requests/permits
- Added waiver of remonstrance possibility for future road improvement
- Added requirement for restrictive covenant for partition, subdivision or PUD application approval
- Added request that future TSP updates include analysis of recreation on transportation system



# Transportation: Chapter 12

- Added new policy related to rec
- Directives for updates to TSP



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

*Pioneering pathways to prosperity.*

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**FILE #:** 921-18-000109 (9)

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**REQUEST:** Legislative Request to Amend the Comprehensive Plan, Chapter 5  
**DECISION:**

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**Attachments:**

- A. Wasco County Comprehensive Plan Periodic Review Work Task 9 Overview
- B. Annotated Draft of Proposed Chapters 5 of Wasco County 2040 (Comprehensive Plan) with notes
- C. Clean Draft of Proposed Chapter 5

**File Number:** 921-18-000109

**Request:** Amend the Wasco County Comprehensive Plan  
1. Change the format to align with Statewide Land Use Planning Goals  
2. Develop Goal 5 into Wasco County 2040 format (Chapter 5), make any general amendments reflecting current planning practice and amend the aggregate and historic inventories. This is related to Periodic Review work task 9.

**Prepared by:** Kelly Howsley Glover, Long Range Planner

**Prepared for:** Wasco County Planning Commission

**Applicant:** Wasco County Planning Department

**Staff Recommendation:** Recommend adoption of the proposed amendments of the Wasco County Comprehensive Plan by the Wasco County Board of Commissioners.

**Planning Commission  
Hearing Date:** May 7, 2019

**Board of County  
Commissioner Hearing  
Date:** June 5, 2010

**Procedure Type:** Legislative

**Attachments:** Attachment A: Wasco County Comprehensive Plan Periodic Review Work Task 5 Overview  
Attachment B: Annotated Draft of Proposed Chapter 5 of Wasco County 2040 (Comprehensive Plan) with notes  
Attachment C: Clean Draft of Proposed Chapter 5

## **I. APPLICABLE CRITERIA**

### **A. Wasco County Comprehensive Plan Chapter 11: Revisions Process**

1. Section B: Form of Comprehensive Plan Amendment
2. Section C: Who May Apply for a Plan revision
3. Section D: Legislative Revisions
4. Section H: General Criteria
5. Section I: Transportation Planning Rule Compliance
6. Section J: Procedure for the Amendment process

### **B. Oregon Administrative Rules 660-025**

## **II. SUBMITTED COMMENTS**

As of the Wasco County Planning Department has received no comments about the proposed revisions.

## **III. PUBLIC INVOLVEMENT**

In addition to the public hearings required by this legislative process to allow for public testimony and the ability to provide written comment, Wasco County has included the following additional measures to ensure the process is open to the public:

### **A. Newspaper Notifications**

#### Citizen Advisory Group Work Session March 12, 2019:

Public notice for a Citizen Advisory Group meeting was published in The Dalles Chronicle on February 20, 2019, more than 20 days prior to the March 12th work session.

#### Planning Commission Hearing May 7, 2019:

Public notice for a Planning Commission hearing was published in The Dalles Chronicle on April 13, 2019, more than 20 days prior to the May 7<sup>th</sup> hearing.

#### Board of County Commissioner Hearing June 5, 2019:

Public notice for the Board of County Commissioner hearing was published in The Dalles Chronicle on May 15, 2019, more than 20 days prior to the June 5<sup>th</sup> hearing.

### **B. Information Available on Website**

The information regarding the proposed amendments was placed on the Wasco County Planning Department Website<sup>1</sup> on March 5<sup>th</sup>, 2019. If updates are made following each hearing, the webpage will be updated to reflect such changes. At the time of publication of this document, the following information was made available:

- A listing of hearing dates, times and locations.
- Drafts of the proposed amendments

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<sup>1</sup> <http://co.wasco.or.us/departments/planning/index.php>



- Staff report describing the process and proposed changes
- A way to submit comments and concerns

In addition, the Wasco County Comprehensive Plan website<sup>2</sup> has included several posts that have included the time and date of meetings and discussion of proposed topics. This website has 25 subscribers that receive notification of new content, and is also promoted on the Planning Department's social media channels which have 211 followers.

#### **C. Notification to Partners**

An email notification of proposed amendments, progress on Periodic Review, and the legislative hearing was sent to the Periodic Review Assistance team and other Citizen Advisory Group identified stakeholders on March 5, 2019. The notification included links to the staff report, proposed amendments, and the opportunity to comment.

#### **D. Notification to Community Notification List**

During the Wasco County 2040 initial outreach phase, a public email notification list was assembled. Members of the public continue to have the opportunity to sign up for this list at any time on the project website<sup>3</sup> or in person at any of the public hearings, work sessions or other events. They can also request to be put on the list via email, telephone, or in the Planning Department Office. Currently this list includes 74 interested parties from the community.

An email notification of proposed amendments, progress on Periodic Review, and the legislative hearing was sent to this notification list on March 5, 2019. The notification included links to the project website and instructions on how to comment.

#### **E. Postcard Mailer Notification to All Property Owners in Unincorporated Wasco County**

At the beginning of March, a postcard mailer was sent to all property owners in unincorporated Wasco County updating them about the progress on Wasco County 2040 and putting them on notice about upcoming public meetings, including the worksession on March 12<sup>th</sup>. The postcard included links to the project website and contact information for the department.

#### **F. Other Public Outreach**

In addition to the public meetings, an online survey, social media content, and news media articles helped to promote engagement with the work tasks and solicit additional input. Any comments, survey results, or other feedback were compiled and analyzed by staff and used to inform the development of the new policy and implementation strategies.

### **IV. FINDINGS**

#### **A. Wasco County Comprehensive Plan Criteria**

##### **1. Chapter 11 - Revisions Process**

<sup>2</sup> [www.Wasco2040.com](http://www.Wasco2040.com)

<sup>3</sup> <https://wasco2040.com/contact/>

**a. Section B – Form of Comp Plan Amendment**

***Amendments to the Comprehensive Plan include many forms and can either be legislative or quasi-judicial.***

**FINDING:** The request is for a legislative text amendment to policies and the format for Goal 5 (Chapter 5) of the Comprehensive Plan, as part of a broader Periodic Review work plan. Amendments include reformatting and edits to existing policy and implementation, as well as the addition of some new content including historical perspective, overview, and findings and references. The main goal of the work task is to update the aggregate and historic inventories with current information, including additions as the result of planning permits and new sites identified through the National Register of Historic places. There are substantial edits that still need to be made to Goal 5 (Chapter 5) that will be made with subsequent work tasks.

**b. Section C – Who May Apply for a Plan revision**

***Amendments to the plan may be initiated by the Wasco County Governing Body***

**FINDING:** The Wasco County Board of Commissioners authorized the Wasco County Planning Department to pursue Voluntary Periodic Review (VPR) to update the Wasco County Comprehensive Plan. They sent a letter to the Land Conservation and Development Commission supporting VPR on September 29, 2016.

**c. Section D – Legislative Revisions**

***Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership. The Planning Commission and County Governing Body shall evaluate the plan as often as necessary to meet changes in the social, economic, or environmental character of Wasco County.***

**FINDING:** The proposed text amendments to policies and format of the Comprehensive Plan are applicable to all properties governed by the Wasco County Comprehensive Plan and therefore the proposal is a legislative revision. The proposed amendments are part of a larger Periodic Review process approved by the Planning Commission, Board of County Commissioners, Department of Land Conservation and Development and the Land Conservation and Development Commission. To be accepted for periodic review, staff prepared extensive justification demonstrating the need for amendments to the Comprehensive Plan as a result of changes in the social, economic and environmental character of Wasco County.

**d. Section H – General Criteria**

***The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:***

- 1). Compliance with the statewide land use goal as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.***

- 2). Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.**
- 3). A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.**
- 4). Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.**
- 5). Proof of change in the inventories originally developed.**
- 6). Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.**

**FINDING:** Amendments being proposed to Goal 5 with this work task are intended to add new context, findings and references to existing policies and implementation and update existing inventories currently listed in the Comprehensive Plan as required by state law.

To ensure accurate information for the updated inventory, staff conducted an extensive audit of aggregate mining permits and data, correcting duplicates and ensuring all information is up to date. The aggregate inventory has been updated since 1983, but a series of additions or alterations in 2006 and 2015 were not captured in the inventory list. These additions went through the required Conditional Use Permit and Comprehensive Plan Amendment Process, but for whatever reason were not updated in the inventory list and Comprehensive Plan Map.

The first modification was in 2006 was through a quasi-judicial review (PLACUP-06-112 and CPA-06-102). This is number 174 on the list. The approved request permitted the aggregate mining operation and added the site to the inventory. The site is located on 3S 13E 0, tax lot 4000. The Comprehensive Plan inventory list, however, was not modified to include this site. Staff is now proposing this addition.

In 2015, there was an application (PLACUP-15-01-0001) to create a 20 acre aggregate operation and designate it a significant site. This was done through a quasi-judicial hearings process, including a Comprehensive Plan amendment to add the proposed site to the inventory, apply EPD-5, and issue a conditional use permit to allow the aggregate operation. This was approved in 2015 at the Planning Commission level. The site is located on 7S 15E 0, tax lot 600. The site is now #171 on the inventory. Although it was added to the inventory through the appropriate process, the inventory list was not updated at the time.

Also in 2015, site 172, located at 6S 17E 0, tax lots 2200 and 2400 was reviewed through a quasi-judicial hearing for a significance determination, zone change and a conditional use permit (PLACUP-15-01-0002). This was approved in 2015. The inventory list was not updated at that time.

Finally, there was a third approval (PLACUP-15-02-0003) in 2015 for a site at 5S 16E 0, tax lot 3600 that was not added to the inventory. This approval included a significance determination, application of EPD-5, and a conditional use permit for a 20 acre aggregate operation.

All four additions were approved through the appropriate process but were not added to the official inventory list. Staff proposes to make these additions, in keeping with the process and amending the map.

The historical inventory was updated in 1994 during Periodic Review. These sites were included in the Cultural, Historic and Archeological Overlay, EPD-4, adopted December 7, 1994 into the Comprehensive Plan Map and Land Use and Development Ordinance. Currently, the historical inventory, which includes cultural and archeological sites, includes 41 sites. 1 site was removed from the inventory in 2008 but needs to be removed from the list.

Proposed amendments to the cultural, historic and archeological overlay include the addition of two sites that are on the National Historic Register. This includes the Imperial Stock Ranch Headquarters, which is a historic district, and the Mosier Mounds, which is a sensitive cultural and archeological site added to the Register in 2003. This is consistent with past practice and the Wasco County Land Use and Development Ordinance, Chapter 3 Section 3.770 which states a proposed landmark or district has significance because it is listed on the National Register of Historic Places. It is also consistent with the current Comprehensive Plan policy that "All resources listed on the National Register...shall be designated a Wasco County landmark subject to the Historic Preservation Overlay."

The Citizen Advisory Group reviewed five other potential sites which have been deemed eligible and/or contributing by the National Register, but not listed, and have declined to pursue analysis to add to the historic inventory at this time.

Staff is proposing a reformatting of the inventory to include additional information, including site parcel location, a description of the resource, date of construction, and notes related to its significance. The purpose of the reformat is to ensure transparency to future staff and the public on the resources.

There are additional edits needed to be made to Chapter 5 (Goal 5) that are related to future work tasks. Where future work is scheduled, original text from the Comprehensive Plan is carried over. There are also some areas left blank to be completed with those upcoming work tasks.

***e. Section I- Transportation Planning Rule Compliance***

***1). Review of Applications for Effect on Transportation Facilities – A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – "TPR"). "Significant" means the proposal would:***

***a). Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);***



- b). Change standards implementing a functional classification system; or***
- c). As measured at the end of the planning period identified in the adopted transportation system plan:***
  - i. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;***
  - ii. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or***
  - iii. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or Comprehensive Plan.***

**FINDING:** The proposed updates will not change the functional classification of an existing or planned transportation facility, change standards implementing a functional classification system and/or allow uses or development resulting in impacts to the transportation system.

Proposed revisions to Goal 5 do not have a direct or indirect impact on transportation facilities, the Transportation Systems Plan, or Transportation Planning rules.

#### ***Oregon Administrative Rules 660-025-0130***

#### ***Submission of Completed Work Task***

- 1). A local government must submit completed work tasks as provided in the approved work program or a submittal pursuant to OAR 660-025-0175 to the department along with the notice required in OAR-660-025-0140 and any form required by the department. A local government must submit to the department a list of persons who participated orally or in writing in the local proceedings leading to the adoption of the work task or who requested notice of the local government's final decision on a work task.***

**FINDING:** A notice was sent to DLCD on March 1, 2019, consistent with requirements, to inform them of the proposed May 7, 2019 hearing and subsequent hearings to adopt Chapters related to Periodic Review work task 9. To date, staff has not received any oral or written comment or request for notification from the public on Work Task 9. At such a time when comment is received, that will be attached to the staff report and submitted to DLCD.

- 3). For a periodic review tasks to be complete, a submittal must be a final decision containing all required elements identified for that task in the work program. The department may accept a portion of a task or subtask as a complete submittal if the work program identified that portion of the task or subtasks as a separate item for adoption by the local government. All submittals required by section 1) of this rule are subject to the following requirements:***
  - a). If the local record does not exceed 2,000 pages, a submittal must include the entire local record, including but not limited to adopted ordinances and orders, studies, inventories,***

*findings, staff reports, correspondence, hearings minutes, written testimony and evidence, and any other items specifically listed in the work program.*

- b). If the local record exceeds 2,000 pages, a submittal must include adopted ordinances, resolutions, and orders; any amended comprehensive or regional framework plan provisions or land use regulations; findings, hearing minutes; materials from the record that the local government deems necessary to explain the submittal or cities in its findings; and a detailed index listing all items in the local record and indicating whether or not the item is included in the submittal. All items in the local record must be made available for public review during the period for submitting objections under OAR 660-025-0140. The director or commission may require a local government to submit any materials from the local record not included in the initial submittal;*
- c) A submittal of over 500 pages must include an index of all submitted materials. Each document must be separately indexed, in chronological order, with the last document on the top. Pages must be consecutively numbered at the bottom of the page.*

**FINDING:** The local record for Work Task 9 will not exceed 2,000 pages. Consistent with this requirement, submittal to DLCD will include the entire local record, including but not limited to the adopted ordinance and orders, studies, findings, staff reports, correspondence, hearing minutes, written testimony and evidence and any other relevant material.

A copy of the record, when complete, will also be available for inspection at the Planning Department.

## **Attachment A**

### **Chapter 5 Proposed Amendments**

**Documentation:** The following is a summarized overview of proposed amendments.

**State of the Comprehensive Plan:**

- A. **Purpose:** The main purpose of the Comprehensive Plan is to function as a visionary policy document with a 20 year horizon. The plan represents the desires of the citizens of Wasco County and provides generalized direction for development, preservation, the planning process, citizen involvement and numerous other elements related to land use planning. Due to frequent changes in circumstances, law, and the desires of the citizens of the county, the major components should be updated every five to ten years as needed. The land use and development ordinance includes the specific rules and regulations that are meant to implement this vision and amendments to it are required to be consistent with Comprehensive Plan language.
- B. **Prior Updates:** The Comprehensive Plan was acknowledged by the Land Conservation and Development Department in 1983. Major components of the document have not been updated since 1983, resulting in them now being out of date. Other portions have been updated but were done inconsistently and in some cases, the new language did not get inserted into the amended document. In several instances, updates to the ordinance are now out of compliance with the Comprehensive Plan because of the lack of comprehensive updates. A more comprehensive update was initiated in 2009, but ultimately not completed. Staff has used some of the past findings and information in drafting the proposed updates.
- C. **Format:** The Comprehensive Plan is currently organized in a way that puts unrelated information in the same chapter and separated related information into multiple chapters. This has created significant difficulty for staff and the public to find information and utilize as the plan was intended.
- D. **Reformatting:** After a careful case study of other Oregon county comprehensive plans, the Citizen Advisory Group held several work sessions in 2015 and 2016 to discuss, among other issues, reformatting the Comprehensive Plan for increased use, transparency and readability. Based on those work sessions, staff was directed to compile and organize information in a manner that better aligned the plan to the Statewide Land Use Planning Goals.
  - 1. **Oregon's Land Use Goals:** The vast majority of the Comprehensive Plan language is tied to one of the State of Oregon's Land Use Goals. Other than some introductory chapters, the entire Comprehensive Plan is being formatted so that each chapter corresponds to one of the applicable Land Use Goals. Each chapter will include all of the policies, findings, and inventories for the specific goal, in addition to any references and historical information.
  - 2. **Format of Goal Chapters:** Each Goal related chapter will be formatted according to the following conventions:

- a. Overview: A sentence to a paragraph on the outlining the purpose behind the Goal and Wasco County policies.
- b. Statement of Wasco County Goal and reference to Statewide Planning Goal
- c. Any cross-references to other Goals
- d. Policy Statements
- e. Implementation Statements for each policy
- f. Findings and reference section detailing any relevant findings and references.
- g. Appendices- These contain critical inventories and other data relevant to the related chapter. In the case of Chapter 5, this includes the historic and aggregate inventories, as well as information about species and habitat in Wasco County.

#### **Chapter by Chapter Overview of Proposed Substantive Amendments:**

##### **A. Chapter 5- Goal 5 Open Spaces, Scenic and Historic Areas, and Natural Resources**

This new chapter maps to Goal 5 (Opens Spaces, Scenic and Historic Areas, and Natural Resources) and includes an overview of the natural environment, a brief overview of the goal's purpose in Wasco County, an excerpt of Oregon's Statewide Land Use Planning Goal 5, policies, implementation strategies for each policy, and a new findings and references section.

1. **Overview:** The overview briefly discusses the relevance to Goal 5 in Wasco County and its relationship to Wasco County land use planning.
2. **Historical Perspective:** Historical perspective was left blank to be completed with future work tasks.
3. **Excerpt of Statewide Planning Goal:** Excerpt from the Oregon Administrative Rules on Goal 5 that outlines for staff and public the purpose of Goal 5.
4. **Wasco County's Goal:** Wasco County's goal is related, but not verbatim, to the Statewide Goal 5.
5. **Photo:** A collage of different photos of scenic, historic, and natural resources taken by staff is included.
6. **Cross Reference:** A list of other goals that relate to Goal 5 was included for easy reference.
7. **Policies:** The existing plan has ten policies. The recommendation is to keep ten policies but update them to more accurately reflect current policy and status.
  - a. Policy 1: Current language "Protect and utilize appropriately the mineral and aggregate resources of Wasco County, and minimize conflict between surface mining and surrounding land uses." No change is recommended
    - (1) Implementation Strategy "a." A minor revision updating the Oregon Administrative Rules reference is recommended.



- b. Policy 2: states *"The County shall maintain an inventory of mineral and aggregate resource sites. The comprehensive plan inventory shall consist of three part:..."* No changes are recommended to this policy or the implementation strategies at this time. Staff will make revisions to this policy with Work Task 19.
  - c. Policy 3: Current policy is *"New mineral and aggregate sites shall not be allowed within the quarter mile boundary of either the John Day or Deschutes River."* Staff is not currently recommending any modification to this policy.
  - d. Policy 4: Current policy is *"All aggregate operations within the Columbia Gorge National Scenic Area shall be operated in compliance with the Management Plan for the National Scenic Area and its implementing ordinance."* Staff is not proposing any changes to this policy at this time.
  - e. Policy 5: Current policy is *"The Deschutes and John Day River Scenic Waterways shall be maintained and protected as natural and open space areas with consideration for agriculture and recreation."* No changes are currently proposed for this policy or supporting implementation.
  - f. Policy 6: Current policy is *"Coordinate with and support the managing agencies recreation use management issues and facilities necessary for recreation and resource protection."* No changes are currently proposed for this policy or supporting implementation.
  - g. Policy 7: Current policy is *"Maintain the existing aesthetic quality of the Columbia River Gorge."* No changes are currently proposed for this policy or supporting implementation. Some revisions to this policy and supporting implementation may be recommended with Work Task 16.
  - h. Policy 8: Current policy is *"Encourage the construction of ponds for livestock, fire protection and water reclamation."* No changes are currently proposed for this policy or supporting implementation.
  - i. Policy 9: Current policies are *"Encourage land use and land management practices which contribute to the preservation and enhancement of fish and wildlife resources, with consideration for private agricultural practices. To conserve and protect existing fish and wildlife areas. To maintain wildlife diversity and habitat so that it will support optimum numbers of game and nongame wildlife for recreation and aesthetic opportunities."* No changes are currently proposed for this policy or supporting implementation.
  - j. Policy 10: Current policies are *"Preserve the historical, archeological, and cultural resources of the County."* No changes are currently proposed for this policy.
- (1) Implementation Strategy "a." Currently reads "The Wasco County Historical Landmarks Commission shall maintain a current inventory of significant

archaeological and cultural resources in the county.” The statement is proposed to be revised to remove “Historical Landmarks Commission” as the inventory has historically lived with the Wasco County Planning Department who implements the Environmental Protection District.

- (2) Implementation Strategy “b.” reads “Encourage preservation of resources identified as significantly historically, culturally, or archeologically.” Staff is proposing to change the word “significantly” to “significant.”
- (3) Implementation Strategy “c.” was written before EPD-4 was developed and reads “Develop and implement a program to review and regulate activities which may impact historic, archaeological and cultural resources per statewide Goal 5 and OAR 660 16.” Staff is recommending removal of this strategy as EPD-4 has been developed and implemented.
- (4) Implementation strategies “d-h.” Staff is recommended no revisions.
- (5) Implementation Strategy “i.” The strategy currently reads: “The County shall designate a Landmarks Commission to advise the County Court about the county’s historic landmarks according to the Historic Preservation Overlay ordinance.” Staff is recommending it be revised to read: “Wasco County shall maintain a Historic Landmarks Commission, which evaluates applications for development, alteration or demolition in according with the Land Use and Development Ordinance and State Law.”
- (6) Implementation Strategy “j.” This strategy, and its supporting points, talks about the creation of a historic review board and their proposed tasks. As this has not been accomplished, and the Historical Landmarks Commission functions in this capacity, creating a redundancy, staff is proposing the removal of this strategy.
- (7) Implementation Strategy “k.” is “All resources listed on the National Register or determined eligible for the National Register of Historic Places shall be designated a Wasco County landmark subject to the Historic Preservation overlay.” Staff is proposing the reference be changed from Historic Preservation overlay to EPD-4 so that it may also include cultural and archaeological components.
- (8) Implementation Strategy “l.” Staff proposes the following strategy: “Maintain EPD-4 in accordance with state regulations.”
- (9) Implementation Strategy “m.” “Encourage active participation and coordination with local, regional, state and federal partners” is a recommended addition to ensure continued coordination with partner agencies.
- (10) Implementation Strategy “n.” The final implementation strategy recommended for this policy is to “Provide outreach and information to maintain public awareness of

state and federal laws protecting historic and prehistoric resources, including deposit of prehistoric artifacts and records with appropriate institutions.”

8. **Findings and References:** To help provide some information about each of the policies, as well as some history, findings and references are provided at the end of the chapter. These references cite sources from text. Findings provide additional context for some of the policies and implementation strategies. The references list a variety of external plans and reports that are useful, not only in giving context to the policies, but also for research or reference for current planning.

DRAFT

**Goal5**

**Open Spaces, Scenic and**

**Historic Areas and**

**Natural Resources**



## Goal5

### Open Spaces, Scenic and Historic Areas and Natural Resources

#### Overview

Goal 5 offers framework for Wasco County's role in protecting its natural resources, open spaces, groundwater resources, rivers, waterways, historic and mineral/aggregate resources.

Protection of these diverse resources requires a variety of approaches. The role of land use planning in this protection involves a threefold approach:

- Collecting and maintaining data and other inventories of assets;
- Coordinating with local, regional, state and federal programs; and
- Administering local and state regulations that protect the sustainability and quality of the resourcesrelated to these resources.

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## Statewide Planning Goal 5

To protect natural resources and conserve scenic and historic areas and open spaces.

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability.

Excerpt from  
OAR 660-015-0000(5)

## Cross-Reference

Additional policies related to this goal:

## Wasco County Goal

## Open Spaces, Scenic and Historic Areas and Natural Resources

To conserve open space and protect natural and scenic resources.



## Policies

### Mineral Resources

- 5.1.1** Protect and utilize appropriately the mineral and aggregate resources of Wasco County, and minimize conflict between surface mining and surrounding land uses.

#### Implementation for Policy 5.1.1:

- a. The development of new rock and aggregate resource sites shall be consistent with the State Planning Goal 5 and Oregon Administrative Rules Chapter 660, Division 23<sup>1</sup> process to balance conflicts between mining operations and new and existing surrounding conflicting uses.
- b. Sites identified as significant aggregate resource sites shall not support interim or permanent uses which may jeopardize the future availability of the resource.
- c. Mining and processing of gravel and mineral materials may only be allowed at sites included on the "Other Site" inventory or "Significant Sites" inventory.
  1. Mining at sites on the "Other Sites" inventory may be allowed by a conditional use permit.
  2. Mining at sites on the "Significant Sites" inventory may only be permitted in accordance with the Mineral Resources Overlay.
- d. For each site determined to be significant, the County shall complete the remainder of the County Goal 5 process identifying conflicting uses, analyzing the ESEE consequences of the conflicting use(s), and designating a level of protection from conflicting uses. If the final decision concerning the site is to preserve fully or partially protect the resource from conflicting uses, the County shall zone the site with the Mineral Resources Overlay.

- 5.1.2** The County shall maintain an inventory of mineral and aggregate resource sites. The comprehensive plan inventory shall consist of three parts:

- a. An inventory of "Significant Sites" identified through the Goal

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<sup>1</sup> Per DLCD, Updates converting policy/rules from Division 16 to 23 are part of work task 19, to be completed in 2020  
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## 5.1 Policies

5 process as important resources that will be protected from conflicting uses;

- b. An inventory of "Potential Sites" for which sufficient information concerning the location, quality, and quantity of a resource site is not adequate to allow the County to make a determination of significance;
- c. An inventory of "Other Sites" for which available information demonstrates that the site.

**Implementation for Policy 5.1.2<sup>2</sup>:**

- a. The significance of non-aggregate mineral resources shall be judged on a case by-case basis, taking into account information concerning the commercial or industrial use of the resource, as well as the relative quality and relative abundance of the resource within at least the County.
- b. The scope of an existing or "grandfathered" aggregate operation shall be established by:
  - 1. Authorization by a County land use approval; or
  - 2. The extent of the area disturbed by mining on the date that the mining operation became a non-conforming use.
- c. Sites on the "Other Sites" inventory shall not be protected from conflicting uses.
- d. For sites on the "Potential Sites" inventory, the County shall review available information about mineral and aggregate resources, and if the information is sufficient, determine the site to be significant when one of the following conditions exist:
  - 1. As part of the next scheduled Periodic Review;
  - 2. When a landowner or operator submits information concerning the potential significance of a resource site and requests a Comprehensive Plan amendment;
  - 3. When resolution of the status of a potential resource site is necessary to advance another planning objective.
- e. In order to approve surface mining at a site zoned for exclusive farm or forestry use, the County shall find, as part of the ESEE analysis, that the proposed activity will not: 1) force a significant change in, or significantly increase the cost of, accepted farming or forestry practices on surrounding lands, and 2) will not significantly increase fire hazard or significantly

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<sup>2</sup> Some of this may be changed with Work Task 19, which will transition rules to ensure consistency with OAR 660-023-0180  
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increase fire suppression costs or significantly increase risks to fire suppression personnel.

- f. The County may establish and impose conditions on operation of a surface mine when deemed necessary as a result of a site-specific Goal 5 analysis. Where such conditions conflict with criteria and standards in the Mineral and Aggregate Resources Overlay, the conditions developed through the Goal 5 analysis shall control.
- g. No surface mining or processing activity, as defined by the zoning ordinance, shall commence without land use approval from the County, and approval of a reclamation plan and issuance of an operating permit by DOGAMI.
- h. Aggregate sites shall be subordinate to the landscape setting as seen from travel corridors when such travel corridors have been determined to be significant by the ESEE analysis.

**5.1.3** New mineral and aggregate sites shall not be allowed within the quarter mile boundary of either the John Day or Deschutes River.

**5.1.4** All aggregate operations within the Columbia River Gorge National Scenic Area shall be operated in compliance with the Management Plan for the National Scenic Area and its implementing ordinance.

## **Wild and Scenic Rivers<sup>3</sup>**

**5.1.5** The Deschutes and John Day River Scenic Waterways shall be maintained and protected as natural and open space areas with consideration for agriculture and recreation.

### **Implementation for Policy 5.1.5:**

- a. Coordinate all land use planning activities with the Bureau of Land Management, Oregon State Department of Transportation and the Warm Springs Indian Reservation. These three parties shall be notified of all proposed land actions within the Deschutes River and John Day River Scenic Waterways for their review and comment.
- b. Allow agricultural operations within the Deschutes and John Day Scenic Waterways.
- c. Allow only buildings customarily provided in conjunction with

<sup>3</sup> This policy/implementation will be addressed in 2020 with Work Task 15  
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farm use within the visual corridors of the Deschutes and John Day Scenic Waterways.

- d. Encourage the preservation of landscape features of the John Day and Deschutes Rivers.

**5.1.6** Cooperate with managing agencies to solve recreation use management on the John Day and Deschutes River Scenic Waterways.

**Implementation for Policy 5.1.6:**

- a. Coordinate with and support the managing agencies recreation use management issues and facilities necessary for recreation and resource protection.

**5.1.7** Maintain the existing aesthetic quality of the Columbia River Gorge

**Implementation for Policy 5.1.6:**

- a. Scenic and Open Space areas in the Columbia River Gorge will be preserved by placement of the Environmental Protection District, Division 4, and overlay zone.
- b. The Oregon State Highway Division should employ plantings to provide buffers between residential areas and Interstate 84 when feasible.
- c. Forestry uses shall be in accordance with the Oregon Forest Practices Act.
- d. Clear-cutting within the legal boundaries of the Columbia River Gorge is discouraged.

## **Water**

**5.1.8** Encourage the construction of ponds for livestock, fire protection and water reclamation.

**Implementation for Policy 5.1.7:**

- a. Allow such uses in the "A-1" (Exclusive Farm Use) zone.
- b. The County Water master and Sanitarian shall continue to regulate appropriations, diversions and sewage waste disposals to ensure quality water resources.

## **Fish and Wildlife**

**5.1.9** Encourage land use and land management practices

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which contribute to the preservation and enhancement of fish and wildlife resources, with consideration for private agricultural practices.

To conserve and protect existing fish and wildlife areas.

To maintain wildlife diversity and habitat so that it will support optimum numbers of game and nongame wildlife for recreation and aesthetic opportunities.

**Implementation for Policy 5.1.9:**

- a. Identify and maintain all wildlife habitats by:
  1. Implementation of an Environmental Protection District overlay zone for significant fish and wildlife habitats and for the big game winter range.
  2. Designation of the Big Game Winter Range and Area of Voluntary Siting Standards (low elevation winter range) on the map contained in this plans Resource Element.
- b. The winter range identified on the Big Game Habitat Map included in the Resource Element of this plan shall be protected by an overlay zone. The Rural Service Centers identified in the Comprehensive Plan which lie within the overlay zone shall be exempt from the provisions of the overlay zone.
- c. Consistent with the development standards of the land use ordinance, sensitive riparian areas of perennial and intermittent streams identified in the Resource Element, as well as to protect people and property from flood damage, the zoning ordinance shall prohibit development within 100 feet of the mean high water mark of perennial or intermittent stream or lake in a resource zone, and 50 feet of the mean high water mark of a perennial or intermittent stream or lake in residential zones.
- d. Sensitive bird habitat sites (bald eagle, golden eagle, osprey, great grey owl, great blue heron) and mammal habitat sites (Western pond turtle nesting sites) identified in the Resource Element of the plan shall be protected by a Sensitive Bird and Mammal Overlay Zone during periodic review pursuant to the current County approved work program.
- e. When site specific information is available to the County on the location, quality and quantity of threatened and endangered fish and wildlife species listed by State or Federal Wildlife agencies and the Oregon Department of Fish and

Wildlife develops protection criteria for the species, the county shall proceed with a Goal 5 ESEE analysis in compliance with OAR 660 Div. 16.

- f. The county shall review the Transition Land Study Area (TULSA) big game habitat areas and designated as "1-B" Goal 5 resources, during the next periodic review or as additional information on the location, quality and quantity of the habitat areas becomes available. (ORD. 3.180 )
- g. County-owned land shall be managed to protect and enhance fish and wildlife habitat except where a conflicting public use outweighs the loss of habitat.
- h. The county shall notify the Oregon Division of State Lands and the Oregon Department of Fish and Wildlife of any development application for land within a wetland identified on the National Wetlands Inventory maps<sup>4</sup>. (ORD. 3.180).
- i. An application for a destination resort, or any portion thereof, in a recognized big game habitat overlay zone shall not be accepted pending completion of the County's Goal 8 destination resort mapping process. (ORD 3.180)
- j. The county shall provide ODFW an annual record of development approvals within the areas designated as Area of Voluntary Siting Standards' on the plan map to allow ODFW to monitor and evaluate if there is a significant detrimental effect on habitat.

## Historic, Cultural and Archeological Resources

**5.1.10** Preserve the historical, archaeological, and cultural resources of the County.

### Implementation for Policy 5.1.10:

- ~~a. The Wasco County Historical Landmarks Commission shall maintain a current inventory of significant archaeological and cultural resources in the county.~~
- ~~b. Wasco County shall maintain an inventory of significant archaeological and -cultural resources in the County.~~
- ~~c. a. Encourage~~ Require preservation of resources identified as significant~~y~~ historically, culturally, or archaeologically in keeping with state and national rules.
- ~~d. Develop and implement a program to review and regulate activities which may impact historic, archaeological and~~

<sup>4</sup> This will be updated to reference State Wetlands Inventory with Work Task 14 in 2020



~~cultural resources per statewide Goal 5 and OAR 660-16-  
(Amended by Historic Preservation Overlay Ord. adopted Dec.  
7, 1994).~~

~~e.b.~~ Location of archaeological sites shall not be disclosed, (this information is exempt from the Freedom of Information Act), unless development is proposed which would threaten these resources. When any development is proposed which may affect an identified archaeological site, the site will be protected by the Wasco County Land Use and Development Ordinance, Chapter 3, Historic Preservation Overlay zone.

~~f.c.~~ Resources listed as Wasco County Historic Landmarks will be protected by the Wasco County Land Use and Development Ordinance Chapter 3 Historic Preservation Overlay zone.

~~g.d.~~ When adequate information becomes available, Wasco County shall evaluate its Goal 5 1-B historic resources for inclusion on the inventory or designation as a significant (1-C) resource and, where appropriate, provide protection under the County's Historic Preservation Overlay Chapter of the Wasco County Land Use and Development Ordinance.

~~h.e.~~ Pursue private and public sources of funding for use by property owners in renovation and maintenance of historic properties.

~~i.f.~~ Pursue options and incentives to allow productive, reasonable use, and adaptive reuse of historic properties.

~~j. The County shall designate a Landmarks Commission to advise the County Court about the county's historic landmarks according to the Historic Preservation Overlay ordinance. (Adopted by Ord., December 7, 1994). Wasco County shall maintain a Historic Landmarks Commission, which evaluates applications for development, alteration or demolition in accordance with the Land Use and Development Ordinance and State Law.~~

~~k. Appoint a Historic Review Board whose role is to protect and preserve historic Landmarks, Districts and Corridors and who individually have demonstrated interest and expertise in the field of Historic Preservation. This board shall be empowered to:~~

~~1. Maintain and update the Wasco County Cultural Resource Inventory.~~

~~2. Recommend to the County Court the designation of historic landmarks or districts that meet the criteria for designation as contained in Section 3.772 of the Land Use and Development Ordinance.~~

- ~~3. Protect historic landmarks or districts through the review, in accordance with the review criteria established for alterations, demolition and new construction~~
- ~~4. Provide a forum for public participation in matters and issues related to historic preservation in the community.~~
- ~~5. Review proposed activities by the County or other agencies, businesses, or developers that may detrimentally affect historic landmarks and advise the Planning and Economic Development Staff, Planning Commission, and County Court regarding these matters.~~

~~h.g.~~ All resources listed on the National Register or determined eligible for the National Register of Historic Places shall be designated a Wasco County landmark subject to ~~the Historic Preservation Overlay, EPD-4.~~

- l. Maintain EPD-4 in accordance with state regulations.
- m. Encourage active participation and coordination with local, regional, state and federal partners.
- n. Provide outreach and information to maintain public awareness of state and federal laws protecting historic and prehistoric resources, including deposit of prehistoric artifacts and records with appropriate institutions.

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## Findings and References

1.1.a Comprehensive Plans are required to foster and encourage historic preservation, management and enhancement consistent with ORS 358.605. OAR 660-023-300 (3).

1.1.a 1.1.b The inventory of historic resources must be consistent with OAR 660-023-0030.

### References

Oregon Department of Land Conservation and Development. *Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources*. Oregon's Statewide Planning Goals and Guidelines.

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# Appendix



## Mineral and Aggregate Resources

1) **General Information:** Wasco County has few economically important mineral deposits. Some limited mining activity has occurred in the past. There are no active mineral mines in Wasco County. Most of the county is underlain with recent basalt flows, which precludes the possibility of extensive mineral resources. The highest potential for minerals would be in the older geologic formations, found in other parts of Oregon or bordering counties. The primary minerals found in Wasco County are as follows:

- A. **Bauxite:** Evidence suggests there may be some potential low grade bauxite found in the Columbia River basalt group but no investigations have been undertaken in Wasco County to confirm this.
- B. **Copper and Lead:** These minerals have been mined in the Ashwood-Oregon King Mine located in Jefferson County to the south. Some deposits may occur in the County.
- C. **Mercury and Molybdenum:** No economically important deposits are located within Wasco County.
- D. **Semi-precious Gems:** These are more of interest to rock collectors rather than having intrinsic mineral value.
- E. **Perlite:** Between 1945 and 1950, mining was conducted in an area south of Maupin near the Deschutes River. High quality acoustic and insulating tile was produced for a number of years from this perlite. It became unprofitable to mine at this location and the operation was discontinued. A large deposit still exists in this area.
- F. **Volcanic Tuffs:** The Rainbow Rock Quarry, about five miles south of Pine Grove, has produced brightly colored and banded tuff since 1949. Rock of similar appearance has been uncovered but not developed on a nearby flat east of the quarry. Tuffs are utilized for decorative building stone and ceramic art.
- G. **Peat:** According to the U.S. Geological Survey, Mineral and Water Resources of Oregon, 1969, there are widely scattered minor deposits of peat in the Cascade region of the County and coal in the southeastern region. They have never been mined commercially.
- H. **The Ka-Nee-Ta Stone Quarry:** On the Warm Springs Reservation, this quarry produced rough pieces of rhyolite. The stone is multi-colored and valuable for decoration. Other stone quarries include Indian Candy and Sorenson Quarry.
- I. **Quarry Rock:** Quarry rock increases in importance as the more desirable deposits become depleted. Transportation costs are high so that quarries must be located within ample reserves of good quality crushing rock. The best rock for crushing is generally Columbia River basalt.

2) **Inventory:** Wasco County's cumulative demand projection for all aggregate material by the year 1995 was between four and six million tons.

3) **Application of the Goal 5 Process for Mineral Resources**

- A. Potential Conflicting Use in Zone Categories Applicable to Mineral resource Sites: All except one currently inventoried resource site fall into three resource zones employed by the County: A-1, Agriculture; F-1, Forest; F-2, Forest. One site is in an Industrial zone (Sun Pit). Conflicting uses are generally those which, if allowed to locate within the specific site identified, would render the

resource unrecoverable and those activities on surrounding lands which affects or is affected by aggregate operation. Most of the conflicting uses are structural improvements which commit the site to another use. Other less intensive uses such as recreation facilities, public parks and playgrounds, and golf courses which are conditional uses in some zones may conflict because, once established, they tend to diminish the value of the resource. Some competing uses, such as water impoundments or power generation facilities, may be determined to be of sufficient importance as to preempt the mineral resource value.

# Aggregate Inventory

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
1	2N 11E 2 D 200	NSA	Hood River Sand & Gravel		33-0055	CUP 92-110	No
2	2N 11E 11 900	NSA	ODOT (Gove) 33-004-4	2N 11E 11 2800	33-0060		No
3	2N 11E 11 200	NSA	ODOT 33-001-4	2N 11E 11 200	33-0057		
	2N 11E 2 D 300	Mosier UGB	(Mosier Pit) Listed as reference	2N 11E 2 1300			
4	2N 11E 1 D 200	NSA	Hood River Sand & Gravel 2630 Old Columbia River Drive Hood River OR 97031	2N 11E 1 D 200	33-0076	CUP 92-136	No
			Ken & Joan Hudson 1020 Mosier Creek Rd	2N 11E 3500			No
5	2N 11E 13 600	F-2		2N 11E 6001			No
6	2N 11E 24 500	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008				
7	2N 12E 19 1200	F-2	Tony Heldstab 2175 Mosier Creek Road Mosier OR 97040	2N 12E 19 600	33-0088	CUP 92-126 & 94-111	No
8	2N 12E 29 1800	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008	2N 12E 9155			No
9	2N 11E 11 2700	NSA	Gayle Weisfield		33-0079	CUP 92-101 - <i>Exp. 1997</i>	No
10			Chenoweth Air Park				No
11	2N 13E 19 1600	NSA	Floyd Marsh P O Box 2 The Dalles OR 97058	2N 13E 19 100			No
12	2N 13E 19 600	A-1	W R & Margaret Pentecost 4900 Seven Mile Road The Dalles OR 97058	2N 13E 19 800			No
13	2N 12E 1300	NSA	Jim Ellett 5693 Chenoweth Road The Dalles OR 97058	2N 12E 24 12500	33-0056	CUP 90-124 & C90-0249 <i>Exp. 11-2000</i> CUP-00-125 & SPR-00-169	Yes

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	
14	2N 12E 16 D 1900	RR-5	William Ringlbauer 2244 Dell Vista Drive The Dalles OR 97058	2N 12E 16 D 1700			No
15			Mayer State Park				No
16	2N 13E 17 B 200	SMA	US Forest Service 902 Wasco Ave Ste 200 Hood River OR 97031	2N 13E 17 1801			No
17	2N 13E 20 300	NSA	Wayne & Jana Webb P O Box 692 The Dalles OR 97058	2N 13E 20 1000 not shown on map	33-0064	CUP-98-122 - <i>Exp. 1-2000</i>	No
18			Gooseberry Springs - State of Oregon				No
19			Gooseberry Springs - State of Oregon				No
20			Dalles Dam - State of Oregon				No
21	2N 13E 20 700, 600	NSA	(Sun Pit) 1022 W 9th Street The Dalles OR 97058	2N 13E 20 600	33-0011	CUP 91-101 &	No
					33-0083	SPR 91-103	
22	2N 15E 500	NSA	Celilo - State of Oregon	2N 15E 700			No
23	Fifteen Mile Road		County				No
24	2N 14E 25		Right of Way	2N 14E 25			No
25	2N 14E 1100	A-1	Jacob Kaser 4550 Fifteen Mile Road The Dalles OR 97058	2N 14E 1000			No
26	2N 14E 2200	A-1	Donna E. Ashbrook et al P O Box 158 Dufur OR 97021	2N 14E 28 2700	33-0014		No
27	2N 14E 33 500	A-1	Judith F. Bayley et al 6331 SW Radcliff St Portland OR 97219	2N 14E 33 400			No
28	2N 14E 2400	A-1	C Gard Fulton 3775 Fifteen Mile Rd. The Dalles OR 97058	2N 14E 33 3000	33-0023		No
29	1N 14E 300	A-1	Forest J. Hay	1N 14E 400			No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			609 E 9th St The Dalles OR 97058				
30	1N 14E 2000	A-1	Sylvia Weimer 4100 Old Dufur Rd.	1N 14E 3500			Yes
31	1N 14E 2300	A-1	William & Sheli Markman/Wasco County 4785 Eight Mile Road The Dalles OR 97058	1N 14E 3300			No
32	1N 15E 3700	A-1	William & Carmen Eddins 1515 E 21st Street The Dalles OR 97058	1N 15E 3700			No
33	1N 14E 500	A-1	Cliff Baker (County?)	1N 14E 6700			No
34	1S 13E 1		County May Pit	1S 13E 1	33-0013		No
35	1S 14E 17 300	A-1	Miller Ranch Co. 1 NW Greenwood Ave. Bend OR 97701	1S 14E 3100			No
36	1S 14E 3000	A-1	Paul & Velma Limmeroth 2520 Ward Road The Dalles OR 97058	1S 14E 3401 Boyd			No
37	1S 14E 18 100	A-1	Miller Ranch Co. 1 NW Greenwood Ave. Bend OR 97701	1S 14E 18 100			No
38	1S 14E 3200	A-1	Mary Sylvester 3813 Faith Home Road Ceres CA 95307	1S 14E 3600			No
39	1S 14E 20		Dufur	1S 14E 20			No
40	2S 13E 35 100	A-1	William Neil 62883 US Hwy 197 Dufur OR 97021	2S 13E 100	33-0050		No
41	2S 13E 5000	A-1	ODOT Tygh Ridge 33-025-4	2S 13E 35 5200	33-0071		Yes
42	3S 13E 100	A-1	William & Masil Hulse P O Box 427 Dufur OR 97021	3S 13E 100			No
43	3S 13E 2300	A-1	Paul & Velma Limmeroth 2520 Ward Road	3S 13E 2500			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			The Dalles OR 97058				
44	3S 13E 2300	A-1	Paul & Velma Limmeroth 2520 Ward Road The Dalles OR 97058	3S 13E 2500			No
45	3S 13E 3200	A-1	Irl Jr. & Orlena Davis 45 N Eagle Pt Road Tygh Valley OR 97063	3S 13E 3400	33-0054	CUP 96-101	No
46	3S 13E 33 100	A-1	Robert & Meredith Lindell P O Box 217 Tygh Valley OR 97063	3S 13E 33 3500	33-0047		No
47	2N 11E 36 100	F-2	Berniece & Morris Schmidt 2855 Mosier Creek Road Mosier OR 97040	2N 11E 7600	33-0081		No
48	2N 12E 30 1100	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008	2N 12E 9139	33-0088		No
49	2N 13E 31 B 600	RR	Whispering Pines Ranch Corp 612 Liberty The Dalles OR 97058	2N 13 31 600			No
50	1N 11E 25 100	F-2	Ketchum Ranch Inc 6282 Chenowith Road W The Dalles OR 97058	1N 11E 900			No
51	1N 13E 1300	A-1	John & Betty Skirving 2013 W Scenic Drive The Dalles OR 97058	1N 13 4490			No
52	1N 13E 32 200	A-1	Milton & June Martin 3560 Three Mile Road The Dalles OR 97058	1N 13E 5300			No
53	1N 13E 25 700	A-1	Arthur V Braun P O Box 498 The Dalles OR 97058	1N 13E 25 2991	33-0082	CUP 90-113	No
54	1N 15E 2900	A-1	Eldon F Emerson et al 6124 Roberts Market Road The Dalles OR 97058	1N 15E 28 2700			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
55	1S 15E 700	A-1	James Q Johnson 6352 Roberts Market Road The Dalles OR 97058	1S 15E 402			No
56	1S 15E 2000	A-1	Iva J Kortge 338 West 21st The Dalles OR 97058	1S 15E 1400			No
57	1S 15E 2600	A-1	Frederick & Peggy Clausen Rt 2 Box 4 Dufur OR 97021	1S 15E 1900			No
58	2S 14E 1900	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 14E 1600			No
59	2S 14E 2000	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 14E 1800			No
60	2S 14E 2300	A-1	Robert & Nancy Hammel 62250 Tygh Ridge Road Tygh Valley OR 97063	2S 14E 2000			No
61	1N 15E 2200	A-1	William & Barbara Hammel 7075 Fifteen Mile Road The Dalles OR 97058	1N 15E 21 2100			No
62	1N 15E 2200	A-1	William & Barbara Hammel 7075 Fifteen Mile Road The Dalles OR 97058	1N 15E 2100			No
63	1N 15E 2900	A-1	Eldon F Emerson et al 6124 Roberts Market Road The Dalles OR 97058	1N 15E 20 2700			No
64	1S 14E 4500	A-1	Lucie Underhill Life Estate 85429 Easton Canyon Road Dufur OR 97021	1S 14E 4900			No
64	1S 14E 4500	A-1	Clara A. O'Brien 2867 Breckenridge NW Salem OR 97304	1S 14E 4900 Duplicate			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
65	1S 14E 5100	A-1	W C Hanna Estate US Nat'l Bank Trust Dept P O Box 3168 Portland OR 97208	1S 14E 31 5600			No
66	1S 14E 2800	A-1	Daniel Bolton P O Box 731 Dufur OR 97021	1S 14E 1900			No
68	2N 12E 4 1100 2N 12E 5 100	NSA	Wasco County	2N 12E 4/5			No
70	2S 12E 1700	A-1	Sharon L. Sorensen Rt 1 Box 180 Dufur OR 97021	2S 12E 12 3000			No
71	2S 12E 5100	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 12E 23 5700			No
72	3S 12E 3	A-1	Wasco County 511 Washington St. The Dalles OR 97058	3S 12E 3			No
73	3S 12E 25 300	A-1	Russell & Wanda Sinclair Rt 1 Box 79 Tygh Valley OR 97063	3S 12E 25 3700			No
74	2S 13E 5200	A-1	Keith & Mary Smith 60538 Dufur Gap Rd. Dufur OR 97021	2S 13E 32 4900			No
75	4S 13E 12 2800	A-1	Fred & Maxine Ashley/Tygh Valley Sand & Gravel	4S 13E 12 6800	33-0015		No
76	3S 13E 3800	A-1	Roger T. Justesen/Betty Nelson P O Box 96 Grass Valley OR 97029	3S 13E 31 4000	33-0051	Cancelled 1976	No
77	4S 13E 10	A-1	Wasco County	4S 13E 10			No
78	4S 12E 2700	A-1	Keith & Kathleen Obermaier P O Box 3497 Pojaque Santa Fe NM 87501	4S 12E 17 5000 Formerly Cody Logging	33-0048		No
79	4S 13E 7100	A-1	Erma C. Gutzler	4S 13E 31 10800			No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			Rt 1 Box 120 Maupin OR 97037				
80	5S 12E 2 400	A-1	Lora M Hachler Rt 1 Box 408 Maupin OR 97037	5S 12E 2 400			No
81	5S 12E 800	A-1	Wasco County 511 Washington St. The Dalles OR 97058	5S 12E 4 800			No
82	5S 12E 2300	A-1	Milton & Mae McCorkle Life Estate Rt 1 Box 412 Maupin OR 97037	5S 12E 12 2100			No
83	5S 13E 1400	A-1	Eugene H. Walters Rt 1 Box 86 Maupin OR 97037	5S 13E 6 1400			No
84	5S 13E 6300	A-1	Lyle & Lorraine Gabel Rt 1 Box 110 Maupin OR 97037	5S 13E 28 5200			No
85	5S 12E 7100	A-1	Allan & Cristina Blake Rt 1 Box 60A Maupin OR 97037	5S 12E 35 5400			No
86	5S 11E 5100	A-1	Wasco County	5S 11E 35 4802	33-0074		No
87	6S 11E 9	A-1	Woodside	6S 11E 9			No
88	4S 13E 11 100 4S 13E 0 7200	A-1	Robert Ashley	4S 13E 11 100 4S 13 E 0 2700		CPA-01-101 CUP-01-112	No
101	Site Not Identified		Port of The Dalles				
102	Site Not Identified		Interpretative Center Site				
150	4S 14E 33	A-1	Connolly	4S 14E 33			No
151	4S 14E 2700	A-1	Connolly Land & Livestock Inc. 412 W. 4th St. The Dalles OR 97058	4S 14E 25 2400	33-0093	CUP 93-110	No
152	4S 15E 800	A-1	Lee & Ruth Lindley Box 64 Maupin OR 97037	4S 15E 30 800			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
153	4S 15E 1000	A-1	USA Bureau of Land Management	4S 15E 30 1200			No
154	5S 16E 2000	A-1	Lonny & Pamela Brown (County Lease) 18233 W Wintergreen Lane Bremerton WA 98312	5S 16E 20 2200			No
155	5S 16E 3300	A-1	Janis Lee Snodgrass % Lonny D. & Pamela A. Brown 18233 W Wintergreen Lane Bremerton WA 98312	5S 16E 32 3300			No
156	5S 16E 3400	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	5S 16E 32 2401			No
157	6S 19E 900	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	6S 16E 5 106			No
158	6S 16E 900	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	6S 16E 5 106			No
159	6S 16E 2100	A-1	ODOT Bakeoven Quarry 33-051-4	6S 16E 21 101	33-0017	PR-94-102	No
160	7S 17E 31 1700	A-1	Richard & Betty Baker P O Box 136 Antelope OR 97001	7S 17E 31 1990	33-0032		No
161	8S 17E 600	A-1	Donald & Marjorie Gomes (County owned) P O Box 70 Antelope OR 97001	8S 17E 4 692			No
162	8S 17E 1400	A-1	Wilton & Francis Dickson 604 NE Loucks Road Madras OR 97741	8S 17E 14 1500			No
163	8S 16E 4300	A-1	McNamee Ranches P O Box 50 Antelope OR 97001	8S 16E 36 3400			No
164	8S 17E 2000	A-1	Herbert & Faye McKay P O Box 5	8S 17E 35 2100			NO

			Antelope OR 97001				
Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
165	8S 18E 900	A-1	Washington Corp. P O Box 3027 Pasco WA 99302	8S 18E 34 800			No
166	8S 19E 1600	A-1	USA Bureau of Land Management	8S 19E 31 1900			No
167	8S 14E 1400	A-1	Ned Darling 5618 SE Taylor Portland OR 97215	8S 14E 13 101			No
168	8S 14E 2200	A-1	Bureau of Land Management	8S 14E 21 1900			No
169	7S 14E 3100	A-1	Ned Darling 5618 SE Taylor Portland OR 97215	7S 14E 32 3000			No
170	5S 12E 0 8500, 6S 12E 0 1300	A-1	Richard Dodge			PLAQJR-10-10-0005, 4/15/2011	No
171	7S 15E 0 600	A-1	J. Arlie Bryant Inc. (Hagen)			PLACUP-15-01-0001, 6/12/2015	Yes
172	6S 17E 0 2200, 2400	A-1	Jon Justesen			PLACUP-15-01-0002, 6/12/2015	Yes
173	5S 16E 0 3600	A-1	J. Arlie Bryant Inc. (Carver)			PLACUP-15-02-0003, 6/12/2015	Yes
174	3S 13E 0 4000	A-1	Jack Stevens		33-0051	CUP-06-112, CPA-06-102	No
200	4S 14E 3700	A-1	USA Bureau of Land Management	4S 14E 33 3800			No
201	5S 14E 35 C 400	A-1	ODOT Maupin Pit 33-036-4	5S 14E 35 4400	33-0004		Yes
202	6S 14E 300	A-1	Criterion Interest Inc. 122 E Stonewall Charlotte NC 28202-1889	6S 14E 11 100			Yes
203	7S 14E 200	A-1	ODOT Criterion 33-038-4	7S 14E 12 1200	33-0078		Yes
204	6S 17E 3 400	A-1	ODOT 33-049-4 County Line Quarry	6S 17E 3 500	33-0102		Yes
205	6S 17E 0 2000	A-1	State Highway Dept	5S 17E 16 ?			No
206	6S 17E 2300	A-1	ODOT 33-050-4 Hinton Quarry	6S 17E 19 1800	33-0100		Yes
208	7S 16E 1300	A-1	ODOT Identifier 33-053-4	7S 16E 6 1000	33-0024		Yes
209	7S 15E 1600	A-1	ODOT 33-059-4 Garbage Pit	7S 15E 22 1600	33-0097		Yes

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
211	8S 15E 2200	A-1	Charles & Betty Johnson Gateway Star Route Box 465 Madras OR 97741	8S 15E 22 1701			No
212	8S 15E 2000	A-1	Charles & Betty Johnson Gateway Star Route Box 465 Madras OR 97741	8S 15E 27/28 1701			No
213	8S 15E 26 3500	A-1	Annan & Marla Priday HC 62, Box 462 Madras OR 97741	8S 15E 26 2900	33-0094	CPA 96-101 Goal 5	Yes
214	7S 17E 1600	A-1	ODOT Shaniko 33-062-4	7S 17E 20 2000	33-0065		Yes
215	8S 18E 600	A-1	ODOT 33-064-4	8S 18E 6 501			Yes
216	8S 18E 4 400	A-1	ODOT 33-065-4 Antelope Rock Product	8S 18E 4 400	33-0069		Yes
217	5S 12E 8500		Richard Dodge	5S 12E 33 7200	33-0080	CUP 87-104 <i>Added 3/93</i>	No
218	4S 12E 2800	A-1	Metzentine Quarry	4S 12E 17 1900	33-0086	CUP 91-102 <i>Added 3/93</i>	No
			Dan Van Vactor				
219	2N 11E 900		ODOT 33-002 Rock Creek Quarry	2N 11E 2 900			No
220	2N 13E 20 800		ODOT 33-007 Shooting Range Quarry	2N 13E 20 800			No
221	2N 13E 500		ODOT 33-008	2N 13E 20/21 500			No
222	1S 14E 3300		ODOT 33-021 Boyd Quarry	1S 14E 20 3700			No
223	3S 13E 33 200		ODOT 33-028-4 Butler Canyon Quarry	3S 13E 33 4100	33-0062		No
224	5S 14E 6 200		ODOT 33-032 Maupin Maintenance Yard	5S 14E 6 200			No
225	7S 15E 2000		ODOT 33-039 Filler Pit	7S 15E 29 2100			Yes
226	8S 15E 2000		ODOT 33-040	8S 15E 15			Yes
227	8S 15E 3100		ODOT 33-041 Cow Canyon Quarry	8S 15E 22 2800	33-0075		Yes
228	5S 11E 36 1600		ODOT 33-045-4 Pine Grove Quarry	5S 11E 36 5300	33-0074		Yes
229	5S 12E 30B 100		ODOT	5S 12E 30 200			Yes
230	6S 12E 2 700		ODOT 33-048-4 Paquet Gulch Quarry	6S 12E 2 300	33-0101		Yes
231	7S 17E 600		Shaniko Ranch		33-0092	CUP 93-106	No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
232	1N 13E 27/28 1000		Phetteplace		33-0098	CUP 98-113 & CPA 98-103	No
233	6S 17E 2400		Jon Justesen		33-0072	CUP 99-105	No
234	1N 13E 0 2900		Elmer Wilson		33-0096	CUP 94-135	No
235	2N 12E 2000		Tingue		33-0064 & 33-0081	CUP 90-107	No
other -	<b>Co. Road Depts Sites</b>						
625	1S 13E 39 102		Dufur County Pit	1S 13E 36 102			No
649	4S 12E 36 7400		Kennedy Pit	4S 12E 36 7400			No
673	8S 14E 13 101		South Junction Pit	8S 14E 13 101 a portion			No
713	5S 11E 35 4802		Kelly Springs	5S 11E 35 4802			No
790	2S 14E 33 2900		Hilgen Pit	2S 13E 33 2900 a portion of			No
800	8S 17E 4 500		Helyer Pit	8S 17 4 500			No
833	3S 12E 3 1101		Schindler Pit	3S 12E 3 1101			No
850	2S 12E 12 3000		West Pit	2S 12E 12 3000			No
870	3S 12E 25 3800 & 1102		Shadybrook Pit	3S 12E 25 1102			No
871	<b>2N 12E/13E 19 &amp; 24 1000</b>	<b>NSA</b>	<b>Harvey Pit</b>	<b>2N 12E 1000</b>	<b>33-0009</b>		<b>Yes</b>
872	2S 13E 0 (34,35) 4400, 4900		(Mike) Filbin Pit		33-0099	CUP-99-102	No

# Animals in Wasco County

A = Abundant F = Few C = Common R = Rare U = Unknown

Darker Grey is from the 2007 White River Wildlife Management Plan (2007) ODFW

C = Common, U = Uncommon, R = Rare, X = Extremely Rare

Light Grey is from Lower Deschutes Wildlife Area Management Plan (2009) ODFW

C = Common, U = Uncommon, R = Rare, X = Extremely Rare

	Habitat Types							Use Period			
	Mixed Conifer	Mixed Conifer Oak	Pine-Oak	Oak-Grass	Grass-Shrub Juniper	Riparian	Agricultural	Spring	Summer	Fall	Winter
<b>Bird Species</b>											
Killdeer					C	C		X	X	X	X
Mallard Duck						C	C	X	X	X	X
Wood Duck						F			X	X	X
Turkey Vulture	C	C	C	C	C	C	C	X	X		
Bald Eagle	F	F	F	F	F	F		X			
Rough-legged Hawk	F	F	F	F	C	F	C			X	X
American Kestrel	C	C	C	C		C	C	X	X	X	X
Long-eared owl	C	C	F	C	F	F	F	X	X	X	X
Screech owl	F	C	F	C	F	F	F	X	X	X	X
Great-horned owl	C	C	C	C	C	C	C	X	X	X	X
Merriam's Turkey	C	C	C	C		C		X	X	X	X
California Quail	C	C	C	C	C	C	C	X	X	X	X
Ring-necked Pheasant		F	F	F	F	C	C	X	X	X	X
Mourning Dove		C	C	C	C	C	C	X	X	X	X
Rock Dove		C	C	C		C		X	X	X	X
Common Nighthawk	C	C	C	C	C	C	C	X	X		
Belted Kingfisher					F	C		X	X	X	X
Common Flicker	C	C	C	C	F	C	C	X	X	X	X

Lewis Woodpecker	C	C	C	C	F	C	C	X	X	X	X
Downy Woodpecker	C	C	C		F	C		X	X	X	X
Yellow Bellied Sapsucker	F	F	F			F		X	X	X	X
Western Kingbird	F	F	F		F	F	F	X	X		
Western Flycatcher	F	F	F		F	F	F	X	X		
Ash-throated Flycatcher	F		F		F	F	F	X	X		
Western Wood Pewee	F	F	F		F	F	F	X	X		
Horned Lark			C	C	C	C	C	X	X	X	X
House Wren	C	C	C		C	C	C	X	X		
Winter Wren	C	C	C			C	C			X	X
Bewick's Wren	F	F	F			F		X	X		
Rock Wren	F	C	F	C	C	F	F	X	X		
Hermit Thrush	C	C	F			F		X	X		
Fox Sparrow	F	C	C			C	C	X	X	X	X
Song Sparrow	F	C	C			C	C	X	X	X	X
Canada Goose						C	C	X	X	X	X
Pintail						F	F			X	X
American Widgeon						C	C			X	X
Blue Winged Teal						F	F			X	X
Cinnamon Teal						F	F	X	X	X	X
Green-winged Teal						F	F	X	X	X	X
Common Goldeneye	F					F		X	X	X	X
Bufflehead						F		X	X	X	X
Harlequin Duck						F		X	X	X	X
Common Merganser						C		X	X	X	X
Hooded Merganser						F		X	X	X	X
Goshawk	F	F				F		X	X	X	X
Coopers Hawk	C	F	C	F	F	C	C	X	X	X	X
Sharp-skinned Hawk	C	F			F	C	F	X	X	X	X
Osprey						F		X	X		
Ruffed Grouse	C	C	C			C		X	X	X	X

Blue Grouse	C	C	C			C		X	X	X	X
Spotted Owl	R							X	X	X	X
Great Blue Heron						C	C	X	X	X	X
American Coot						C		X	X	X	X
Common Snipe						F				X	X
Poor-will	F		F			F	F	X	X		
Hairy Woodpecker	F	F	F					X	X	X	X
Alder Flycatcher	F					F	F	X	X		
Bank Swallow			C	C		C	C	X	X		
Clark's Nutcracker	F	F	F			F				X	X
Townsend's Solitaire	C					C	C	X	X		
Loggerhead Shrike			F		F		F	X	X	X	X
House Finch		C	C	C	C	C	C	X	X	X	X
Western Grebe						C		X	X	X	X
Marsh Hawk					F	F	F	X	X	X	X
Hungarian Partridge					F	F	C	X	X	X	X
Ferruginous Hawk					R	R	R			X	X
Swainson's Hawk					F	F	F	X	X	X	X
Golden Eagle	F		F		F	F	F	X	X	X	X
Chukar Partridge					C	C	C	X	X	X	X
Prairie Falcon					F	F	F	X	X	X	X
Sparrow Hawk		F	C	C	C	C	C	X	X	X	X
Burrowing Owl					F	F	F	X	X		
Red-shafted Flicker	F	C	C	C	F	C	F	X	X	X	
Red-Tailed Hawk	C	C	C	C	C	C	C	X	X	X	X
Eastern Kingbird				F	F	F	F	X	X		
Say's Phoebe				F	F	F	F	X	X		
Sage Thrasher					F			X	X		
Yellow Warbler	C	C	F			F	F	X	X		
Common Yellowthroat	C	C				F		X	X		
MacGilvray's Warbler	C	C				F	F	X	X		



Wilson Warbler	C	C				F	F	X	X		
Nashville Warbler	F					F	F	X	X		
Yellow-rumped Warbler	F					F	F	X	X		
Black-throated Gray Warbler	F					F	F	X	X		
House Sparrow	C	C	C	C	C	C	C	X	X	X	X
Western Meadowlark		C	C	C	C	C	C	X	X	X	X
Red-winged Blackbird		C	F	F	C	C	C	X	X	X	X
Brewer's Blackbird	F	C	F	F	C	C	C	X	X	X	X
Brown-headed Cowbird		C	F	C	C	C	C	X	X	X	X
Northern Oriole		C	F			F	F	X	X	X	X
Western Tanager	F					F	F	X	X		
Evening Grosbeak	C	F				C	C	X	X	X	X
Lazuli Bunting	F	F	F		F	F		X	X		
Purple Finch	F	F	F	F		F	F	X	X		X
American Goldfinch	C	C	F	C	F	F	F	X	X		
Rufous-sided Towhee	C	C	C	C	C	C	C	X	X	X	X
Savannah Sparrow		C	F	C	C	F	F	X	X		
Vesper Sparrow		C	F	C	C	F	F	X	X	X	
Lark Sparrow		C	F	C	F	F	F	X	X	X	
Dark-eye Junco	C	C	C		F	C	C	X	X	X	X
Chipping Sparrow	F	C	F	C	F	F	F	X	X		
White-crowned Sparrow		C	C	C	C	C	C	X	X	X	X
Hummingbirds	C	C	C	F	F	C	C	X	X		
Pine Siskin	C	C				F		X	X		
Mountain Quail	C	F	F	F	R	C		X	X	X	
Barn Swallow		C	C	C	F	C	C	X	X		
Violet-green Swallow	C	C	C	C	C	C	C	X	X		
Tree Swallow	C	C	F		F	F	F	X	X		
Stellars Jay	C	C	C	C	F	C	C	X	X	X	X
Scrub Jay	C	F	F	F	F	C	F	X	X	X	X
Black-billed Magpie		C	F	C	C	C		X	X	X	X

Common Raven	C	C	C	C	C	C	C	X	X	X	X
Common Crow	C	C	C	C	C	C	C	X	X	X	X
Black-capped Chickadee	C	C	C		F	C	C	X	X	X	X
Common Bushtit	C	C	F		F	F		X	X	X	X
Dipper						C		X	X	X	X
White-breasted Nuthatch	C	C	F			C		X	X	X	X
Brown Creeper	C	C	F	F	F	C		X	X	X	X
Red-breasted Nuthatch	C	C				C		X	X	X	X
Grasshopper Sparrow				C				X	X		
American Robin	C	C	C	C	C	C	C	X	X	X	X
Varied Thrush	C	C				C	C	X	X	X	X
Swainsons Thrush	C	C				C		X	X	X	
Western Bluebird	C	C	C	C	F	C	C	X	X		
Mountain Bluebird	C	C		C	F	C		X	X	X	X
Golden-crowned Kinglet	C	C				C		X	X	X	X
Ruby-crowned Kinglet	C	C				C		X	X	X	
Bohemian Waxwing	C	C				F	F	X	X	X	X
Cedar Waxwing	C	C				F	F	X	X	X	
Starling	C	C	C	C	C	C	C	X	X	X	X
Vaux's Swift	F				F	F	F	X	X		
Solitary Vireo	C	C	F			F	F	X	X		
Orange-crowned Warbler	C	C	F			F	F	X	X		
Sage Sparrow	F	C	F	C	F	F	F	X	X	X	X
Short-eared Owl	F	C	F	C	F	F	F	X	X	X	X
Horned Grebe								R	R	R	R
Eared Grebe								R	R	R	R
American Bittern								R	R	R	R
Greater White-fronted Goose								R	R	R	R
Ross' Goose								R	R	R	R
Ruddy Duck								C	C	C	C
Northern Harrier								C	C	C	C

Northern Goshawk								R	R	R	R
French Red-legged Partridge								R	R	R	R
Wild Turkey								A	A	A	A
American Coot								C	C	C	C
Sandhill Crane								R	R	R	R
Spotted Sandpiper								R	R	R	R
Flammulated Owl								R	R	R	R
Snowy Owl								R	R	R	R
Northern Pygmy-owl								R	R	R	R
Great Gray Pwl								R	R	R	R
Black-chinned Hummingbird								U	C	C	C
Calliope Hummingbird								U	C	C	C
Rufous Hummingbird								U	C	C	C
Red-breasted Sapsucker								R	R	R	R
Willow Flyvatcher								C	C	C	C
Hammond's Flycatcher								U	C	C	C
Dusky Flycatcher								U	C	C	C
Pacific Slope Flycatcher								U	C	C	C
Blue Jay								R	R	R	R
American Crow								C	C	C	C
Moutain Chickadee								C	C	C	C
Plain Titmouse								C	C	C	C
Canyon Wren								U	C	U	U
Gray Catbird								R	R	R	R
European Starling								U	A	A	U
Warbling Vireo								U	C	C	C
Spotted Towhee								C	C	C	C
Pacific Loon										X	X
Common Loon								R		R	R
Pied-billed Grebe								U	R	U	R
Red-necked Grebe											X

Double-crested Cormorant								C	C	C	C
Great Egret								X			
Black-crowned Night-Heron								X			
Trumpeter Swan									X		
Northern Pintail										R	R
Gadwall										R	R
Eurasian Wigeon										X	
Northern Shoveler								R		R	R
Ring-necked Duck								U		U	C
Canvasback								R		R	R
Barrow's Goldeneye										R	U
Lesser Scaup								U		U	C
Ringed-bill Gull								C	C	C	C
California Gull								C	U	C	C
Herring Gull								R		R	
Thayer's Gull								R		R	
Rock Pigeon								C	C	C	C
White-throated Swift								R		R	
Northern Flicker								C	C	C	C
Northern Shrike										R	R
Northern Rough-winged								C	C	U	
Cliff Swallow								C	C	C	
Marsh Wren								R		R	
American Pipit								R		R	
Palm Warbler											X
Bullock's Oriole								C	C		
<b>Amphibians Species</b>											
Northern Long-Toed Salamander						U		X	X	X	X
Western Toad	F	F			F	F		X	X	X	X
Pacific Tree Frog	C					C	F	X	X	X	X
Rough-skinned Newt	C					C		X	X	X	X



Spotted Frog						F		X	X	X	X
Leopard Frog						F		X	X	X	X
Bullfrog											
Reptiles											
Painted Turtles						F		X	X	X	X
Northwestern Fence Lizard	C	C	C	C	F	C	C	X	X	X	X
Western Shink	F	F	F		F	F	F	X	X	X	X
Oregon Alligator Lizard		F	F			F	F	X	X	X	X
Rubber Boa						U		X	X	X	X
Sharp-tailed Snake		U	U			U		X	X	X	X
Stripped Whipsnake		U	U		F	U		X	X	X	X
Western Yellow-bellied Racer		U	U			U		X	X	X	X
Great Basin Gopher Snake	U	U	U	U		U		X	X	X	X
Pacific Gopher Snake		C	C	C		C	C	X	X	X	X
Valley Garter Snake		C	C	C		C	C	X	X	X	X
Wandering Garter Snake					U	U		X	X	X	X
Northern Pacific Rattlesnake	F	F	F	F	F	F	F	X	X	X	X
Western Ring-necked Snake	F	F	F	F	F	F	F	X	X	X	X
Great Basin Fence Lizard					F			X	X	X	X
Sagebrush Lizard	U	U	U	U	F	U	U	X	X	X	X
Side-blotched Lizard	U	U	U	U	F	U	U	X	X	X	X
Western Whiptail	U	U	U	U	U	U	U	X	X	X	X
Rocky Mt. Rubber Boa	U	U	U	U	U	U	U	X	X	X	X
Bullsnake			C	C	C	C	C	X	X	X	X
Night Snake	U	U	U	U	U	U	U	X	X	X	X
Southern Alligator Lizard											
Western Fence Lizard											
Racer											
Western Terrestrial Garter Snake											
Common Garter Snake											
Mammals											

Mule Deer					C	C	C	X	X	X	X
Blacktail Deer	C	C	C			C	C	X	X	X	X
Coyote	C	C	C	C	C	C	C	X	X	X	X
Bobcat	F	F		F	F	F		X	X	X	X
Raccoon	C	C	C		F	C	C	X	X	X	X
Long-tailed Weasel	F	F			F	F	F	X	X	X	X
Badger		F		F	C			X	X	X	X
Striped Skunk	C	C	C	C	F	C	C	X	X	X	X
River Otter					F	F		X	X	X	X
Mink					F	C		X	X	X	X
Beaver						C		X	X	X	X
Muskrat			F			F		X	X	X	X
Merriam Shrew					U			X	X	X	X
Vagrant Shrew	U	U	U	U	U		U	X	X	X	X
Water Shrew					U			X	X	X	X
Pacific or Coast Mole	U	U			U	F	F	X	X	X	X
Little Brown Myotis	U	U	U		U	U	U	X	X	U	U
Fringed Myotis	U	U	U		U	U	U	X	X	U	U
California Myotis	U	U	U		U	U	U	X	X	U	U
Western Harvest Mouse					C			X	X	X	X
Canyon Mouse					C			X	X	X	X
Deer Mouse	F	C	C	C	C		C	X	X	X	X
Northern Grasshopper Mouse					C			X	X	X	X
Bushy-tailed Wood Rat		C	C		C	C	C	X	X	X	X
Sagebrush Mole					U			X	X	X	X
Montane Meadow House					U			X	X	X	X
Norway Rat					F	C	C	X	X	X	X
House Mouse			C	C	F	C	C	X	X	X	X
Western Jumping Mouse			F	F	F			X	X	X	X
Opossum		F				F	R	X	X	X	X
Dusky Shrew	U	U	U	U			U	X	X	X	X

Trowbridge Shrew	U	U	U			U	U	X	X	X	X
Pacific Mole	U	U				R	F	X	X	X	X
Yuma Myotis	U	U	U			U	U	X	X	U	U
Spotted Skunk	F	F	F	F	R	F	F	X	X	X	X
California Ground Squirrel	C	C	C	C	F	C	C	X	X	X	X
Yellow Pine Chipmunk	C	C	C			C		X	X	X	X
Townsend Chipmunk	C	C	C			C		X	X	X	X
Small-footed Myotis	U	U	U		U	U	U	X	X	U	U
Hairy-winged Myotis					U			X	X	X	X
Long-eared Myotis	U	U	U		U	U	U	X	X	U	U
Silvery-haired bat	U	U	U		U	U	U	X	X	U	U
Big Brown Bat	U	U	U		U	U	U	X	X	U	U
Western Pipistrelle	U	U	U		U	U	U	X	X	U	U
Pallid Bat	U	U	U		U	U	U	X	X	X	X
Lump-nosed Bat					U			X	X		
Blacktailed Hare					R			X	X	X	X
Whitetailed Hare					F		F	X	X	X	X
Mountain Cottontail	F	C	C	C	C	C	C	X	X	X	X
Pygmy Rabbit	F	F			F	F	F	X	X	X	X
Yellow-bellied Marmot					F			X	X	X	X
Belding Ground Squirrel					C		F	X	X	X	X
Townsend Ground Squirrel					C		F	X	X	X	X
Least Chipmunk	F	F			F			X	X	X	X
Northern Pocket Gopher	C	C	C	C	C	C	C	X	X	X	X
Great Basin Pocket Mouse					U			X	X	X	X
Ord Kangaroo Rat					F			X	X	X	X
Western Gray Squirrel	C	C	C			C	C	X	X	X	X
Chickaree	C	C				C		X	X	X	X
Northern Flying Squirrel	F	F				F		X	X	X	X
Longtail Vole	C	C		C		C	C	X	X	X	X
Oregon Vole	C	C		C		C	C	X	X	X	X

Norway Rat						C	C	X	X	X	X
Black Rat						C	C	X	X	X	X
Porcupine	C	C	C	C	C	C	C	X	X	X	X
Snowshoe Hare	C							X	X	X	X
Black Bear	C							X	X	X	X
Mountain Lion	F	F	F					X	X	X	X
Rocky Mountain Elk	C	C	C	C		C	C	X	X	X	X
Pika	C							X	X	X	X
Nuttall Cottontail	C	C		C		C		X	X	X	X
Cougar								C	C	C	C
Little Brown Bat								C	C	C	C
Golden-mantled Ground Squirrel								U	C	C	U
American Beaver								C	C	C	C
Townsend's Big-eared Bat											
White-tailed Jackrabbit											
Montane Vole											
Sagebrush Vole											
North American Porcupine											
California Bighorn Sheep											
A = Abundant F = Few C = Common R = Rare U = Unknown											
Darker Grey is from the 2007 White River Wildlife Management Plan (2007) ODFW											
C = Common, U = Uncommon, R = Rare, X = Extremely Rare											
Lighter Grey is from Lower Deschutes Wildlife Area Management Plan (2009) ODFW											
C = Common, U = Uncommon, R = Rare, X = Extremely Rare											



# Historic, Cultural and Archaeological Inventory

Site Number	Site Name	Location	Description	Date of Construction	Notes
1	Oregon Trail		Road/ Archaeological Site		Historic Oregon Trail Route. This east-west route was the highway to the Northwest that ended in The Dalles.
2	Barlow Road and Cut off Road		Road/ Archaeological Site	1845-1846	This was the alternate route to the Willamette Valley from the east. The former route was the Columbia River. The road was built in 1845-6 by Samuel K Barlow.
3	The Dalles Military Wagon Road	4S 12E 1 301	Road/ Archaeological Site		This was the main military road to the interior Oregon from Fort Dalles.
4	Jonah H. Mosier Sawmill Site	2N 11E 1	Cultural site	1854	Mosier sawmill established to supply The Dalles with lumber, was the first settlement of the City of Mosier.
5	Lower Fivemile School	1N 14E 2000		1890	Historic school, also known as the Benson School.
6	Mt. Hood Flat School	1S 13E 21 400		1890	Originally Dutch Flat School (1890), then called Fairview (1901), finally Mount Hood Flat (1910), it was declared abandoned in 1954 and property became private.
7	Lower Eightmile School	1N 14E 32 400		1904	Established in 1904, the school dated back to 1860 and was also used by Mt. View Grange.
8	Mill Creek Grange	1N 12E 14		1920	Historic grange hall.
9	Wolf Run Community Hall	1S 12E 14		1913	Wolf Run School operated from 1913-1939 and was named after wolves that roamed the area.
10	Center Ridge School	2S 15E 0 800		1890	Historic school, in the 1940s it consolidated with Dufur School District.
11	Columbia Hall	1N 15E 0 1200		1906	Was used as a school until moved to the current site where it was as a Farmers Union Hall.
12	Bear Springs Camp Shelter	5S 10E 0 100			Owned by the US Forest Service. Occupied during the first enrollment period by Company 616, a company of junior enrollees from Chicago.
13	Wapinitia	5S 12E 25B 200		1878	Wapinitia, meaning "running water", references a nearby creek. The

	School/Gym				school operated from 1878 to 1946. The town of Wapinitia also had two churches, two stores, a hotel and a blacksmith. The school district eventually merged with Maupin.
14	White River Dam	4S 14E 0 1800		1910	Now a State Park, the White River Falls was the site of a historic hydroelectric power plant that supplied power to Wasco and Sherman Counties from 1910 until completion of The Dalles Dam in 1960.
15	Old White River Station Camp	4S 11E 0 100			Owned by the US Forest Service this campsite was used in the pioneer days.
16	Pine Grove School	5S 11E 25B 600		1890	Historic school was consolidated with other schools in the late 1940s.
17	Jersey School	8S 14E 0 2300		1894	A historic school close to the Deschutes River, it was abandoned in 1954.
18	Lower Antelope School	8S 16E 0 800		1890	Historic school that was part of a joint district with Jefferson County.
19	Fivemile Rapids				Site not identified on GIS to protect cultural resources
20	Memaloose Island		Cultural Site		Lewis and Clark called it "Sepulchar Island".
21	Abbott site	5S 12E 0 5000			Near Wapinitia
22	Celilo Falls	2N 15E 20 400	Cultural site	1958	Falls were flooded in 1957 with the construction of the Dam. Park was developed by the Army Corp of Engineers to commemorate the Falls.
23	Black Walnut	2s 13E 18 1600	Black walnut tree with approx. 7' diameter	c. 1860	Record Size. Part of the Nickalson P. O'Brien homestead from 1890s. Black walnut trees, not native to Oregon, were reportedly brought west by Oregon Trail pioneers.
24	Old Fashioned Yellow Rose	4S 13E 24	Large Old-Fashioned Yellow Rosebush	c. 1910	Rose was inside the Fairview School yard. Highway was widened on part of the original school yards.
25	Ox Yoke Monument	2N 14E 25 400	Monument	1936	Built as an Oregon Trail marker by Isaac Remington. Constructed from cement mixed by hand in his wheelbarrow when Remington was aged 76.
26	Seufert Viaduct	2N 14E 31	Bridge	1920	Named for former train station which, in turn, was named for two pioneer brothers who moved to Oregon in the early 1880s. Designed by CB McCullough and constructed by the State Highway Department. Built under contract in 1920 by the Colonial Building Company.
27	BNRR Bridge	2N 15E 20	Railroad Bridge	1912	Historic link between Oregon and Washington. The bridge was built entirely on dry land on the rocks in the river during low water.
28	Dalles Canyon City Road Bridge	2S 14E 9 700	Bridge	1923	Constructed by Alfonso Pizzolato to eliminate water problems created by Dry Creek. One of few cut stone bridges in Wasco County.
29	Upper White River	5S 12E 4, 5, 8, 9	Road	1910	Road was built as a short cut between Juniper Flats and Smock Prairie.

	Canyon Grade				Valuable as recreation and scenic road.
30	Hinton House	5S 16E 26 2900	Dwelling	1900-1915	Built for R.R. Hinton and family.
31	Nansene House and Post Office	2S 14E 9 701	Hotel/Stage Coach Stop	1874	Nansene, the Native-American name for Fifteenmile Creek, was an early stage coach stop and post office. It served as a stage coach stop (started in 1874) and post office (1880 to 1904). Credited with being one of the few remaining stagecoach stops in Oregon.
32	Mark O. Mayer House	2N 12E 6 401	Residence	1910	Mark O. Mayer constructed the house in 1910 as a country home. Mayer, from Portland, built the road from Mosier to his house. The road later became part of the Columbia River Highway. He named the house Mayerdale. Its an excellent example of Colonial Revival style.
33	Friend Store, Post Office and Real Estate Office	2S 12E 35 100	Commerce/Government	1912	The post office was opened in 1903. The small building was constructed in 1924 by Fred Buskuhl as a real estate office during the boom time for Friend between 1912-1924.
35	Wapinitia Hotel	5S 12E 26 5000	Multiple dwelling	1915	Barzee Hotel, built in 1915 by Earl Barzee. The hotel/rooming house was very popular in the 1920s when the Wapinitia cut-off highway was being constructed with highway engineers and workers. It was also a popular place for local teachers to board. The Wapinitia Hotel operated until the 1940s.
36	OWRR&N Railroad Section House	5S 14E 5 700	Multiple dwelling	1910	Affiliated with the east site of the Deschutes River and the railroad.
37	Round Barn	1N 13E 10AB 7200	Barn	1932	Built for a poultry business for Howard McNeal. In 1964, the barn was remodeled for use by a local theater group and called "The Round Barn." The group was asked to vacate the barn in 1973, and reverted to farm use. It is one of the few remaining round barns in Wasco County.
38	Smock Prairie School	4S 12E 32 8500	School	1906	The district merged with Wamic in 1958.
39	Friend School	3S 12E 2 800	School	1909-1910	Operated as a school until the late 1930s.
40	Petersburg School	2N 14E 33 3001	School	1860s	Built by William Floyd circa 1860s. Originally called the Floyd School. In 1904, name changed to Roosevelt School until 1908 when it was renamed Petersburg School after the nearby Great Southern Railroad station of the same name. The school was vacated in 1954 when a new school was built.
41	Fairbanks School	2N 15E 31 600	School	1912	Served as a school between 1912-1928. From 1954-1982, the building was leased to the Ten-Mile Saddle Club.
42	Clarno School	7S 19E 32 1200	School	1914	Had an average of 10-16 pupils who were rancher children between Clarno and Pine Creek (Wheeler County). The last class graduated in 1937

					with two students.
<u>43</u>	<u>Imperial Stock Ranch Headquarters Complex</u>	<u>5S 16E 26 2900</u>	<u>Historic District</u>	<u>1871-1915</u>	<u>Historic District, for much of its history was the largest individually owned land and livestock holding in Oregon.</u>
<u>44</u>	<u>Mosier Mounds</u>		<u>Archaeological resource</u>		<u>Site not identified on GIS to protect cultural resources</u>



## Goal 5

# **Open Spaces, Scenic and Historic Areas and Natural Resources**

# Goal5

## Open Spaces, Scenic and Historic Areas and Natural Resources

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### Overview

Goal 5 offers framework for Wasco County's role in protecting its natural resources, open spaces, groundwater resources, rivers, waterways, historic and mineral/aggregate resources.

Protection of these diverse resources requires a variety of approaches. The role of land use planning in this protection involves a threefold approach:

- Collecting and maintaining data and other inventories of assets;
- Coordinating with local, regional, state and federal programs; and
- Administering local and state regulations that protect the sustainability and quality of the resources.

## Statewide Planning Goal 5

**To protect natural resources and conserve scenic and historic areas and open spaces.**

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability.

Excerpt from  
OAR 660-015-0000(5)

## Cross-Reference

Additional policies related to this goal:

## Wasco County Goal

## Open Spaces, Scenic and Historic Areas and Natural Resources

To conserve open space and protect natural and scenic resources.



## Mineral Resources

- 5.1.1** Protect and utilize appropriately the mineral and aggregate resources of Wasco County, and minimize conflict between surface mining and surrounding land uses.

### Implementation for Policy 5.1.1:

- a. The development of new rock and aggregate resource sites shall be consistent with the State Planning Goal 5 and Oregon Administrative Rules Chapter 660, Division 23<sup>1</sup> process to balance conflicts between mining operations and new and existing surrounding conflicting uses.
- b. Sites identified as significant aggregate resource sites shall not support interim or permanent uses which may jeopardize the future availability of the resource.
- c. Mining and processing of gravel and mineral materials may only be allowed at sites included on the "Other Site" inventory or "Significant Sites" inventory.
  1. Mining at sites on the "Other Sites" inventory may be allowed by a conditional use permit.
  2. Mining at sites on the "Significant Sites" inventory may only be permitted in accordance with the Mineral Resources Overlay.
- d. For each site determined to be significant, the County shall complete the remainder of the County Goal 5 process identifying conflicting uses, analyzing the ESEE consequences of the conflicting use(s), and designating a level of protection from conflicting uses. If the final decision concerning the site is to preserve fully or partially protect the resource from conflicting uses, the County shall zone the site with the Mineral Resources Overlay.

- 5.1.2** The County shall maintain an inventory of mineral and aggregate resource sites. The comprehensive plan inventory shall consist of three parts:

- a. An inventory of "Significant Sites" identified through the Goal

# 5.1 Policies



5 process as important resources that will be protected from conflicting uses;

- b. An inventory of "Potential Sites" for which sufficient information concerning the location, quality, and quantity of a resource site is not adequate to allow the County to make a determination of significance;
- c. An inventory of "Other Sites" for which available information demonstrates that the site.

**Implementation for Policy 5.1.2:**

- a. The significance of non-aggregate mineral resources shall be judged on a case by-case basis, taking into account information concerning the commercial or industrial use of the resource, as well as the relative quality and relative abundance of the resource within at least the County.
- b. The scope of an existing or "grandfathered" aggregate operation shall be established by:
  - 1. Authorization by a County land use approval; or
  - 2. The extent of the area disturbed by mining on the date that the mining operation became a non-conforming use.
- c. Sites on the "Other Sites" inventory shall not be protected from conflicting uses.
- d. For sites on the "Potential Sites" inventory, the County shall review available information about mineral and aggregate resources, and if the information is sufficient, determine the site to be significant when one of the following conditions exist:
  - 1. As part of the next scheduled Periodic Review;
  - 2. When a landowner or operator submits information concerning the potential significance of a resource site and requests a Comprehensive Plan amendment;
  - 3. When resolution of the status of a potential resource site is necessary to advance another planning objective.
- e. In order to approve surface mining at a site zoned for exclusive farm or forestry use, the County shall find, as part of the ESEE analysis, that the proposed activity will not: 1) force a significant change in, or significantly increase the cost of, accepted farming or forestry practices on surrounding lands, and 2) will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

- f. The County may establish and impose conditions on operation of a surface mine when deemed necessary as a result of a site-specific Goal 5 analysis. Where such conditions conflict with criteria and standards in the Mineral and Aggregate Resources Overlay, the conditions developed through the Goal 5 analysis shall control.
- g. No surface mining or processing activity, as defined by the zoning ordinance, shall commence without land use approval from the County, and approval of a reclamation plan and issuance of an operating permit by DOGAMI.
- h. Aggregate sites shall be subordinate to the landscape setting as seen from travel corridors when such travel corridors have been determined to be significant by the ESEE analysis.

**5.1.3** New mineral and aggregate sites shall not be allowed within the quarter mile boundary of either the John Day or Deschutes River.

**5.1.4** All aggregate operations within the Columbia River Gorge National Scenic Area shall be operated in compliance with the Management Plan for the National Scenic Area and its implementing ordinance.

## **Wild and Scenic Rivers**

**5.1.5** The Deschutes and John Day River Scenic Waterways shall be maintained and protected as natural and open space areas with consideration for agriculture and recreation.

### **Implementation for Policy 5.1.5:**

- a. Coordinate all land use planning activities with the Bureau of Land Management, Oregon State Department of Transportation and the Warm Springs Indian Reservation. These three parties shall be notified of all proposed land actions within the Deschutes River and John Day River Scenic Waterways for their review and comment.
- b. Allow agricultural operations within the Deschutes and John Day Scenic Waterways.
- c. Allow only buildings customarily provided in conjunction with farm use within the visual corridors of the Deschutes and John Day Scenic Waterways.
- d. Encourage the preservation of landscape features of the John Day and Deschutes Rivers.

- 5.1.6** Cooperate with managing agencies to solve recreation use management on the John Day and Deschutes River Scenic Waterways.

**Implementation for Policy 5.1.6:**

- a. Coordinate with and support the managing agencies recreation use management issues and facilities necessary for recreation and resource protection.

- 5.1.7** Maintain the existing aesthetic quality of the Columbia River Gorge

**Implementation for Policy 5.1.6:**

- a. Scenic and Open Space areas in the Columbia River Gorge will be preserved by placement of the Environmental Protection District, Division 4, and overlay zone.
- b. The Oregon State Highway Division should employ plantings to provide buffers between residential areas and Interstate 84 when feasible.
- c. Forestry uses shall be in accordance with the Oregon Forest Practices Act.
- d. Clear-cutting within the legal boundaries of the Columbia River Gorge is discouraged.

## **Water**

- 5.1.8** Encourage the construction of ponds for livestock, fire protection and water reclamation.

**Implementation for Policy 5.1.7:**

- a. Allow such uses in the "A-1" (Exclusive Farm Use) zone.
- b. The County Water master and Sanitarian shall continue to regulate appropriations, diversions and sewage waste disposals to ensure quality water resources.

## **Fish and Wildlife**

- 5.1.9** Encourage land use and land management practices which contribute to the preservation and enhancement of fish and wildlife resources, with consideration for private agricultural practices.

To conserve and protect existing fish and wildlife

areas.

To maintain wildlife diversity and habitat so that it will support optimum numbers of game and nongame wildlife for recreation and aesthetic opportunities.

**Implementation for Policy 5.1.9:**

- a. Identify and maintain all wildlife habitats by:
  - 1. Implementation of an Environmental Protection District overlay zone for significant fish and wildlife habitats and for the big game winter range.
  - 2. Designation of the Big Game Winter Range and Area of Voluntary Siting Standards (low elevation winter range) on the map contained in this plans Resource Element.
- b. The winter range identified on the Big Game Habitat Map included in the Resource Element of this plan shall be protected by an overlay zone. The Rural Service Centers identified in the Comprehensive Plan which lie within the overlay zone shall be exempt from the provisions of the overlay zone.
- c. Consistent with the development standards of the land use ordinance, sensitive riparian areas of perennial and intermittent streams identified in the Resource Element, as well as to protect people and property from flood damage, the zoning ordinance shall prohibit development within 100 feet of the mean high water mark of perennial or intermittent stream or lake in a resource zone, and 50 feet of the mean high water mark of a perennial or intermittent stream or lake in residential zones.
- d. Sensitive bird habitat sites (bald eagle, golden eagle, osprey, great grey owl, great blue heron) and mammal habitat sites (Western pond turtle nesting sites) identified in the Resource Element of the plan shall be protected by a Sensitive Bird and Mammal Overlay Zone during periodic review pursuant to the current County approved work program.
- e. When site specific information is available to the County on the location, quality and quantity of threatened and endangered fish and wildlife species listed by State or Federal Wildlife agencies and the Oregon Department of Fish and Wildlife develops protection criteria for the species, the county shall proceed with a Goal 5 ESEE analysis in compliance with OAR 660 Div. 16.
- f. The county shall review the Transition Land Study Area



(TULSA) big game habitat areas and designated as "1-B" Goal 5 resources, during the next periodic review or as additional information on the location, quality and quantity of the habitat areas becomes available. (ORD. 3.180 )

- g. County-owned land shall be managed to protect and enhance fish and wildlife habitat except where a conflicting public use outweighs the loss of habitat.
- h. The county shall notify the Oregon Division of State Lands and the Oregon Department of Fish and Wildlife of any development application for land within a wetland identified on the National Wetlands Inventory maps. (ORD. 3.180).
- i. An application for a destination resort, or any portion thereof, in a recognized big game habitat overlay zone shall not be accepted pending completion of the County's Goal 8 destination resort mapping process. (ORD 3.180)
- j. The county shall provide ODFW an annual record of development approvals within the areas designated as Area of Voluntary Siting Standards' on the plan map to allow ODFW to monitor and evaluate if there is a significant detrimental effect on habitat.

## **Historic, Cultural and Archeological Resources**

**5.1.10** Preserve the historical, archaeological, and cultural resources of the County.

### **Implementation for Policy 5.1.10:**

- a. Wasco County shall maintain an inventory of significant archaeological and cultural resources in the County. Require preservation of resources identified as significant historically, culturally, or archaeologically in keeping with state and national rules
- b. Location of archaeological sites shall not be disclosed, (this information is exempt from the Freedom of Information Act), unless development is proposed which would threaten these resources. When any development is proposed which may affect an identified archaeological site, the site will be protected by the Wasco County Land Use and Development Ordinance, Chapter 3, Historic Preservation Overlay zone.
- c. Resources listed as Wasco County Historic Landmarks will be protected by the Wasco County Land Use and Development Ordinance Chapter 3 Historic Preservation Overlay zone.
- d. When adequate information becomes available, Wasco

County shall evaluate its Goal 5 1-B historic resources for inclusion on the inventory or designation as a significant (1-C) resource and, where appropriate, provide protection under the County's Historic Preservation Overlay Chapter of the Wasco County Land Use and Development Ordinance.

- e. Pursue private and public sources of funding for use by property owners in renovation and maintenance of historic properties.
- f. Pursue options and incentives to allow productive, reasonable use, and adaptive reuse of historic properties.
- g. Wasco County shall maintain a Historic Landmarks Commission, which evaluates applications for development, alteration or demolition in accordance with the Land Use and Development Ordinance and State Law. All resources listed on the National Register or determined eligible for the National Register of Historic Places shall be designated a Wasco County landmark subject to EPD-4.
- l. Maintain EPD-4 in accordance with state regulations.
- m. Encourage active participation and coordination with local, regional, state and federal partners.
- n. Provide outreach and information to maintain public awareness of state and federal laws protecting historic and prehistoric resources, including deposit of prehistoric artifacts and records with appropriate institutions.

## Findings and References

**1.1.a** Comprehensive Plans are required to foster and encourage historic preservation, management and enhancement consistent with ORS 358.605. OAR 660-023-300 (3)

**1.1.b** The inventory of historic resources must be consistent with OAR 660-023-0030.

### References

Oregon Department of Land Conservation and Development. *Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources*. Oregon's Statewide Planning Goals and Guidelines.

# Appendix



# Mineral and Aggregate Resources

- 1) **General Information:** Wasco County has few economically important mineral deposits. Some limited mining activity has occurred in the past. There are no active mineral mines in Wasco County. Most of the county is underlain with recent basalt flows, which precludes the possibility of extensive mineral resources. The highest potential for minerals would be in the older geologic formations, found in other parts of Oregon or bordering counties. The primary minerals found in Wasco County are as follows:
  - A. **Bauxite:** Evidence suggests there may be some potential low grade bauxite found in the Columbia River basalt group but no investigations have been undertaken in Wasco County to confirm this.
  - B. **Copper and Lead:** These minerals have been mined in the Ashwood-Oregon King Mine located in Jefferson County to the south. Some deposits may occur in the County.
  - C. **Mercury and Molybdenum:** No economically important deposits are located within Wasco County.
  - D. **Semi-precious Gems:** These are more of interest to rock collectors rather than having intrinsic mineral value.
  - E. **Perlite:** Between 1945 and 1950, mining was conducted in an area south of Maupin near the Deschutes River. High quality acoustic and insulating tile was produced for a number of years from this perlite. It became unprofitable to mine at this location and the operation was discontinued. A large deposit still exists in this area.
  - F. **Volcanic Tuffs:** The Rainbow Rock Quarry, about five miles south of Pine Grove, has produced brightly colored and banded tuff since 1949. Rock of similar appearance has been uncovered but not developed on a nearby flat east of the quarry. Tuffs are utilized for decorative building stone and ceramic art.
  - G. **Peat:** According to the U.S. Geological Survey, Mineral and Water Resources of Oregon, 1969, there are widely scattered minor deposits of peat in the Cascade region of the County and coal in the southeastern region. They have never been mined commercially.
  - H. **The Ka-Nee-Ta Stone Quarry:** On the Warm Springs Reservation, this quarry produced rough pieces of rhyolite. The stone is multi-colored and valuable for decoration. Other stone quarries include Indian Candy and Sorenson Quarry.
  - I. **Quarry Rock:** Quarry rock increases in importance as the more desirable deposits become depleted. Transportation costs are high so that quarries must be located within ample reserves of good quality crushing rock. The best rock for crushing is generally Columbia River basalt.
- 2) **Inventory:** Wasco County's cumulative demand projection for all aggregate material by the year 1995 was between four and six million tons.
- 3) **Application of the Goal 5 Process for Mineral Resources**
  - A. Potential Conflicting Use in Zone Categories Applicable to Mineral resource Sites: All except one currently inventoried resource site fall into three resource zones employed by the County: A-1, Agriculture; F-1, Forest; F-2, Forest. One site is in an Industrial zone (Sun Pit). Conflicting uses are generally those which, if allowed to locate within the specific site identified, would render the

resource unrecoverable and those activities on surrounding lands which affects or is affected by aggregate operation. Most of the conflicting uses are structural improvements which commit the site to another use. Other less intensive uses such as recreation facilities, public parks and playgrounds, and golf courses which are conditional uses in some zones may conflict because, once established, they tend to diminish the value of the resource. Some competing uses, such as water impoundments or power generation facilities, may be determined to be of sufficient importance as to preempt the mineral resource value.

# Aggregate Inventory

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
1	2N 11E 2 D 200	NSA	Hood River Sand & Gravel		33-0055	CUP 92-110	No
2	2N 11E 11 900	NSA	ODOT (Gove) 33-004-4	2N 11E 11 2800	33-0060		No
3	2N 11E 11 200	NSA	ODOT 33-001-4	2N 11E 11 200	33-0057		
	2N 11E 2 D 300	Mosier UGB	(Mosier Pit) Listed as reference	2N 11E 2 1300			
4	2N 11E 1 D 200	NSA	Hood River Sand & Gravel 2630 Old Columbia River Drive Hood River OR 97031	2N 11E 1 D 200	33-0076	CUP 92-136	No
5	2N 11E 13 600	F-2	Ken & Joan Hudson 1020 Mosier Creek Rd	2N 11E 3500			No
6	2N 11E 24 500	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008	2N 11E 6001			No
7	2N 12E 19 1200	F-2	Tony Heldstab 2175 Mosier Creek Road Mosier OR 97040	2N 12E 19 600	33-0088	CUP 92-126 & 94-111	No
8	2N 12E 29 1800	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008	2N 12E 9155			No
9	2N 11E 11 2700	NSA	Gayle Weisfield		33-0079	CUP 92-101 - <i>Exp.</i> 1997	No
10			Chenoweth Air Park				No
11	2N 13E 19 1600	NSA	Floyd Marsh P O Box 2 The Dalles OR 97058	2N 13E 19 100			No
12	2N 13E 19 600	A-1	W R & Margaret Pentecost 4900 Seven Mile Road The Dalles OR 97058	2N 13E 19 800			No
13	2N 12E 1300	NSA	Jim Ellett 5693 Chenoweth Road The Dalles OR 97058	2N 12E 24 12500	33-0056	CUP 90-124 & C90-0249 <i>Exp.</i> 11-2000 CUP-00-125 & SPR-00-169	Yes

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	
14	2N 12E 16 D 1900	RR-5	William Ringlbauer 2244 Dell Vista Drive The Dalles OR 97058	2N 12E 16 D 1700			No
15			Mayer State Park				No
16	2N 13E 17 B 200	SMA	US Forest Service 902 Wasco Ave Ste 200 Hood River OR 97031	2N 13E 17 1801			No
17	2N 13E 20 300	NSA	Wayne & Jana Webb P O Box 692 The Dalles OR 97058	2N 13E 20 1000 not shown on map	33-0064	CUP-98-122 - <i>Exp. 1-2000</i>	No
18			Gooseberry Springs - State of Oregon				No
19			Gooseberry Springs - State of Oregon				No
20			Dalles Dam - State of Oregon				No
21	2N 13E 20 700, 600	NSA	(Sun Pit) 1022 W 9th Street The Dalles OR 97058	2N 13E 20 600	33-0011	CUP 91-101 & SPR 91-103	No
22	2N 15E 500	NSA	Celilo - State of Oregon	2N 15E 700			No
23	Fifteen Mile Road		County				No
24	2N 14E 25		Right of Way	2N 14E 25			No
25	2N 14E 1100	A-1	Jacob Kaser 4550 Fifteen Mile Road The Dalles OR 97058	2N 14E 1000			No
26	2N 14E 2200	A-1	Donna E. Ashbrook et al P O Box 158 Dufur OR 97021	2N 14E 28 2700	33-0014		No
27	2N 14E 33 500	A-1	Judith F. Bayley et al 6331 SW Radcliff St Portland OR 97219	2N 14E 33 400			No
28	2N 14E 2400	A-1	C Gard Fulton 3775 Fifteen Mile Rd. The Dalles OR 97058	2N 14E 33 3000	33-0023		No
29	1N 14E 300	A-1	Forest J. Hay	1N 14E 400			No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			609 E 9th St The Dalles OR 97058				
30	1N 14E 2000	A-1	Sylvia Weimer 4100 Old Dufur Rd.	1N 14E 3500			Yes
31	1N 14E 2300	A-1	William & Sheli Markman/Wasco County 4785 Eight Mile Road The Dalles OR 97058	1N 14E 3300			No
32	1N 15E 3700	A-1	William & Carmen Eddins 1515 E 21st Street The Dalles OR 97058	1N 15E 3700			No
33	1N 14E 500	A-1	Cliff Baker (County?)	1N 14E 6700			No
34	1S 13E 1		County May Pit	1S 13E 1	33-0013		No
35	1S 14E 17 300	A-1	Miller Ranch Co. 1 NW Greenwood Ave. Bend OR 97701	1S 14E 3100			No
36	1S 14E 3000	A-1	Paul & Velma Limmeroth 2520 Ward Road The Dalles OR 97058	1S 14E 3401 Boyd			No
37	1S 14E 18 100	A-1	Miller Ranch Co. 1 NW Greenwood Ave. Bend OR 97701	1S 14E 18 100			No
38	1S 14E 3200	A-1	Mary Sylvester 3813 Faith Home Road Ceres CA 95307	1S 14E 3600			No
39	1S 14E 20		Dufur	1S 14E 20			No
40	2S 13E 35 100	A-1	William Neil 62883 US Hwy 197 Dufur OR 97021	2S 13E 100	33-0050		No
41	2S 13E 5000	A-1	ODOT Tygh Ridge 33-025-4	2S 13E 35 5200	33-0071		Yes
42	3S 13E 100	A-1	William & Masil Hulse P O Box 427 Dufur OR 97021	3S 13E 100			No
43	3S 13E 2300	A-1	Paul & Velma Limmeroth 2520 Ward Road	3S 13E 2500			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			The Dalles OR 97058				
44	3S 13E 2300	A-1	Paul & Velma Limmeroth 2520 Ward Road The Dalles OR 97058	3S 13E 2500			No
45	3S 13E 3200	A-1	Irl Jr. & Orlena Davis 45 N Eagle Pt Road Tygh Valley OR 97063	3S 13E 3400	33-0054	CUP 96-101	No
46	3S 13E 33 100	A-1	Robert & Meredith Lindell P O Box 217 Tygh Valley OR 97063	3S 13E 33 3500	33-0047		No
47	2N 11E 36 100	F-2	Berniece & Morris Schmidt 2855 Mosier Creek Road Mosier OR 97040	2N 11E 7600	33-0081		No
48	2N 12E 30 1100	F-2	Mosier Creek Dev. 1234 P O Box 6039 Bellevue WA 98008	2N 12E 9139	33-0088		No
49	2N 13E 31 B 600	RR	Whispering Pines Ranch Corp 612 Liberty The Dalles OR 97058	2N 13 31 600			No
50	1N 11E 25 100	F-2	Ketchum Ranch Inc 6282 Chenowith Road W The Dalles OR 97058	1N 11E 900			No
51	1N 13E 1300	A-1	John & Betty Skirving 2013 W Scenic Drive The Dalles OR 97058	1N 13 4490			No
52	1N 13E 32 200	A-1	Milton & June Martin 3560 Three Mile Road The Dalles OR 97058	1N 13E 5300			No
53	1N 13E 25 700	A-1	Arthur V Braun P O Box 498 The Dalles OR 97058	1N 13E 25 2991	33-0082	CUP 90-113	No
54	1N 15E 2900	A-1	Eldon F Emerson et al 6124 Roberts Market Road The Dalles OR 97058	1N 15E 28 2700			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
55	1S 15E 700	A-1	James Q Johnson 6352 Roberts Market Road The Dalles OR 97058	1S 15E 402			No
56	1S 15E 2000	A-1	Iva J Kortge 338 West 21st The Dalles OR 97058	1S 15E 1400			No
57	1S 15E 2600	A-1	Frederick & Peggy Clausen Rt 2 Box 4 Dufur OR 97021	1S 15E 1900			No
58	2S 14E 1900	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 14E 1600			No
59	2S 14E 2000	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 14E 1800			No
60	2S 14E 2300	A-1	Robert & Nancy Hammel 62250 Tygh Ridge Road Tygh Valley OR 97063	2S 14E 2000			No
61	1N 15E 2200	A-1	William & Barbara Hammel 7075 Fifteen Mile Road The Dalles OR 97058	1N 15E 21 2100			No
62	1N 15E 2200	A-1	William & Barbara Hammel 7075 Fifteen Mile Road The Dalles OR 97058	1N 15E 2100			No
63	1N 15E 2900	A-1	Eldon F Emerson et al 6124 Roberts Market Road The Dalles OR 97058	1N 15E 20 2700			No
64	1S 14E 4500	A-1	Lucie Underhill Life Estate 85429 Easton Canyon Road Dufur OR 97021	1S 14E 4900			No
64	1S 14E 4500	A-1	Clara A. O'Brien 2867 Breckenridge NW Salem OR 97304	1S 14E 4900 Duplicate			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
65	1S 14E 5100	A-1	W C Hanna Estate US Nat'l Bank Trust Dept P O Box 3168 Portland OR 97208	1S 14E 31 5600			No
66	1S 14E 2800	A-1	Daniel Bolton P O Box 731 Dufur OR 97021	1S 14E 1900			No
68	2N 12E 4 1100 2N 12E 5 100	NSA	Wasco County	2N 12E 4/5			No
70	2S 12E 1700	A-1	Sharon L. Sorensen Rt 1 Box 180 Dufur OR 97021	2S 12E 12 3000			No
71	2S 12E 5100	A-1	Martin & Beverly Underhill P O Box 266 Dufur OR 97021	2S 12E 23 5700			No
72	3S 12E 3	A-1	Wasco County 511 Washington St. The Dalles OR 97058	3S 12E 3			No
73	3S 12E 25 300	A-1	Russell & Wanda Sinclair Rt 1 Box 79 Tygh Valley OR 97063	3S 12E 25 3700			No
74	2S 13E 5200	A-1	Keith & Mary Smith 60538 Dufur Gap Rd. Dufur OR 97021	2S 13E 32 4900			No
75	4S 13E 12 2800	A-1	Fred & Maxine Ashley/Tygh Valley Sand & Gravel	4S 13E 12 6800	33-0015		No
76	3S 13E 3800	A-1	Roger T. Justesen/Betty Nelson P O Box 96 Grass Valley OR 97029	3S 13E 31 4000	33-0051	Cancelled 1976	No
77	4S 13E 10	A-1	Wasco County	4S 13E 10			No
78	4S 12E 2700	A-1	Keith & Kathleen Obermaier P O Box 3497 Pojaque Santa Fe NM 87501	4S 12E 17 5000 Formerly Cody Logging	33-0048		No
79	4S 13E 7100	A-1	Erma C. Gutzler	4S 13E 31 10800			No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
			Rt 1 Box 120 Maupin OR 97037				
80	5S 12E 2 400	A-1	Lora M Hachler Rt 1 Box 408 Maupin OR 97037	5S 12E 2 400			No
81	5S 12E 800	A-1	Wasco County 511 Washington St. The Dalles OR 97058	5S 12E 4 800			No
82	5S 12E 2300	A-1	Milton & Mae McCorkle Life Estate Rt 1 Box 412 Maupin OR 97037	5S 12E 12 2100			No
83	5S 13E 1400	A-1	Eugene H. Walters Rt 1 Box 86 Maupin OR 97037	5S 13E 6 1400			No
84	5S 13E 6300	A-1	Lyle & Lorraine Gabel Rt 1 Box 110 Maupin OR 97037	5S 13E 28 5200			No
85	5S 12E 7100	A-1	Allan & Cristina Blake Rt 1 Box 60A Maupin OR 97037	5S 12E 35 5400			No
86	5S 11E 5100	A-1	Wasco County	5S 11E 35 4802	33-0074		No
87	6S 11E 9	A-1	Woodside	6S 11E 9			No
88	4S 13E 11 100 4S 13E 0 7200	A-1	Robert Ashley	4S 13E 11 100 4S 13 E 0 2700		CPA-01-101 CUP-01-112	No
101	Site Not Identified		Port of The Dalles				
102	Site Not Identified		Interpretative Center Site				
150	4S 14E 33	A-1	Connolly	4S 14E 33			No
151	4S 14E 2700	A-1	Connolly Land & Livestock Inc. 412 W. 4th St. The Dalles OR 97058	4S 14E 25 2400	33-0093	CUP 93-110	No
152	4S 15E 800	A-1	Lee & Ruth Lindley Box 64 Maupin OR 97037	4S 15E 30 800			No

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
153	4S 15E 1000	A-1	USA Bureau of Land Management	4S 15E 30 1200			No
154	5S 16E 2000	A-1	Lonny & Pamela Brown (County Lease) 18233 W Wintergreen Lane Bremerton WA 98312	5S 16E 20 2200			No
155	5S 16E 3300	A-1	Janis Lee Snodgrass % Lonny D. & Pamela A. Brown 18233 W Wintergreen Lane Bremerton WA 98312	5S 16E 32 3300			No
156	5S 16E 3400	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	5S 16E 32 2401			No
157	6S 19E 900	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	6S 16E 5 106			No
158	6S 16E 900	A-1	Warnock Ranches Inc. Rt 1 Box 16 Baker OR 97814	6S 16E 5 106			No
159	6S 16E 2100	A-1	ODOT Bakeoven Quarry 33-051-4	6S 16E 21 101	33-0017	PR-94-102	No
160	7S 17E 31 1700	A-1	Richard & Betty Baker P O Box 136 Antelope OR 97001	7S 17E 31 1990	33-0032		No
161	8S 17E 600	A-1	Donald & Marjorie Gomes (County owned) P O Box 70 Antelope OR 97001	8S 17E 4 692			No
162	8S 17E 1400	A-1	Wilton & Francis Dickson 604 NE Loucks Road Madras OR 97741	8S 17E 14 1500			No
163	8S 16E 4300	A-1	McNamee Ranches P O Box 50 Antelope OR 97001	8S 16E 36 3400			No
164	8S 17E 2000	A-1	Herbert & Faye McKay P O Box 5	8S 17E 35 2100			NO

			Antelope OR 97001				
Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
165	8S 18E 900	A-1	Washington Corp. P O Box 3027 Pasco WA 99302	8S 18E 34 800			No
166	8S 19E 1600	A-1	USA Bureau of Land Management	8S 19E 31 1900			No
167	8S 14E 1400	A-1	Ned Darling 5618 SE Taylor Portland OR 97215	8S 14E 13 101			No
168	8S 14E 2200	A-1	Bureau of Land Management	8S 14E 21 1900			No
169	7S 14E 3100	A-1	Ned Darling 5618 SE Taylor Portland OR 97215	7S 14E 32 3000			No
170	5S 12E 0 8500, 6S 12E 0 1300	A-1	Richard Dodge			PLAQJR-10-10-0005, 4/15/2011	No
171	7S 15E 0 600	A-1	J. Arlie Bryant Inc. (Hagen)			PLACUP-15-01-0001, 6/12/2015	Yes
172	6S 17E 0 2200, 2400	A-1	Jon Justesen			PLACUP-15-01-0002, 6/12/2015	Yes
173	5S 16E 0 3600	A-1	J. Arlie Bryant Inc. (Carver)			PLACUP-15-02-0003, 6/12/2015	Yes
174	3S 13E 0 4000	A-1	Jack Stevens		33-0051	CUP-06-112, CPA-06-102	No
200	4S 14E 3700	A-1	USA Bureau of Land Management	4S 14E 33 3800			No
201	5S 14E 35 C 400	A-1	ODOT Maupin Pit 33-036-4	5S 14E 35 4400	33-0004		Yes
202	6S 14E 300	A-1	Criterion Interest Inc. 122 E Stonewall Charlotte NC 28202-1889	6S 14E 11 100			Yes
203	7S 14E 200	A-1	ODOT Criterion 33-038-4	7S 14E 12 1200	33-0078		Yes
204	6S 17E 3 400	A-1	ODOT 33-049-4 County Line Quarry	6S 17E 3 500	33-0102		Yes
205	6S 17E 0 2000	A-1	State Highway Dept	5S 17E 16 ?			No
206	6S 17E 2300	A-1	ODOT 33-050-4 Hinton Quarry	6S 17E 19 1800	33-0100		Yes
208	7S 16E 1300	A-1	ODOT Identifier 33-053-4	7S 16E 6 1000	33-0024		Yes
209	7S 15E 1600	A-1	ODOT 33-059-4 Garbage Pit	7S 15E 22 1600	33-0097		Yes

Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
211	8S 15E 2200	A-1	Charles & Betty Johnson Gateway Star Route Box 465 Madras OR 97741	8S 15E 22 1701			No
212	8S 15E 2000	A-1	Charles & Betty Johnson Gateway Star Route Box 465 Madras OR 97741	8S 15E 27/28 1701			No
213	8S 15E 26 3500	A-1	Annan & Marla Priday HC 62, Box 462 Madras OR 97741	8S 15E 26 2900	33-0094	CPA 96-101 Goal 5	Yes
214	7S 17E 1600	A-1	ODOT Shaniko 33-062-4	7S 17E 20 2000	33-0065		Yes
215	8S 18E 600	A-1	ODOT 33-064-4	8S 18E 6 501			Yes
216	8S 18E 4 400	A-1	ODOT 33-065-4 Antelope Rock Product	8S 18E 4 400	33-0069		Yes
217	5S 12E 8500		Richard Dodge	5S 12E 33 7200	33-0080	CUP 87-104 Added 3/93	No
218	4S 12E 2800	A-1	Metzentine Quarry	4S 12E 17 1900	33-0086	CUP 91-102 Added 3/93	No
			Dan Van Vactor				
219	2N 11E 900		ODOT 33-002 Rock Creek Quarry	2N 11E 2 900			No
220	2N 13E 20 800		ODOT 33-007 Shooting Range Quarry	2N 13E 20 800			No
221	2N 13E 500		ODOT 33-008	2N 13E 20/21 500			No
222	1S 14E 3300		ODOT 33-021 Boyd Quarry	1S 14E 20 3700			No
223	3S 13E 33 200		ODOT 33-028-4 Butler Canyon Quarry	3S 13E 33 4100	33-0062		No
224	5S 14E 6 200		ODOT 33-032 Maupin Maintenance Yard	5S 14E 6 200			No
225	7S 15E 2000		ODOT 33-039 Filler Pit	7S 15E 29 2100			Yes
226	8S 15E 2000		ODOT 33-040	8S 15E 15			Yes
227	8S 15E 3100		ODOT 33-041 Cow Canyon Quarry	8S 15E 22 2800	33-0075		Yes
228	5S 11E 36 1600		ODOT 33-045-4 Pine Grove Quarry	5S 11E 36 5300	33-0074		Yes
229	5S 12E 30B 100		ODOT	5S 12E 30 200			Yes
230	6S 12E 2 700		ODOT 33-048-4 Paquet Gulch Quarry	6S 12E 2 300	33-0101		Yes
231	7S 17E 600		Shaniko Ranch		33-0092	CUP 93-106	No



Inv. #	Current Map/Tax Lot	Zone	Owner Name & Address	Former Map & Tax Lot	DOGAMI #	Application #	Goal 5
232	1N 13E 27/28 1000		Phetteplace		33-0098	CUP 98-113 & CPA 98-103	No
233	6S 17E 2400		Jon Justesen		33-0072	CUP 99-105	No
234	1N 13E 0 2900		Elmer Wilson		33-0096	CUP 94-135	No
235	2N 12E 2000		Tingue		33-0064 & 33-0081	CUP 90-107	No
other -	<b>Co. Road Depts Sites</b>						
625	1S 13E 39 102		Dufur County Pit	1S 13E 36 102			No
649	4S 12E 36 7400		Kennedy Pit	4S 12E 36 7400			No
673	8S 14E 13 101		South Junction Pit	8S 14E 13 101 a portion			No
713	5S 11E 35 4802		Kelly Springs	5S 11E 35 4802			No
790	2S 14E 33 2900		Hilgen Pit	2S 13E 33 2900 a portion of			No
800	8S 17E 4 500		Helyer Pit	8S 17 4 500			No
833	3S 12E 3 1101		Schindler Pit	3S 12E 3 1101			No
850	2S 12E 12 3000		West Pit	2S 12E 12 3000			No
870	3S 12E 25 3800 & 1102		Shadybrook Pit	3S 12E 25 1102			No
871	<b>2N 12E/13E 19 &amp; 24 1000</b>	<b>NSA</b>	<b>Harvey Pit</b>	<b>2N 12E 1000</b>	<b>33-0009</b>		<b>Yes</b>
872	2S 13E 0 (34,35) 4400, 4900		(Mike) Filbin Pit		33-0099	CUP-99-102	No

# Animals in Wasco County

A = Abundant F = Few C = Common R = Rare U = Unknown

Darker Grey is from the 2007 White River Wildlife Management Plan (2007) ODFW

C = Common, U = Uncommon, R = Rare, X = Extremely Rare

Light Grey is from Lower Deschutes Wildlife Area Management Plan (2009) ODFW

C = Common, U = Uncommon, R = Rare, X = Extremely Rare

	Habitat Types							Use Period			
	Mixed Conifer	Mixed Conifer Oak	Pine-Oak	Oak-Grass	Grass-Shrub Juniper	Riparian	Agricultural	Spring	Summer	Fall	Winter
<b>Bird Species</b>											
Killdeer					C	C		X	X	X	X
Mallard Duck						C	C	X	X	X	X
Wood Duck						F			X	X	X
Turkey Vulture	C	C	C	C	C	C	C	X	X		
Bald Eagle	F	F	F	F	F	F		X			
Rough-legged Hawk	F	F	F	F	C	F	C			X	X
American Kestrel	C	C	C	C		C	C	X	X	X	X
Long-eared owl	C	C	F	C	F	F	F	X	X	X	X
Screech owl	F	C	F	C	F	F	F	X	X	X	X
Great-horned owl	C	C	C	C	C	C	C	X	X	X	X
Merriam's Turkey	C	C	C	C		C		X	X	X	X
California Quail	C	C	C	C	C	C	C	X	X	X	X
Ring-necked Pheasant		F	F	F	F	C	C	X	X	X	X
Mourning Dove		C	C	C	C	C	C	X	X	X	X
Rock Dove		C	C	C		C		X	X	X	X
Common Nighthawk	C	C	C	C	C	C	C	X	X		
Belted Kingfisher					F	C		X	X	X	X
Common Flicker	C	C	C	C	F	C	C	X	X	X	X

Lewis Woodpecker	C	C	C	C	F	C	C	X	X	X	X
Downy Woodpecker	C	C	C		F	C		X	X	X	X
Yellow Bellied Sapsucker	F	F	F			F		X	X	X	X
Western Kingbird	F	F	F		F	F	F	X	X		
Western Flycatcher	F	F	F		F	F	F	X	X		
Ash-throated Flycatcher	F		F		F	F	F	X	X		
Western Wood Pewee	F	F	F		F	F	F	X	X		
Horned Lark			C	C	C	C	C	X	X	X	X
House Wren	C	C	C		C	C	C	X	X		
Winter Wren	C	C	C			C	C			X	X
Bewick's Wren	F	F	F			F		X	X		
Rock Wren	F	C	F	C	C	F	F	X	X		
Hermit Thrush	C	C	F			F		X	X		
Fox Sparrow	F	C	C			C	C	X	X	X	X
Song Sparrow	F	C	C			C	C	X	X	X	X
Canada Goose						C	C	X	X	X	X
Pintail						F	F			X	X
American Widgeon						C	C			X	X
Blue Winged Teal						F	F			X	X
Cinnamon Teal						F	F	X	X	X	X
Green-winged Teal						F	F	X	X	X	X
Common Goldeneye	F					F		X	X	X	X
Bufflehead						F		X	X	X	X
Harlequin Duck						F		X	X	X	X
Common Merganser						C		X	X	X	X
Hooded Merganser						F		X	X	X	X
Goshawk	F	F				F		X	X	X	X
Coopers Hawk	C	F	C	F	F	C	C	X	X	X	X
Sharp-skinned Hawk	C	F			F	C	F	X	X	X	X
Osprey						F		X	X		
Ruffed Grouse	C	C	C			C		X	X	X	X

Blue Grouse	C	C	C			C		X	X	X	X
Spotted Owl	R							X	X	X	X
Great Blue Heron						C	C	X	X	X	X
American Coot						C		X	X	X	X
Common Snipe						F				X	X
Poor-will	F		F			F	F	X	X		
Hairy Woodpecker	F	F	F					X	X	X	X
Alder Flycatcher	F					F	F	X	X		
Bank Swallow			C	C		C	C	X	X		
Clark's Nutcracker	F	F	F			F				X	X
Townsend's Solitaire	C					C	C	X	X		
Loggerhead Shrike			F		F		F	X	X	X	X
House Finch		C	C	C	C	C	C	X	X	X	X
Western Grebe						C		X	X	X	X
Marsh Hawk					F	F	F	X	X	X	X
Hungarian Partridge					F	F	C	X	X	X	X
Ferruginous Hawk					R	R	R			X	X
Swainson's Hawk					F	F	F	X	X	X	X
Golden Eagle	F		F		F	F	F	X	X	X	X
Chukar Partridge					C	C	C	X	X	X	X
Prairie Falcon					F	F	F	X	X	X	X
Sparrow Hawk		F	C	C	C	C	C	X	X	X	X
Burrowing Owl					F	F	F	X	X		
Red-shafted Flicker	F	C	C	C	F	C	F	X	X	X	
Red-Tailed Hawk	C	C	C	C	C	C	C	X	X	X	X
Eastern Kingbird				F	F	F	F	X	X		
Say's Phoebe				F	F	F	F	X	X		
Sage Thrasher					F			X	X		
Yellow Warbler	C	C	F			F	F	X	X		
Common Yellowthroat	C	C				F		X	X		
MacGillivray's Warbler	C	C				F	F	X	X		



Wilson Warbler	C	C				F	F	X	X		
Nashville Warbler	F					F	F	X	X		
Yellow-rumped Warbler	F					F	F	X	X		
Black-throated Gray Warbler	F					F	F	X	X		
House Sparrow	C	C	C	C	C	C	C	X	X	X	X
Western Meadowlark		C	C	C	C	C	C	X	X	X	X
Red-winged Blackbird		C	F	F	C	C	C	X	X	X	X
Brewer's Blackbird	F	C	F	F	C	C	C	X	X	X	X
Brown-headed Cowbird		C	F	C	C	C	C	X	X	X	X
Northern Oriole		C	F			F	F	X	X	X	X
Western Tanager	F					F	F	X	X		
Evening Grosbeak	C	F				C	C	X	X	X	X
Lazuli Bunting	F	F	F		F	F		X	X		
Purple Finch	F	F	F	F		F	F	X	X		X
American Goldfinch	C	C	F	C	F	F	F	X	X		
Rufous-sided Towhee	C	C	C	C	C	C	C	X	X	X	X
Savannah Sparrow		C	F	C	C	F	F	X	X		
Vesper Sparrow		C	F	C	C	F	F	X	X	X	
Lark Sparrow		C	F	C	F	F	F	X	X	X	
Dark-eye Junco	C	C	C		F	C	C	X	X	X	X
Chipping Sparrow	F	C	F	C	F	F	F	X	X		
White-crowned Sparrow		C	C	C	C	C	C	X	X	X	X
Hummingbirds	C	C	C	F	F	C	C	X	X		
Pine Siskin	C	C				F		X	X		
Mountain Quail	C	F	F	F	R	C		X	X	X	
Barn Swallow		C	C	C	F	C	C	X	X		
Violet-green Swallow	C	C	C	C	C	C	C	X	X		
Tree Swallow	C	C	F		F	F	F	X	X		
Stellars Jay	C	C	C	C	F	C	C	X	X	X	X
Scrub Jay	C	F	F	F	F	C	F	X	X	X	X
Black-billed Magpie		C	F	C	C	C		X	X	X	X

Common Raven	C	C	C	C	C	C	C	X	X	X	X
Common Crow	C	C	C	C	C	C	C	X	X	X	X
Black-capped Chickadee	C	C	C		F	C	C	X	X	X	X
Common Bushtit	C	C	F		F	F		X	X	X	X
Dipper						C		X	X	X	X
White-breasted Nuthatch	C	C	F			C		X	X	X	X
Brown Creeper	C	C	F	F	F	C		X	X	X	X
Red-breasted Nuthatch	C	C				C		X	X	X	X
Grasshopper Sparrow				C				X	X		
American Robin	C	C	C	C	C	C	C	X	X	X	X
Varied Thrush	C	C				C	C	X	X	X	X
Swainsons Thrush	C	C				C		X	X	X	
Western Bluebird	C	C	C	C	F	C	C	X	X		
Mountain Bluebird	C	C		C	F	C		X	X	X	X
Golden-crowned Kinglet	C	C				C		X	X	X	X
Ruby-crowned Kinglet	C	C				C		X	X	X	
Bohemian Waxwing	C	C				F	F	X	X	X	X
Cedar Waxwing	C	C				F	F	X	X	X	
Starling	C	C	C	C	C	C	C	X	X	X	X
Vaux's Swift	F				F	F	F	X	X		
Solitary Vireo	C	C	F			F	F	X	X		
Orange-crowned Warbler	C	C	F			F	F	X	X		
Sage Sparrow	F	C	F	C	F	F	F	X	X	X	X
Short-eared Owl	F	C	F	C	F	F	F	X	X	X	X
Horned Grebe								R	R	R	R
Eared Grebe								R	R	R	R
American Bittern								R	R	R	R
Greater White-fronted Goose								R	R	R	R
Ross' Goose								R	R	R	R
Ruddy Duck								C	C	C	C
Northern Harrier								C	C	C	C

Northern Goshawk								R	R	R	R
French Red-legged Partridge								R	R	R	R
Wild Turkey								A	A	A	A
American Coot								C	C	C	C
Sandhill Crane								R	R	R	R
Spotted Sandpiper								R	R	R	R
Flammulated Owl								R	R	R	R
Snowy Owl								R	R	R	R
Northern Pygmy-owl								R	R	R	R
Great Gray Pwl								R	R	R	R
Black-chinned Hummingbird								U	C	C	C
Calliope Hummingbird								U	C	C	C
Rufous Hummingbird								U	C	C	C
Red-breasted Sapsucker								R	R	R	R
Willow Flycatcher								C	C	C	C
Hammond's Flycatcher								U	C	C	C
Dusky Flycatcher								U	C	C	C
Pacific Slope Flycatcher								U	C	C	C
Blue Jay								R	R	R	R
American Crow								C	C	C	C
Moutain Chickadee								C	C	C	C
Plain Titmouse								C	C	C	C
Canyon Wren								U	C	U	U
Gray Catbird								R	R	R	R
European Starling								U	A	A	U
Warbling Vireo								U	C	C	C
Spotted Towhee								C	C	C	C
Pacific Loon										X	X
Common Loon								R		R	R
Pied-billed Grebe								U	R	U	R
Red-necked Grebe											X

Double-crested Cormorant								C	C	C	C
Great Egret								X			
Black-crowned Night-Heron								X			
Trumpeter Swan									X		
Northern Pintail										R	R
Gadwall										R	R
Eurasian Wigeon										X	
Northern Shoveler								R		R	R
Ring-necked Duck								U		U	C
Canvasback								R		R	R
Barrow's Goldeneye										R	U
Lesser Scaup								U		U	C
Ringed-bill Gull								C	C	C	C
California Gull								C	U	C	C
Herring Gull								R		R	
Thayer's Gull								R		R	
Rock Pigeon								C	C	C	C
White-throated Swift								R		R	
Northern Flicker								C	C	C	C
Northern Shrike										R	R
Northern Rough-winged								C	C	U	
Cliff Swallow								C	C	C	
Marsh Wren								R		R	
American Pipit								R		R	
Palm Warbler											X
Bullock's Oriole								C	C		
<b>Amphibians Species</b>											
Northern Long-Toed Salamander						U		X	X	X	X
Western Toad	F	F			F	F		X	X	X	X
Pacific Tree Frog	C					C	F	X	X	X	X
Rough-skinned Newt	C					C		X	X	X	X



Spotted Frog						F		X	X	X	X
Leopard Frog						F		X	X	X	X
Bullfrog											
<b>Reptiles</b>											
Painted Turtles						F		X	X	X	X
Northwestern Fence Lizard	C	C	C	C	F	C	C	X	X	X	X
Western Shink	F	F	F		F	F	F	X	X	X	X
Oregon Alligator Lizard		F	F			F	F	X	X	X	X
Rubber Boa						U		X	X	X	X
Sharp-tailed Snake		U	U			U		X	X	X	X
Stripped Whipsnake		U	U		F	U		X	X	X	X
Western Yellow-bellied Racer		U	U			U		X	X	X	X
Great Basin Gopher Snake	U	U	U	U		U		X	X	X	X
Pacific Gopher Snake		C	C	C		C	C	X	X	X	X
Valley Garter Snake		C	C	C		C	C	X	X	X	X
Wandering Garter Snake					U	U		X	X	X	X
Northern Pacific Rattlesnake	F	F	F	F	F	F	F	X	X	X	X
Western Ring-necked Snake	F	F	F	F	F	F	F	X	X	X	X
Great Basin Fence Lizard					F			X	X	X	X
Sagebrush Lizard	U	U	U	U	F	U	U	X	X	X	X
Side-blotched Lizard	U	U	U	U	F	U	U	X	X	X	X
Western Whiptail	U	U	U	U	U	U	U	X	X	X	X
Rocky Mt. Rubber Boa	U	U	U	U	U	U	U	X	X	X	X
Bullsnake			C	C	C	C	C	X	X	X	X
Night Snake	U	U	U	U	U	U	U	X	X	X	X
Southern Alligator Lizard											
Western Fence Lizard											
Racer											
Western Terrestrial Garter Snake											
Common Garter Snake											
<b>Mammals</b>											

Mule Deer					C	C	C	X	X	X	X
Blacktail Deer	C	C	C			C	C	X	X	X	X
Coyote	C	C	C	C	C	C	C	X	X	X	X
Bobcat	F	F		F	F	F		X	X	X	X
Raccoon	C	C	C		F	C	C	X	X	X	X
Long-tailed Weasel	F	F			F	F	F	X	X	X	X
Badger		F		F	C			X	X	X	X
Striped Skunk	C	C	C	C	F	C	C	X	X	X	X
River Otter					F	F		X	X	X	X
Mink					F	C		X	X	X	X
Beaver						C		X	X	X	X
Muskrat			F			F		X	X	X	X
Merriam Shrew					U			X	X	X	X
Vagrant Shrew	U	U	U	U	U		U	X	X	X	X
Water Shrew					U			X	X	X	X
Pacific or Coast Mole	U	U			U	F	F	X	X	X	X
Little Brown Myotis	U	U	U		U	U	U	X	X	U	U
Fringed Myotis	U	U	U		U	U	U	X	X	U	U
California Myotis	U	U	U		U	U	U	X	X	U	U
Western Harvest Mouse					C			X	X	X	X
Canyon Mouse					C			X	X	X	X
Deer Mouse	F	C	C	C	C		C	X	X	X	X
Northern Grasshopper Mouse					C			X	X	X	X
Bushy-tailed Wood Rat		C	C		C	C	C	X	X	X	X
Sagebrush Mole					U			X	X	X	X
Montane Meadow House					U			X	X	X	X
Norway Rat					F	C	C	X	X	X	X
House Mouse			C	C	F	C	C	X	X	X	X
Western Jumping Mouse			F	F	F			X	X	X	X
Opossum		F				F	R	X	X	X	X
Dusky Shrew	U	U	U	U			U	X	X	X	X

Trowbridge Shrew	U	U	U			U	U	X	X	X	X
Pacific Mole	U	U				R	F	X	X	X	X
Yuma Myotis	U	U	U			U	U	X	X	U	U
Spotted Skunk	F	F	F	F	R	F	F	X	X	X	X
California Ground Squirrel	C	C	C	C	F	C	C	X	X	X	X
Yellow Pine Chipmunk	C	C	C			C		X	X	X	X
Townsend Chipmunk	C	C	C			C		X	X	X	X
Small-footed Myotis	U	U	U		U	U	U	X	X	U	U
Hairy-winged Myotis					U			X	X	X	X
Long-eared Myotis	U	U	U		U	U	U	X	X	U	U
Silvery-haired bat	U	U	U		U	U	U	X	X	U	U
Big Brown Bat	U	U	U		U	U	U	X	X	U	U
Western Pipistrelle	U	U	U		U	U	U	X	X	U	U
Pallid Bat	U	U	U		U	U	U	X	X	X	X
Lump-nosed Bat					U			X	X		
Blacktailed Hare					R			X	X	X	X
Whitetailed Hare					F		F	X	X	X	X
Mountain Cottontail	F	C	C	C	C	C	C	X	X	X	X
Pygmy Rabbit	F	F			F	F	F	X	X	X	X
Yellow-bellied Marmot					F			X	X	X	X
Belding Ground Squirrel					C		F	X	X	X	X
Townsend Ground Squirrel					C		F	X	X	X	X
Least Chipmunk	F	F			F			X	X	X	X
Northern Pocket Gopher	C	C	C	C	C	C	C	X	X	X	X
Great Basin Pocket Mouse					U			X	X	X	X
Ord Kangaroo Rat					F			X	X	X	X
Western Gray Squirrel	C	C	C			C	C	X	X	X	X
Chickaree	C	C				C		X	X	X	X
Northern Flying Squirrel	F	F				F		X	X	X	X
Longtail Vole	C	C		C		C	C	X	X	X	X
Oregon Vole	C	C		C		C	C	X	X	X	X

Norway Rat						C	C	X	X	X	X
Black Rat						C	C	X	X	X	X
Porcupine	C	C	C	C	C	C	C	X	X	X	X
Snowshoe Hare	C							X	X	X	X
Black Bear	C							X	X	X	X
Mountain Lion	F	F	F					X	X	X	X
Rocky Mountain Elk	C	C	C	C		C	C	X	X	X	X
Pika	C							X	X	X	X
Nuttall Cottontail	C	C		C		C		X	X	X	X
Cougar								C	C	C	C
Little Brown Bat								C	C	C	C
Golden-mantled Ground Squirrel								U	C	C	U
American Beaver								C	C	C	C
Townsend's Big-eared Bat											
White-tailed Jackrabbit											
Montane Vole											
Sagebrush Vole											
North American Porcupine											
California Bighorn Sheep											
A = Abundant F = Few C = Common R = Rare U = Unknown											
Darker Grey is from the 2007 White River Wildlife Management Plan (2007) ODFW											
C = Common, U = Uncommon, R = Rare, X = Extremely Rare											
Lighter Grey is from Lower Deschutes Wildlife Area Management Plan (2009) ODFW											
C = Common, U = Uncommon, R = Rare, X = Extremely Rare											
Additional known animals without habitat information (from CAG members): Pronghorn Antelope, Diamond Back Rattlesnake, Timber Rattler, Sandhill Crane, Asian Dove											



# Historic, Cultural and Archaeological Inventory

Site Number	Site Name	Location	Description	Date of Construction	Notes
1	Oregon Trail		Road/ Archaeological Site		Historic Oregon Trail Route. This east-west route was the highway to the Northwest that ended in The Dalles.
2	Barlow Road and Cut off Road		Road/ Archaeological Site	1845-1846	This was the alternate route to the Willamette Valley from the east. The former route was the Columbia River. The road was built in 1845-6 by Samuel K Barlow.
3	The Dalles Military Wagon Road	4S 12E 1 301	Road/ Archaeological Site		This was the main military road to the interior Oregon from Fort Dalles.
4	Jonah H. Mosier Sawmill Site	2N 11E 1	Cultural site	1854	Mosier sawmill established to supply The Dalles with lumber, was the first settlement of the City of Mosier.
5	Lower Fivemile School	1N 14E 2000		1890	Historic school, also known as the Benson School.
6	Mt. Hood Flat School	1S 13E 21 400		1890	Originally Dutch Flat School (1890), then called Fairview (1901), finally Mount Hood Flat (1910), it was declared abandoned in 1954 and property became private.
7	Lower Eightmile School	1N 14E 32 400		1904	Established in 1904, the school dated back to 1860 and was also used by Mt. View Grange.
8	Mill Creek Grange	1N 12E 14		1920	Historic grange hall.
9	Wolf Run Community Hall	1S 12E 14		1913	Wolf Run School operated from 1913-1939 and was named after wolves that roamed the area.
10	Center Ridge School	2S 15E 0 800		1890	Historic school, in the 1940s it consolidated with Dufur School District.
11	Columbia Hall	1N 15E 0 1200		1906	Was used as a school until moved to the current site where it was as a Farmers Union Hall.
12	Bear Springs Camp	5S 10E 0 100			Owned by the US Forest Service. Occupied during the first enrollment

	Shelter				period by Company 616, a company of junior enrollees from Chicago.
13	Wapinitia School/Gym	5S 12E 25B 200		1878	Wapinitia, meaning “running water”, references a nearby creek. The school operated from 1878 to 1946. The town of Wapinitia also had two churches, two stores, a hotel and a blacksmith. The school district eventually merged with Maupin.
14	White River Dam	4S 14E 0 1800		1910	Now a State Park, the White River Falls was the site of a historic hydroelectric power plant that supplied power to Wasco and Sherman Counties from 1910 until completion of The Dalles Dam in 1960.
15	Old White River Station Camp	4S 11E 0 100			Owned by the US Forest Service this campsite was used in the pioneer days.
16	Pine Grove School	5S 11E 25B 600		1890	Historic school was consolidated with other schools in the late 1940s.
17	Jersey School	8S 14E 0 2300		1894	A historic school close to the Deschutes River, it was abandoned in 1954.
18	Lower Antelope School	8S 16E 0 800		1890	Historic school that was part of a joint district with Jefferson County.
19	Fivemile Rapids				Site not identified on GIS to protect cultural resources
20	Memaloose Island		Cultural Site		Lewis and Clark called it “Sepulchar Island”.
21	Abbott site	5S 12E 0 5000			Near Wapinitia
22	Celilo Falls	2N 15E 20 400	Cultural site	1958	Falls were flooded in 1957 with the construction of the Dam. Park was developed by the Army Corp of Engineers to commemorate the Falls.
23	Black Walnut	2s 13E 18 1600	Black walnut tree with approx. 7’ diameter	c. 1860	Record Size. Part of the Nickalson P. O’Brien homestead from 1890s. Black walnut trees, not native to Oregon, were reportedly brought west by Oregon Trail pioneers.
24	Old Fashioned Yellow Rose	4S 13E 24	Large Old-Fashioned Yellow Rosebush	c. 1910	Rose was inside the Fairview School yard. Highway was widened on part of the original school yards.
25	Ox Yoke Monument	2N 14E 25 400	Monument	1936	Built as an Oregon Trail marker by Isaac Remington. Constructed from cement mixed by hand in his wheelbarrow when Remington was aged 76.
26	Seufert Viaduct	2N 14E 31	Bridge	1920	Named for former train station which, in turn, was named for two pioneer brothers who moved to Oregon in the early 1880s. Designed by CB McCullough and constructed by the State Highway Department. Built under contract in 1920 by the Colonial Building Company.
27	BNRR Bridge	2N 15E 20	Railroad Bridge	1912	Historic link between Oregon and Washington. The bridge was built entirely on dry land on the rocks in the river during low water.
28	Dalles Canyon City	2S 14E 9 700	Bridge	1923	Constructed by Alfonso Pizzolato to eliminate water problems created by

	Road Bridge				Dry Creek. One of few cut stone bridges in Wasco County.
29	Upper White River Canyon Grade	5S 12E 4, 5, 8, 9	Road	1910	Road was built as a short cut between Juniper Flats and Smock Prairie. Valuable as recreation and scenic road.
30	Hinton House	5S 16E 26 2900	Dwelling	1900-1915	Built for R.R. Hinton and family.
31	Nansene House and Post Office	2S 14E 9 701	Hotel/Stage Coach Stop	1874	Nansene, the Native-American name for Fifteenmile Creek, was an early stage coach stop and post office. It served as a stage coach stop (started in 1874) and post office (1880 to 1904). Credited with being one of the few remaining stagecoach stops in Oregon.
32	Mark O. Mayer House	2N 12E 6 401	Residence	1910	Mark O. Mayer constructed the house in 1910 as a country home. Mayer, from Portland, built the road from Mosier to his house. The road later became part of the Columbia River Highway. He named the house Mayerdale. Its an excellent example of Colonial Revival style.
33	Friend Store, Post Office and Real Estate Office	2S 12E 35 100	Commerce/Government	1912	The post office was opened in 1903. The small building was constructed in 1924 by Fred Buskuhl as a real estate office during the boom time for Friend between 1912-1924.
35	Wapinitia Hotel	5S 12E 26 5000	Multiple dwelling	1915	Barzee Hotel, built in 1915 by Earl Barzee. The hotel/rooming house was very popular in the 1920s when the Wapinitia cut-off highway was being constructed with highway engineers and workers. It was also a popular place for local teachers to board. The Wapinitia Hotel operated until the 1940s.
36	OWRR&N Railroad Section House	5S 14E 5 700	Multiple dwelling	1910	Affiliated with the east site of the Deschutes River and the railroad.
37	Round Barn	1N 13E 10AB 7200	Barn	1932	Built for a poultry business for Howard McNeal. In 1964, the barn was remodeled for use by a local theater group and called "The Round Barn." The group was asked to vacate the barn in 1973, and reverted to farm use. It is one of the few remaining round barns in Wasco County.
38	Smock Prairie School	4S 12E 32 8500	School	1906	The district merged with Wamic in 1958.
39	Friend School	3S 12E 2 800	School	1909-1910	Operated as a school until the late 1930s.
40	Petersburg School	2N 14E 33 3001	School	1860s	Built by William Floyd circa 1860s. Originally called the Floyd School. In 1904, name changed to Roosevelt School until 1908 when it was renamed Petersburg School after the nearby Great Southern Railroad station of the same name. The school was vacated in 1954 when a new school was built.
41	Fairbanks School	2N 15E 31 600	School	1912	Served as a school between 1912-1928. From 1954-1982, the building was leased to the Ten-Mile Saddle Club.

42	Clarno School	7S 19E 32 1200	School	1914	Had an average of 10-16 pupils who were rancher children between Clarno and Pine Creek (Wheeler County). The last class graduated in 1937 with two students.
43	Imperial Stock Ranch Headquarters Complex	5S 16E 26 2900	Historic District	1871-1915	Historic District, for much of its history was the largest individually owned land and livestock holding in Oregon.
44	Mosier Mounds		Archaeological resource		Site not identified on GIS to protect cultural resources





**PLANNING DEPARTMENT**

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*Pioneering pathways to prosperity.*

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**FILE #:** 921-18-000215 (11)

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**REQUEST:** Legislative Request to Amend the Comprehensive Plan, Chapter 12  
**DECISION:**

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**Attachments:**

- A. Wasco County Comprehensive Plan Periodic Review Work Task 11 Overview
- B. Annotated Draft of Proposed Chapters 12 of Wasco County 2040 (Comprehensive Plan) with notes

**File Number:** 921-18-000215

**Request:** Amend the Wasco County Comprehensive Plan  
1. Change the format to align with Statewide Land Use Planning Goals  
2. Develop Goal 12 into Wasco County 2040 format (Chapter 12),  
make any general amendments reflecting current planning practice.  
This is related to Periodic Review work task 12.

**Prepared by:** Kelly Howsley Glover, Long Range Planner

**Prepared for:** Wasco County Planning Commission

**Applicant:** Wasco County Planning Department

**Staff Recommendation:** Recommend adoption of the proposed amendments of the Wasco County Comprehensive Plan by the Wasco County Board of Commissioners.

**Planning Commission  
Hearing Date:** May 7, 2019

**Board of County  
Commissioner Hearing  
Date:** June 5, 2010

**Procedure Type:** Legislative

**Attachments:** Attachment A: Wasco County Comprehensive Plan Periodic Review  
Work Task 11 Overview  
Attachment B: Annotated Draft of Proposed Chapter 12 of Wasco  
County 2040 (Comprehensive Plan) with notes

## **I. APPLICABLE CRITERIA**

### **A. Wasco County Comprehensive Plan Chapter 11: Revisions Process**

1. Section B: Form of Comprehensive Plan Amendment
2. Section C: Who May Apply for a Plan revision
3. Section D: Legislative Revisions
4. Section H: General Criteria
5. Section I: Transportation Planning Rule Compliance
6. Section J: Procedure for the Amendment process

### **B. Oregon Administrative Rules 660-025: Periodic Review**

## **II. SUBMITTED COMMENTS**

As of the date of this document, Wasco County Planning Department has received no comments about the proposed revisions.

## **III. PUBLIC INVOLVEMENT**

In addition to the public hearings required by this legislative process to allow for public testimony and the ability to provide written comment, Wasco County has included the following additional measures to ensure the process is open to the public:

### **A. Newspaper Notifications**

#### Citizen Advisory Group Work Session March 12, 2019:

Public notice for a Citizen Advisory Group meeting was published in *The Dalles Chronicle* on February 20, 2019, more than 20 days prior to the March 12th work session.

#### Planning Commission Hearing May 7, 2019:

Public notice for a Planning Commission hearing was published in *The Dalles Chronicle* on April 13, 2019, more than 20 days prior to the May 7<sup>th</sup> hearing.

#### Board of County Commissioner Hearing June 5, 2019:

Public notice for the Board of County Commissioner hearing was published in *The Dalles Chronicle* on May 15, 2019, more than 20 days prior to the June 5<sup>th</sup> hearing.

### **B. Information Available on Website**

The information regarding the proposed amendments was placed on the Wasco County Planning Department Website<sup>1</sup> on March 5, 2019. If updates are made following each hearing, the webpage will be updated to reflect such changes. At the time of publication of this document, the following information was made available to the public:

- A listing of hearing dates, times and locations
- Drafts of the proposed amendments
- Staff report describing the process and proposed changes

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<sup>1</sup> <http://co.wasco.or.us/departments/planning/index.php>

- A way to submit comments and concerns

In addition, the Wasco County Comprehensive Plan website<sup>2</sup> has included several posts that have included the time and date of meetings and discussion of proposed topics. This website has 25 subscribers that receive notification of new content, and is also promoted on the Planning Department's social media channels which have 211 followers.

#### **C. Notification to Partners**

An email notification of proposed amendments, progress on Periodic Review, and the legislative hearing was sent to the Periodic Review Assistance team and other Citizen Advisory Group identified stakeholders on March 5, 2019. The notification included links to the staff report, proposed amendments, and the opportunity to comment.

#### **D. Notification to Community Notification List**

During the Wasco County 2040 initial outreach phase, a public email notification list was assembled. Members of the public continue to have the opportunity to sign up for this list at any time on the project website<sup>3</sup> or in person at any of the public hearings, work sessions or other events. They can also request to be put on the list via email, telephone, or in the Planning Department Office. Currently this list includes 74 interested parties from the community.

An email notification of proposed amendments, progress on Periodic Review, and the legislative hearing was sent to this notification list on March 5, 2019. The notification included links to the staff report, proposed amendments, and information on how to provide comment.

#### **E. Postcard Mailer Notification to All Property Owners in Unincorporated Wasco County**

At the beginning of March, a postcard mailer was sent to all property owners in unincorporated Wasco County updating them about the progress on Wasco County 2040 and putting them on notice about upcoming public meetings, including the work session on March 12<sup>th</sup>. The postcard included links to the project website and contact information for the department.

#### **F. Other Public Outreach**

In addition to the public meetings, social media content helped to promote engagement with the work tasks and solicit additional input. Any comments, or other feedback were compiled and analyzed by staff and used to inform the development of the new policy and implementation strategies.

### **IV. FINDINGS**

#### **A. Wasco County Comprehensive Plan Criteria**

##### **1. Chapter 11 - Revisions Process**

##### ***a. Section B – Form of Comprehensive Plan Amendment***

<sup>2</sup> [www.Wasco2040.com](http://www.Wasco2040.com)

<sup>3</sup> <https://wasco2040.com/contact/>



***Amendments to the Comprehensive Plan include many forms and can either be legislative or quasi-judicial.***

**FINDING:** The request is for a legislative text amendment to policies and the format for Goal 12 (Chapter 12) of the Comprehensive Plan, as part of a broader Periodic Review work plan. Amendments include reformatting and edits to existing policy and implementation, as well as the addition of some new content including historical perspective, overview, and findings and references. The main goal of the work task is to ensure the transportation element is up-to-date.

***b. Section C – Who May Apply for a Plan revision***

**\*\*\***

***2. Planning Commission by majority vote confirmed by the Wasco County Governing Body. (Legislative)***

**FINDING:** The Wasco County Board of Commissioners is the Wasco County Governing Body, and has authorized the Wasco County Planning Department to pursue Voluntary Periodic Review (VPR) to update the Wasco County Comprehensive Plan. The Board sent a letter to the Land Conservation and Development Commission supporting VPR on September 29, 2016.

***c. Section D – Legislative Revisions***

***Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership. The Planning Commission and County Governing Body shall evaluate the plan as often as necessary to meet changes in the social, economic, or environmental character of Wasco County.***

**FINDING:** The proposed text amendments to policies and format of the Comprehensive Plan are applicable to all properties governed by the Wasco County Comprehensive Plan and therefore the proposal is a legislative revision. The proposed amendments are part of a larger Periodic Review process approved by the Planning Commission, Board of County Commissioners, Department of Land Conservation and Development and the Land Conservation and Development Commission. To be accepted for periodic review, staff prepared extensive justification demonstrating the need for amendments to the Comprehensive Plan as a result of changes in the social, economic and environmental character of Wasco County.

***d. Section H – General Criteria***

***The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:***

- 1). Compliance with the statewide land use goal as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.***

- 2). Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.**
- 3). A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.**
- 4). Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.**
- 5). Proof of change in the inventories originally developed.**
- 6). Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.**

**FINDING:** The policies and implementation strategies for Goal 12, Transportation, were updated following the Transportation Systems Plan completion in 2009. This section is one of the most current and up to date in the Comprehensive Plan.

Since 2009, however, financing for County roads has undergone significant change with the severe reduction of federal timber receipts. Because of this and ongoing changes to the County Public Works financing, staff is recommended the removal of financing related language from the Comprehensive Plan with the expectation that it will need to be re-evaluated during a Transportation Systems Plan analysis. The removal also eliminates any persistent confusion about funding sources and will require the public to contact the Public Works Department directly, which is more appropriate.

Based on feedback throughout the Wasco County 2040 process, staff is recommending the addition of strategy 12.1.5 (c), which focuses on coordination with the Public Works Department on special event permits. Members of the public have expressed frustration that special events, like bicycling races and car rallies, are not sufficiently noticed and create conflict with agricultural transportation and residential traffic. Because the roadways are multi-modal, the suggested compromise is to ensure better communication about events which the Planning Department can help facilitate through outreach.

The new Policy 12.1.6 addresses ongoing concerns from Planning Department staff and the Wasco County Roadmaster that the liability for improvements and maintenance on private or local access roads is not clearly understood by the public. There is also considerable confusion about financial liability for road improvement during partitioning. The recommended implementation strategies address these two issues through recorded documents that are meant to inform current and future property owners about financial liabilities with private or local access roads. These strategies do not change the overall liability of property owners, but instead require an additional process to ensure ongoing clarity about financial obligations for the roadways.

Finally, staff is recommending the addition of Policy 12.1.7 to address increasing pressures on the transportation network for recreation and tourism uses and activities. The Transportation Systems Plan has limited information on multi-modal recreation travel and in order to appropriately plan for and

mitigate impacts, it is necessary complete more extensive analysis and coordinate with partners include the Wasco County Public Works Department and the Oregon Department of Transportation.

The overall format of the Chapter follows previous work with Wasco County 2040 and includes some new content like an overview, findings and references. These additions are meant to enhance the understanding of the audience about the importance of each goal and explain the history and planning process that went behind each policy and implementation piece. The public has continually expressed a desire for increased education about land use planning rules and regulations, and these additions are meant to create new insights into the relevance and importance of land use planning rules.

The proposed changes are in line with Goal 1, Citizen Involvement, and Goal 2, Land Use Planning. The proposed updates are in keeping with the Statewide Goal 12, particularly to minimize adverse social, economic and environmental impacts and costs. Proposed updates are based on factual information and public input, and are based on the public desire for increased transparency and clarity with the rules.

***e. Section I- Transportation Planning Rule Compliance***

***1). Review of Applications for Effect on Transportation Facilities – A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:***

***a). Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);***

***b). Change standards implementing a functional classification system; or***

***c). As measured at the end of the planning period identified in the adopted transportation system plan:***

***(1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;***

***(2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or***

***(3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or Comprehensive Plan.***

**FINDING:** The proposed updates will not change the functional classification of an existing or planned transportation facility, change standards implementing a functional classification system or allow uses or development resulting in impacts to the transportation system.

Proposed revisions to Goal 12 do not have a direct or indirect impact on transportation facilities. An additional policy and a few strategies are recommended additions for future updates to the Transportation System Plan but will not directly result in additional regulation. Coordination policy may result in internal Department processes, but will not otherwise impact the transportation system.

***f. Section J – Procedure for the Amendment Process***

- 1. A petition must be filed with the Planning Offices on forms prescribed by the Director of Planning.***
- 2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.***
- 3. Notification of Hearing:***
  - (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.***
  - (2) Notice of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.***
  - (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission present cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.***
  - (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.***
  - (5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.***

**FINDING:** The Planning Department and the Planning Commission sought approval to revise the Comprehensive Plan through the Board of County Commissioners and the State Department of Land Conservation and Development (DLCD). DLCD approved Wasco County for Periodic Review on February 20, 2018.



The Periodic Review does not involve a modification or amendment to any of the urban growth boundaries and therefore no notices to Cities are required. Planning staff has contacted incorporated cities within Wasco County to solicit ongoing feedback and participation in Wasco County 2040.

Notices for all amendments are occurring in accordance with ORS 215.503. Section III of the staff report, above, details all the public noticing issued for this Periodic Review work task.

A quorum for this hearing was present to deliberate. By a vote of \_\_\_ to \_\_\_ the Planning Commission voted to recommend approval of the amendments in Work Task 12 to the Board of County Commissioners. The first hearing by the Board of County Commissioners will be held on June 5, 2019, 28 days following this hearing. Mailing of recommendation to parties will be sent on May 9, 2019, 26 days before the BOCC hearing.

#### ***Oregon Administrative Rule 660-025: Periodic Review***

##### ***Oregon Administrative Rule 660-0010: Purpose***

***The purpose of this division is to carry out the state policy outlined in ORS 197.010 and 197.628. This division is intended to implement provisions of ORS 197.626 through 197.651. The purpose for periodic review is to ensure that comprehensive plans and land use regulations remain in compliance with the statewide planning goals adopted pursuant to ORS 197.230, the commission's rules and applicable land use statutes. Periodic review also is intended to ensure that local government plans and regulations make adequate provision for economic development, needed housing, transportation, public facilities and services, and urbanization, and that local plans are coordinated as described in ORS 197.015(5). Periodic Review is a cooperative planning process that includes the state and its agencies, local governments, and other interested persons.***

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##### ***Oregon Administrative Rules 660-025-0130: Submission of Completed Work Task***

- 1). A local government must submit completed work tasks as provided in the approved work program or a submittal pursuant to OAR 660-025-0175 to the department along with the notice required in OAR-660-025-0140 and any form required by the department. A local government must submit to the department a list of persons who participated orally or in writing in the local proceedings leading to the adoption of the work task or who requested notice of the local government's final decision on a work task.***

**FINDING:** A notice was sent to DLCD on March 1, 2019, consistent with requirements, to inform them of the proposed May 7, 2019 hearing and subsequent hearings to adopt Chapters related to Periodic Review work task 11. To date, staff has not received any oral or written comment or request for notification from the public on Work Task 11. At such a time when comment is received, that will be attached to the staff report and submitted to DLCD.

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3). *For a periodic review tasks to be complete, a submittal must be a final decision containing all required elements identified for that task in the work program. The department may accept a portion of a task or subtask as a complete submittal if the work program identified that portion of the task or subtasks as a separate item for adoption by the local government. All submittals required by section 1) of this rule are subject to the following requirements:*

- a). If the local record does not exceed 2,000 pages, a submittal must include the entire local record, including but not limited to adopted ordinances and orders, studies, inventories, findings, staff reports, correspondence, hearings minutes, written testimony and evidence, and any other items specifically listed in the work program.*
- b). If the local record exceeds 2,000 pages, a submittal must include adopted ordinances, resolutions, and orders; any amended comprehensive or regional framework plan provisions or land use regulations; findings, hearing minutes; materials from the record that the local government deems necessary to explain the submittal or cities in its findings; and a detailed index listing all items in the local record and indicating whether or not the item is included in the submittal. All items in the local record must be made available for public review during the period for submitting objections under OAR 660-025-0140. The director or commission may require a local government to submit any materials from the local record not included in the initial submittal;*
- c) A submittal of over 500 pages must include an index of all submitted materials. Each document must be separately indexed, in chronological order, with the last document on the top. Pages must be consecutively numbered at the bottom of the page.*

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**FINDING:** The local record for Work Task 11 will not exceed 2,000 pages. Consistent with this requirement, submittal to DLCD will include the entire local record, including but not limited to the adopted ordinance and orders, studies, findings, staff reports, correspondence, hearing minutes, written testimony and evidence and any other relevant material.

A copy of the record, when complete, will also be available for inspection at the Planning Department.

## Attachment A

### Chapter 12 Proposed Amendments

**Documentation:** The following is a summarized overview of proposed amendments.

**State of the Comprehensive Plan:**

- A. **Purpose:** The main purpose of the Comprehensive Plan is to function as a visionary policy document with a 20 year horizon. The plan represents the desires of the citizens of Wasco County and provides generalized direction for development, preservation, the planning process, citizen involvement and numerous other elements related to land use planning. Due to frequent changes in circumstances, law, and the desires of the citizens of the county, the major components should be updated every five to ten years as needed. The land use and development ordinance includes the specific rules and regulations that are meant to implement this vision and amendments to it are required to be consistent with Comprehensive Plan language.
- B. **Prior Updates:** The Comprehensive Plan was acknowledged by the Land Conservation and Development Department in 1983. Major components of the document have not been updated since 1983, resulting in them now being out of date. Other portions have been updated but were done inconsistently and in some cases, the new language did not get inserted into the amended document. In several instances, updates to the ordinance are now out of compliance with the Comprehensive Plan because of the lack of comprehensive updates. A more comprehensive update was initiated in 2009, but ultimately not completed. Staff has used some of the past findings and information in drafting the proposed updates.
- C. **Format:** The Comprehensive Plan is currently organized in a way that puts unrelated information in the same chapter and separated related information into multiple chapters. This has created significant difficulty for staff and the public to find information and utilize as the plan was intended.
- D. **Reformatting:** After a careful case study of other Oregon county comprehensive plans, the Citizen Advisory Group held several work sessions in 2015 and 2016 to discuss, among other issues, reformatting the Comprehensive Plan for increased use, transparency and readability. Based on those work sessions, staff was directed to compile and organize information in a manner that better aligned the plan to the Statewide Land Use Planning Goals.
  - 1. **Oregon's Land Use Goals:** The vast majority of the Comprehensive Plan language is tied to one of the State of Oregon's Land Use Goals. Other than some introductory chapters, the entire Comprehensive Plan is being formatted so that each chapter corresponds to one of the applicable Land Use Goals. Each chapter will include all of the policies, findings, and inventories for the specific goal, in addition to any references and historical information.
  - 2. **Format of Goal Chapters:** Each Goal related chapter will be formatted according to the following conventions:

- a. Overview: A sentence to a paragraph on the outlining the purpose behind the Goal and Wasco County policies.
- b. Statement of Wasco County Goal and reference to Statewide Planning Goal
- c. Any cross-references to other Goals
- d. Policy Statements
- e. Implementation Statements for each policy
- f. Findings and reference section detailing any relevant findings and references.

## Chapter by Chapter Overview of Proposed Substantive Amendments:

### A. Chapter 12- Goal 12 Transportation

This new chapter maps to Goal 12 (Transportation) and includes an overview of Wasco County's Transportation System Plan (TSP), a brief overview of the goal's purpose in Wasco County, an excerpt of Oregon's Statewide Land Use Planning Goal 12, policies, implementation strategies for each policy, and a new findings and references section.

1. **Overview:** The overview briefly discusses transportation in Wasco County, with specific information on the nexus between the Comprehensive and Transportation System plans.
2. **TSP Overview:** Included is a more in depth overview of the Transportation System Plan and what is included in the guiding document.
3. **Excerpt of Statewide Planning Goal:** Excerpt from the Oregon Administrative Rules on Goal 12 that outlines for staff and public the purpose of Goal 12.
4. **Wasco County's Goal:** This maps directly to the State's Goal 12, and is has not been modified from existing broad goal.
5. **Photo:** A staff photo of a Wasco County road was included.
6. **Cross Reference:** A list of other goals that relate to Goal 12 was included for easy reference.
7. **Policies:** The existing plan has five policies. The recommendation is to keep the existing policies with some modifications and add an additional two policies to provide direction for a future TSP update.
  - a. Policy 1: No changes are recommended for this policy or implementation strategies.
  - b. Policy 2: No changes are recommended for this policy or implementation strategies.
  - c. Policy 3: Current policy is *"Provide a multi-modal transportation system that permits the safe and efficient transport of goods and people."* Staff is not currently recommending any modification to this policy. The following changes are proposed for the implementation strategy 1:



- (1) Implementation Strategy “a.” is recommending a modification to the strategy to remove references to Transit partners, some of which are no longer relevant, and replace with more generic language to ensure continuing relevance. The new strategy reads: *“Continue to support the development of public transit opportunities through coordination and collaboration with regional transit authorities and networks.”*
- d. Policy 4: No changes are recommended for this policy or implementation strategies.
- e. Policy 5: Current policy is *“Maintain the safety, physical integrity, and function of the County transportation network.”* Staff is not recommending and changes to the policy. The following changes are proposed for the implementation strategies for Policy 4:
- (1) Implementation Strategy “a.” No change is being recommended.
  - (2) Implementation Strategy “b.” reads *“Maintain long term County Road Fund stability”*. Staff is proposing removing this strategy and revising it in the TSP as this is not under the purview of the land use planning program. The County Roadmaster was consulted and supported removal of references to funding.
  - (3) Implementation Strategy “c.” reads *“Evaluate new innovative funding sources for transportation improvements, such as a road fund serial levy, road utility fee, and/or a county gas tax.”* Staff is proposing removing this strategy and revising it in the TSP as this is not under the purview of the land use planning program. The County Roadmaster was consulted and supported removal of references to funding.
  - (4) Implementation Strategy “d.” reads *“Explore the potential cost savings of revising operational or maintenance standards.”* Staff is proposing removing this strategy and revising it in the TSP as this is not under the purview of the land use planning program. The County Roadmaster was consulted and supported removal of references to funding.
  - (5) Implementation Strategy “e.” reads *“Advocate for flexibility in the use of federal timber receipts so that the county is not exposed to dramatic declines in this funding source.”* Staff is proposing removing this strategy and revising it in the TSP as this is not under the purview of the land use planning program. The County Roadmaster was consulted and supported removal of references to funding.
  - (6) Implementation Strategy “f.” will become “b.”
  - (7) Implementation Strategy “c.” A new strategy, based on feedback from the public is proposed to read: *“Coordinate with the Public Works Department on activity in the ROW and road permits that impact regional travel or property owners.”* During Wasco County 2040 events and through comments, community members requested increased outreach about events, like cycling competitions or car shows, that may have an impact on agricultural or residential transportation. Because the permits

for these types of activities are approved by the Public Works Department, the Planning Department is requesting coordination so that staff may help alert residents, through ordinary channels, about events and activities, including the website.

- f. Policy 6: A new policy is proposed: *“Ensure transparency of infrastructure requirements and ongoing costs for future development.”* This policy is based on input from the public and the Wasco County Roadmaster. The goal of the policy is increased transparency about costs related to development, including private road development and maintenance, which is the responsibility of property owners who use the road for access.
  - (1) Implementation Strategy “a.” Proposed language is meant to further guide permitting requirements, including conditions of approval, to secure funding agreements for road development and maintenance. It reads: *“A waiver of remonstrance for future road improvements may be required to be recorded with the County Clerk’s office at the time of partition, subdivision or planned unit development application approval.”*
  - (2) Implementation Strategy “b.” Proposed language is meant to further guide permitting requirements, including conditions of approval, to secure funding agreements for road development and maintenance. It reads: *“A restrictive covenant agreement requiring acknowledgment of improvement and maintenance costs for local access roads will be required to be recorded with the County Clerk’s office at the time of partition, subdivision or planned unit development application approval.”*
- g. Policy 7: A new policy is proposed: *“Future updates to the Transportation System Plan should include recreational development and impact to the transportation network.”*
  - (1) Implementation Strategy “a.” Proposed language is meant to further guide updates to the TSP with respect to recreational and tourism activities. It reads: *“Increased demand for recreational uses and expansion of recreational facilities within the transportation network should be incorporated into analysis for the Transportation Systems Plan.”*
  - (2) Implementation Strategy “b” states “The concept of recreational/tourism corridors for development should be explored.” Much of the interest for recreational activity is concentrated in a few key locations in Wasco County. Citizens have also expressed significant concerns about locating uses and activities in areas of high traffic commercial agricultural as it creates dangerous driving conditions and other types of conflict, including parking on private property and increased human waste on right of ways and private property. This strategy promotes the idea of designating recreational/tourism corridors and developing additional rules or procedures to address concerns and reduce conflict.
  - (3) Implementation strategy “c” promotes coordination with partners to address recreational transportation issues, including impacts to public facilities and services like

emergency services, public sanitation, and parking. The strategy also aims to improve connectivity by working with those partners impacted by planning efforts. The proposed language read: "Staff shall coordinate with ODOT and Public Works to ensure recreational connectivity and a balance between recreation and impacts to public facilities, services and adjacent land uses."

8. **Findings and References:** To help provide some information about each of the policies, as well as some history, findings and references are provided at the end of the chapter. These references cite sources from text. Findings provide additional context for some of the policies and implementation strategies. The references list a variety of external plans and reports that are useful, not only in giving context to the policies, but also for research or reference for current planning.

# Goal 12

# Transportation

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# Goal12

## Transportation

### Overview

The Wasco County Transportation System Plan (TSP) was adopted in 2009 with the participation of the Oregon Department of Transportation (ODOT) and the Wasco County Public Works Department. The TSP guides the management and development of transportation facilities within Wasco County. Wasco County had addressed transportation through coordination with the Oregon Department of Transportation (ODOT) and the implementation of its Transportation System Plan (TSP) since its adoption in 2009. The TSP Details the management and development of transportation facilities within Wasco County, while remaining consistent with state and local plans and policies. The TSP is consistent with Oregon Revised Statute (ORS) 197.12 and the Department of Land Conservation and Development (DLCD) administrative, the Transportation Planning Rule (TPR).

Five of the policies in this plan are extracted from the TSP, with modifications made during the Wasco County 2040 process to reflect changes in conditions and funding. An additional policy has been added to recommend strategic updates to the TSP based on current and projected projects and conditions.

### TSP Overview

The 2009 Transportation Systems Plan - identified four guiding goals for the development of the transportation system in Wasco County. These were: mobility and connectivity; safety; -multi-modal users; and environment.

Objectives for each of the goals offer strong support for Wasco County land use planning policy. The plan also provides specific transportation system improvement projects for the short and long term.

Funding for infrastructure projects has been the most difficult challenge for transportation goals since the transfer payments, based on logging, were phased out in 2013. Transfer payments were the Road Fund's primary revenue source prior to 2013. Reductions in staff and services were of the results of the shortfall in funding.

Beyond roadways, transportation in Wasco County also includes freight/rail, air, marine, ~~and~~ pedestrian/bicycle transit and pipeline and transmission system.

Mass transit resources are currently managed by the Mid-Columbia Economic Development District.

The Planning Department works with local, regional and state wide transportation partners to ensure development is consistent with the Transportation Systems Plan and Goal 12.

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## Wasco County Goal

### Statewide Planning Goal 12

To provide and encourage  
a safe, convenient, and  
economic transportation  
system.

A transportation plan shall:

1. Consider all modes of transportation, including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;
2. Be based upon inventory of local, regional, and state transportation needs;
3. Consider the differences in social consequences that would results from utilizing differing combinations of transportation modes;
4. Avoid principal reliance upon any one mode of transportation;
5. Minimize adverse social, economic, and environmental impacts and costs;
6. Conserve energy;
7. Meet the needs of the transportation disadvantaged by improving transportation services;
8. Facilitate the flow of goods and services so as to strengthen the local and regional economy; and
9. Conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.

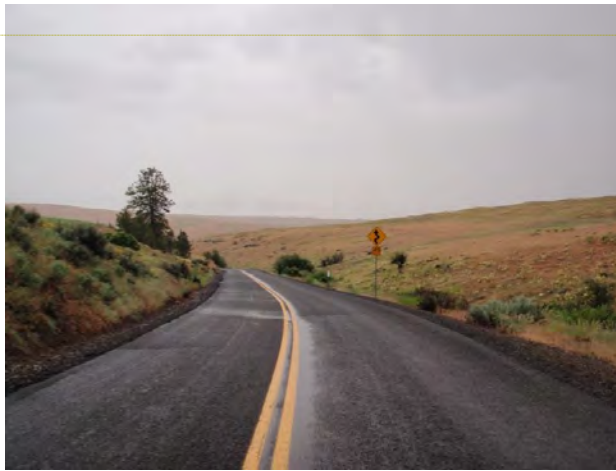
Excerpt from  
OAR 660-015-0000(12)

### Cross-Reference

Additional policies related to  
this goal: [Goal 2](#), [Goal 6](#),  
[Goal 8](#)

## Transportation

To provide and encourage a safe, convenient and economic  
transportation system.



Road in Wasco County (8/14/2017)

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## Policies

**12.1.1** Plan for and maintain an interconnected system of roads that will link communities for all users and that will provide for the existing and future needs for transportation of goods and people in the region.

### Implementation for Policy 12.1.1:

- a. Promote and maintain an integrated and linked network of collector and local streets that minimizes travel distances.
- b. When traffic levels warrant it, develop a County arterial system that facilitates efficient and safe transportation of goods and people in the region.
- c. Maintain roadway performance standards for the efficient movement of people and goods.
- d. Coordinate with ODOT in identifying improvement and maintenance needs for the existing rural arterial system (i.e., state highways).

**12.1.2** Provide a transportation system that promotes the safety of current and future travel models for all users.

### Implementation for Policy 12.1.2:

- a. Continue to work with ODOT to identify and implement measures that will reduce the incidence and severity of motor vehicle crashes on roadway segments that exceeded the average statewide crash rate and/or other safety performance measures used by the county.
- b. Provide a transportation system that allows for adequate emergency vehicle access to all land uses.
- c. Promote railroad at grade crossing elimination, consolidation whenever possible.
- d. Develop access management standards for all county road facilities and implement these standards through the development approval process and as part of public improvement projects.

## 12.1 Policies

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**12.1.3** Provide a multimodal transportation system that permits the safe and efficient transport of goods and people.

**Implementation for Policy 12.1.3:**

- a. Continue to support the development of public transit opportunities through coordination and collaboration with the Transportation Network, Gorge TransLink, and the Hood River County Transportation District regional transit authorities and networks.
- b. Promote an interconnected network of bicycle and pedestrian facilities throughout the County, including parallel routes to Interstate 84.
- c. Consider bicycle and pedestrian facilities needed during construction of new roads and during upgrades of existing roads.
- d. Support the development of recreational bicycling and hiking facilities.

**12.1.4** Provide a transportation system that balances transportation services with the need to protect the environment.

**Implementation for Policy 12.1.4:**

- a. Develop and support a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
- b. Encourage development patterns that decrease reliance on motor vehicles.
- c. Design new and improved transportation facilities to minimize impacts on the natural environment.

**12.1.5** Maintain the safety, physical integrity, and function of the County transportation network.

**Implementation for Policy 12.1.5:**

- a. Continue and enhance the partnering relationships with local jurisdictions, the Confederated Tribes of Warm Springs, and the Oregon Department of Transportation to provide a



comprehensive, safe, and efficient transportation system throughout the County.

- ~~b. Maintain long term County Road Fund stability.~~
- ~~c. Evaluate new innovative funding sources for transportation improvements, such as a road fund serial levy, road utility fee, and/or a county gas tax.~~
- ~~d. Explore the potential cost savings of revising operational or maintenance standards.~~
- ~~e. Advocate for flexibility in the use of federal timber receipts so that the county is not exposed to dramatic declines in this funding source.~~

- b. Ensure that the existing transportation network is conserved through maintenance and preservation.
- c. Coordinate with the Public Works Department on activity in the ROW and road permits that impact regional travel or property owners.

12.1.6 Ensure transparency of infrastructure requirements and ongoing costs for future development.

**Implementation for Policy 12.1.6:**

- a. A waiver of remonstrance for future road improvements may be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.
- b. A restrictive covenant agreement requiring acknowledgment of improvement and maintenance costs for local access roads will be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.

12.1.7 Future updates to the Transportation System Plan should include recreational development and impact to the transportation network.

**Implementation for Policy 12.1.7:**

- a. Increased demand for recreational uses and expansion of recreational facilities within the transportation network

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should be incorporated into analysis for the Transportation Systems Plan.

b. The concept of recreational/tourism corridors for development should be explored.

c. Staff shall coordinate with ODOT and Public Works to ensure recreational connectivity and a balance between recreation and impacts to public facilities, services and adjacent land uses.

a. \_\_\_\_\_ ▲

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# Goal 12

## Findings and References

1.1.a Policies 1-5 and the supporting implementation strategies were identified during the 2009 Wasco County Transportation Systems Plan (TSP) planning process. These policies directly map to the TSP goals.

1.1.b The Wasco County TSP was developed by reviewing relevant transportation plans and policies to ensure consistency, providing public open houses to provide information and opportunities for public input, identifying a detailed inventory of existing facilities and services and addressing future transportation needs.

1.1.c OAR 660-015-0000(12) require TSP and Comprehensive Plans be revised concurrently. The transportation portion of the Comprehensive Plan was revised in 2009, concurrently with the TSP process.

1.1.d At the time of Wasco County 2040 adoption, Mid-Columbia Economic Development District operates the LINK public transit system and works with the regional transit alliance to provide transit opportunities to residents.

**1.1.a.1.e**

### References

Oregon Department of Land Conservation and Development. *Goal 10: Housing*. Oregon's Statewide Planning Goals and Guidelines.

Wasco County Planning Department (2009). *Buildable Lands Survey*. (2009)

Wasco County Planning Department (1983). *Wasco Co-~~unity~~ Comprehensive Plan* (1983)

Mid-Columbia Economic Development (2018). *Columbia Gorge Economic Development Strategy 2017-2022* (Updated March 2018 version)

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# Goal12

## Transportation

### Overview

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Objectives for each of the goals offer strong support for Wasco County land use planning policy. The plan also provides specific transportation system improvement projects for the short and long term.

Funding for infrastructure projects has been the most difficult challenge for transportation goals since the transfer payments, based on logging, were phased out in 2013. Transfer payments were the Road Fund's primary revenue source prior to 2013. Reductions in staff and services were of the results of the shortfall in funding.

Beyond roadways, transportation in Wasco County also includes freight/rail, air, marine, pedestrian/bicycle transit and pipeline and transmission system.

Mass transit resources are currently managed by the Mid-Columbia Economic Development District. The Planning Department works with local, regional and state wide transportation partners to ensure development is consistent with the Transportation Systems Plan and Goal 12.



## Statewide Planning Goal 12

**To provide and encourage a safe, convenient, and economic transportation system.**

A transportation plan shall:

1. Consider all modes of transportation, including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;
  2. Be based upon inventory of local, regional, and state transportation needs;
  3. Consider the differences in social consequences that would result from utilizing differing combinations of transportation modes;
  4. Avoid principal reliance upon any one mode of transportation;
  5. Minimize adverse social, economic, and environmental impacts and costs;
  6. Conserve energy;
  7. Meet the needs of the transportation disadvantaged by improving transportation services;
  8. Facilitate the flow of goods and services so as to strengthen the local and regional economy; and
  9. Conform with local and regional comprehensive land use plans.
- Each plan shall include a provision for transportation as a key facility.

Excerpt from  
OAR 660-015-0000(12)

### Cross-Reference

Additional policies related to this goal: Goal 2, Goal 6, Goal 8

## Wasco County Goal

### Transportation

To provide and encourage a safe, convenient and economic transportation system.



*Road in Wasco County (8/14/2017)*

## Policies

**12.1.1.1** Plan for and maintain an interconnected system of roads that will link communities for all users and that will provide for the existing and future needs for transportation of goods and people in the region.

### Implementation for Policy 12.1.1:

- a. Promote and maintain an integrated and linked network of collector and local streets that minimizes travel distances.
- b. When traffic levels warrant it, develop a County arterial system that facilitates efficient and safe transportation of goods and people in the region.
- c. Maintain roadway performance standards for the efficient movement of people and goods.

Coordinate with ODOT in identifying improvement and maintenance needs for the existing rural arterial system (i.e., state highways).

**12.1.1.2** Provide a transportation system that promotes the safety of current and future travel models for all users.

### Implementation for Policy 12.1.2:

- a. Continue to work with ODOT to identify and implement measures that will reduce the incidence and severity of motor vehicle crashes on roadway segments that exceeded the average statewide crash rate and/or other safety performance measures used by the county.
- b. Provide a transportation system that allows for adequate emergency vehicle access to all land uses.
- c. Promote railroad at grade crossing elimination, consolidation whenever possible.
- d. Develop access management standards for all county road facilities and implement these standards through the development approval process and as part of public improvement projects.

## 12.1 Policies

**12.1.3** Provide a multimodal transportation system that permits the safe and efficient transport of goods and people.

**Implementation for Policy 12.1.3:**

- a. Continue to support the development of public transit opportunities through coordination and collaboration with regional transit authorities and networks.
- b. Promote an interconnected network of bicycle and pedestrian facilities throughout the County, including parallel routes to Interstate 84.
- c. Consider bicycle and pedestrian facilities needed during construction of new roads and during upgrades of existing roads.
- d. Support the development of recreational bicycling and hiking facilities.

**12.1.4** Provide a transportation system that balances transportation services with the need to protect the environment.

**Implementation for Policy 12.1.4:**

- a. Develop and support a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
- b. Encourage development patterns that decrease reliance on motor vehicles.
- c. Design new and improved transportation facilities to minimize impacts on the natural environment.

**12.1.5** Maintain the safety, physical integrity, and function of the County transportation network.

**Implementation for Policy 12.1.5:**

- a. Continue and enhance the partnering relationships with local jurisdictions, the Confederated Tribes of Warm Springs, and the Oregon Department of Transportation to provide a comprehensive, safe, and efficient transportation system

throughout the County.

- b. Ensure that the existing transportation network is conserved through maintenance and preservation.
- c. Coordinate with the Public Works Department on activity in the ROW and road permits that impact regional travel or property owners.

**12.1.6** Ensure transparency of infrastructure requirements and ongoing costs for future development.

**Implementation for Policy 12.1.6:**

- a. A waiver of remonstrance for future road improvements may be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.
- b. A restrictive covenant agreement requiring acknowledgment of improvement and maintenance costs for local access roads will be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.

**12.1.7** Future updates to the Transportation System Plan should include recreational development and impact to the transportation network.

**Implementation for Policy 12.1.7:**

- a. Increased demand for recreational uses and expansion of recreational facilities within the transportation network should be incorporated into analysis for the Transportation Systems Plan.
- b. The concept of recreational/tourism corridors for development should be explored.
- c. Staff shall coordinate with ODOT and Public Works to ensure recreational connectivity and a balance between recreation and impacts to public facilities, services and adjacent land uses.



# Goal 12

## Findings and References

**12.1.a** Policies 1-5 and the supporting implementation strategies were identified during the 2009 Wasco County Transportation Systems Plan (TSP) planning process. These policies directly map to the TSP goals .

**12.1.b** The Wasco County TSP was developed by reviewing relevant transportation plans and policies to ensure consistency, providing public open houses to provide information and opportunities for public input, identifying a detailed inventory of existing facilities and services and addressing future transportation needs.

**12.1.c** OAR 660-015-0000(12) require TSP and Comprehensive Plans be revised concurrently. The transportation portion of the Comprehensive Plan was revised in 2009, concurrently with the TSP process.

**12.1.d** At the time of Wasco County 2040 adoption, Mid-Columbia Economic Development District operates the LINK public transit system and works with the regional transit alliance to provide transit opportunities to residents.

## References

Oregon Department of Land Conservation and Development. *Goal 10: Housing*. Oregon's Statewide Planning Goals and Guidelines.

Wasco County Planning Department (2009). *Buildable Lands Survey*.

Wasco County Planning Department (1983). *Wasco County Comprehensive Plan*

Mid-Columbia Economic Development (2018). *Columbia Gorge Economic Development Strategy 2017-2022*

# Goal 12

# Transportation

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# Goal12

## Transportation

### Overview

The Wasco County Transportation System Plan (TSP) was adopted in 2009 with the participation of the Oregon Department of Transportation (ODOT) and the Wasco County Public Works Department. The TSP guides the management and development of transportation facilities within Wasco County. The TSP is consistent with Oregon Revised Statute (ORS) 197.12 and the Department of Land Conservation and Development (DLCDD) administrative, the Transportation Planning Rule (TPR).

Five of the policies in this plan are extracted from the TSP, with modifications made during the Wasco County 2040 process to reflect changes in conditions and funding. An additional policy has been added to recommend strategic updates to the TSP based on current and projected projects and conditions.

### TSP Overview

The 2009 Transportation Systems Plan identified four guiding goals for the development of the transportation system in Wasco County. These were: mobility and connectivity; safety; multi-modal users; and environment.

Objectives for each of the goals offer strong support for Wasco County land use planning policy. The plan also provides specific transportation system improvement projects for the short and long term.

Funding for infrastructure projects has been the most difficult challenge for transportation goals since the transfer payments, based on logging, were phased out in 2013. Transfer payments were the Road Fund's primary revenue source prior to 2013. Reductions in staff and services were of the results of the shortfall in funding.

Beyond roadways, transportation in Wasco County also includes freight/rail, air, marine, pedestrian/bicycle transit and pipeline and transmission system.

Mass transit resources are currently managed by the Mid-Columbia Economic Development District. The Planning Department works with local, regional and state wide transportation partners to ensure development is consistent with the Transportation Systems Plan and Goal 12.

## Statewide Planning Goal 12

**To provide and encourage a safe, convenient, and economic transportation system.**

A transportation plan shall:

1. Consider all modes of transportation, including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian;
2. Be based upon inventory of local, regional, and state transportation needs;
3. Consider the differences in social consequences that would result from utilizing differing combinations of transportation modes;
4. Avoid principal reliance upon any one mode of transportation;
5. Minimize adverse social, economic, and environmental impacts and costs;
6. Conserve energy;
7. Meet the needs of the transportation disadvantaged by improving transportation services;
8. Facilitate the flow of goods and services so as to strengthen the local and regional economy; and
9. Conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.

Excerpt from  
OAR 660-015-0000(12)

## Cross-Reference

Additional policies related to this goal: Goal 2, Goal 6, Goal 8

## Wasco County Goal

## Transportation

To provide and encourage a safe, convenient and economic transportation system.



*Road in Wasco County (8/14/2017)*



## 12.1 Policies

**12.1.1** Plan for and maintain an interconnected system of roads that will link communities for all users and that will provide for the existing and future needs for transportation of goods and people in the region.

**Implementation for Policy 12.1.1:**

- a. Promote and maintain an integrated and linked network of collector and local streets that minimizes travel distances.
- b. When traffic levels warrant it, develop a County arterial system that facilitates efficient and safe transportation of goods and people in the region.
- c. Maintain roadway performance standards for the efficient movement of people and goods.

Coordinate with ODOT in identifying improvement and maintenance needs for the existing rural arterial system (i.e., state highways).

**12.1.2** Provide a transportation system that promotes the safety of current and future travel models for all users.

**Implementation for Policy 12.1.2:**

- a. Continue to work with ODOT to identify and implement measures that will reduce the incidence and severity of motor vehicle crashes on roadway segments that exceeded the average statewide crash rate and/or other safety performance measures used by the county.
- b. Provide a transportation system that allows for adequate emergency vehicle access to all land uses.
- c. Promote railroad at grade crossing elimination, consolidation whenever possible.
- d. Develop access management standards for all county road facilities and implement these standards through the development approval process and as part of public improvement projects.

**12.1.3** Provide a multimodal transportation system that permits the safe and efficient transport of goods and people.

**Implementation for Policy 12.1.3:**

- a. Continue to support the development of public transit opportunities through coordination and collaboration with regional transit authorities and networks.
- b. Promote an interconnected network of bicycle and pedestrian facilities throughout the County, including parallel routes to Interstate 84.
- c. Consider bicycle and pedestrian facilities needed during construction of new roads and during upgrades of existing roads.
- d. Support the development of recreational bicycling and hiking facilities.

**12.1.4** Provide a transportation system that balances transportation services with the need to protect the environment.

**Implementation for Policy 12.1.4:**

- a. Develop and support a multi-modal transportation system that avoids reliance upon one form of transportation as well as minimizes energy consumption and air quality impacts.
- b. Encourage development patterns that decrease reliance on motor vehicles.
- c. Design new and improved transportation facilities to minimize impacts on the natural environment.

**12.1.5** Maintain the safety, physical integrity, and function of the County transportation network.

**Implementation for Policy 12.1.5:**

- a. Continue and enhance the partnering relationships with local jurisdictions, the Confederated Tribes of Warm Springs, and the Oregon Department of Transportation to provide a comprehensive, safe, and efficient transportation system

throughout the County.

- b. Ensure that the existing transportation network is conserved through maintenance and preservation.
- c. Coordinate with the Public Works Department on activity in the ROW and road permits that impact regional travel or property owners.

**12.1.6** Ensure transparency of infrastructure requirements and ongoing costs for future development.

**Implementation for Policy 12.1.6:**

- a. A waiver of remonstrance for future road improvements may be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.
- b. A restrictive covenant agreement requiring acknowledgment of improvement and maintenance costs for local access roads will be required to be recorded with the County Clerk's office at the time of partition, subdivision or planned unit development application approval.

**12.1.7** Future updates to the Transportation System Plan should include recreational development and impact to the transportation network.

**Implementation for Policy 12.1.7:**

- a. Increased demand for recreational uses and expansion of recreational facilities within the transportation network should be incorporated into analysis for the Transportation Systems Plan.
- b. The concept of recreational/tourism corridors for development should be explored.
- c. Staff shall coordinate with ODOT and Public Works to ensure recreational connectivity and a balance between recreation and impacts to public facilities, services and adjacent land uses.

# Goal 12

## Findings and References

**12.1.a** Policies 1-5 and the supporting implementation strategies were identified during the 2009 Wasco County Transportation Systems Plan (TSP) planning process. These policies directly map to the TSP goals .

**12.1.b** The Wasco County TSP was developed by reviewing relevant transportation plans and policies to ensure consistency, providing public open houses to provide information and opportunities for public input, identifying a detailed inventory of existing facilities and services and addressing future transportation needs.

**12.1.c** OAR 660-015-0000(12) require TSP and Comprehensive Plans be revised concurrently. The transportation portion of the Comprehensive Plan was revised in 2009, concurrently with the TSP process.

**12.1.d** At the time of Wasco County 2040 adoption, Mid-Columbia Economic Development District operates the LINK public transit system and works with the regional transit alliance to provide transit opportunities to residents.

## References

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Wasco County Planning Department (2009). *Buildable Lands Survey*.

Wasco County Planning Department (1983). *Wasco County Comprehensive Plan*

Mid-Columbia Economic Development (2018). *Columbia Gorge Economic Development Strategy 2017-2022*





IN THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF THE WASCO COUNTY PLANNING COMMISSION'S REQUEST TO APPROVE PROPOSED PERIODIC REVIEW LEGISLATIVE AMENDMENTS TO UPDATE THE COMPREHENSIVE PLAN RELATED TO LAND USE PLANNING GOALS 5 AND 12 IN CHAPTERS 5 and 12 OF WASCO COUNTY 2040, THE COMPREHENSIVE PLAN (FILE NUMBERS 921-18-000109, 921-18-000215)

**ORDINANCE # 19-004**

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Board of Commissioners being present; and

WHEREAS, the Wasco County Planning Commission and the Wasco County Board of Commissioners directed the Wasco County Planning Department to pursue Voluntary Periodic Review to update the Wasco County Comprehensive Plan on 5 October 2016; and

WHEREAS, Wasco County entered Periodic Review on 20 February 2018 with approval from the Department of Land Conservation and Development's (DLCD) approval of a work plan; and

WHEREAS, the ninth task on the work plan was to make amendments to Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) to make the language consistent with current Wasco County Planning Department practice and state law and reformat the language in to the new Wasco County 2040 (Comprehensive Plan) format; and

WHEREAS, the ninth task on the work plan was to make amendments to update the aggregate and historic inventories in the Comprehensive Plan; also

WHEREAS, the eleventh task on the work plan was to make amendments to Goal 12 (Transportation) to make the language consistent with current Wasco County Planning Department practice and state law and reformat the language into to the new Wasco County 2040 format; and

WHEREAS, the eleventh task on the work plan was to update transportation policies to be consistent with current practice; and

WHEREAS, each Periodic Review task is approved and submitted to DLCD after completion for acknowledgment; and

WHEREAS, the Wasco County Planning Department sent notification to DLCD pursuant to ORS 197.610 on 28 September 2018; and

WHEREAS, all property owners were sent notice of proposed Periodic Review update to the Comprehensive Plan in March 2017; and

WHEREAS, that on 7 May 2019, at the hour of 3:00 PM in the lower level classroom at The Discovery Center the Wasco County Planning Commission held the first legally notified public hearing to review recommendations by staff and the advisory group, background information, and receive public testimony on work tasks 9, and 11. The Planning Commission then closed the public hearing and with a vote of 4 to 0, with three members absent, recommended approval to the Wasco County Board of Commissioners; and

WHEREAS, that on 5 June 2019 at the hour of 9:30 AM at the Wasco County Courtroom #302, located at 511 Washington St, The Dalles, Oregon, the Wasco County Board of Commissioners met to conduct the first of two legally notified public hearings on the above matter. The Board of County Commissioners reviewed recommendations by the Wasco County Planning Commission, staff's presentation, and received testimony from the public. The Board of County Commissioners tentatively approved the amendments; and

WHEREAS, that on 19 June 2019 at the hour of 9:30 AM at the Wasco County Courtroom #302, located at 511 Washington St, The Dalles, Oregon, the Wasco County Board of Commissioners met to conduct the second of two legally notified public hearings on the above matter. The Board of County Commissioners reviewed recommendations by the Wasco County Planning Commission, staff's presentation, and received testimony from the public. The Board of County Commissioners, by a vote of \_\_ to \_\_, approved the amendments and conducted the second reading, recommending submittal to DLCD; and

NOW, THEREFORE, IT IS HEREBY ORDERED: That the request by the Wasco County Planning Department for a legislative amendment to the Wasco County Comprehensive Plan, to be renamed Wasco County 2040, in conjunction with Periodic Review work plan tasks 9 and 11 is hereby approved; and

WHEREAS, Pursuant to Oregon Administrative Rules 660-025-0130, submission of a completed work task is required to DLCD for acknowledgment as part of Periodic Review, and once the work tasks are acknowledged they will be effective.

DATED this 3<sup>rd</sup> day of July, 2019.

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Brad Timmons, County Counsel

**WASCO COUNTY BOARD OF COMMISSIONERS:**

\_\_\_\_\_  
Steve D. Kramer, Commission Chair

**ATTEST:**

\_\_\_\_\_  
Scott Hege, Vice-Chair

\_\_\_\_\_  
Kathy White, Executive Assistant

\_\_\_\_\_  
Kathy Schwartz, County Commissioner



## AGENDA ITEM

### Road Vacation Hearing

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[STAFF MEMO](#)

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[ROAD MASTER'S REPORT](#)

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[VACATION PETITION](#)

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[ORDER 19-078 VACATING ROADS AND SECTIONS OF ROADS IN TYGH VALLEY](#)

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[MOTION LANGUAGE](#)

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## MEMORANDUM

**SUBJECT: IGA for the Provision of Criminal Prosecution Services**

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**TO: BOARD OF COUNTY COMMISSIONERS**

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**FROM: KATHY WHITE**

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**DATE: 5/28/2019**

### **BACKGROUND INFORMATION:**

At the April 17, 2019 Session of the Board of County Commissioners, Public Works Director Arthur Smith brought forward a petition to vacate certain roads and sections of road in Tygh Valley. During that session, Mr. Smith explained that according to statute, if less than 100% of the adjacent landowners sign the petition, there must be a hearing to complete the process. The Board directed staff to set a hearing for May 15, 2019; however, noticing could not be completed in time for that date and a hearing was set for the June 5, 2019 session.

IN THE BOARD OF COMMISSIONERS

OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF THE PROPOSED )  
VACATION OF CERTAIN ROADS AND )  
SECTIONS OF ROADS IN TYGH )  
VALLEY, OREGON )

REPORT OF PUBLIC WORKS  
DIRECTOR

TO THE HONORABLE BOARD OF COMMISSIONERS OF WASCO COUNTY,  
OREGON:

In compliance with the Order of the Board of Commissioners dated February 7, 2019  
I have investigated the Public Roads as follows:

#### LEGAL DESCRIPTION

A portion of Lawrence Avenue (60 feet in width) from the North line of Lot 8 - Block 24,  
(Third Street) to Fourth Street;

Leonard Avenue (60 feet in width) between Block 23 and 22, from (Third Street) to  
Fourth Street and Leonard Avenue (60 feet in width) West of Block 27, from Fourth  
Street to Fifth Street;

A portion of Church Avenue (60 feet in width) from between the South line of Lot 1 –  
Block 27 and the South line of Lot 8 – Block 28, to Fifth Street;

A portion of Fourth Street (50 feet in width) between Church Avenue and Leonard  
Avenue and Fourth Street (50 feet in width) from Leonard Avenue to Lawrence Avenue,  
excepting that road section between Lot 5 - Block 23 and Lot 4 - Block 24, along the  
South line of St Charles Avenue;

Fifth Street (50 feet in width), between the South line of Lot 4 – Block 28 (French  
Avenue) and Leonard Avenue;

All lying within the Plat of Tygh Valley, located in Section 10 BB, Township 4 South,  
Range 13 East, Willamette Meridian.

Attached hereto, and by this reference made a part hereof, is a map with photos marked as Exhibit "A" showing the location of the above described roads and sections of road.

## **Background**

The petitioner owns all the land within the sections of the right-of-way, but not all of the adjoining property. The petitioner wishes to vacate because these road rights-of-way have never been developed to date, the roads as laid out in the original 1892 plat are not all necessary and the petitioner wishes to develop and re-configure the lot sizes.

If the roads and road sections within Tygh Valley were vacated, each landowner is still guaranteed access.

Note: The adjoining property south of this land is owned by Hal Lindell. The petitioner modified their original request to ensure that Mr. Lindell would have legal access if he were to ever develop or divide his property. It is my understanding that Mr. Lindell is not totally in favor of this request, although the petitioner spent a great deal of time and effort to work with him.

## **Facts and Findings**

The right-of-way proposed for vacation is not developed and all current landowners would still have good and clear access without them. The proposed vacation and associated development still guarantees access to all adjoining property. The County has no current or future road needs for this right-of-way. To my knowledge, there are no public utilities located in the right-of-way proposed for vacation.

## **Fiscal Impact**

The right-of-way would revert to private ownership and onto the tax rolls. The County does not maintain this right-of-way now, so vacation would have no fiscal impact to the Public Works Department.

## **Recommendation**

Per ORS 368.346, because less than 100% of the adjacent landowners have petitioned, notice must be given to owners of abutting land and a hearing must be held to consider the proposed vacation.

Dated this 17<sup>th</sup> day of April, 2019

Arthur Smith  
Director, Wasco County Public Works





WASCO COUNTY  
OREGON  
established 1854

# Wasco County Base Map

Exhibit A

/// = Roads to Be Valuated





## PETITION

TO THE WASCO COUNTY BOARD OF COMMISSIONERS  
511 WASHINGTON STREET  
THE DALLES, OR 97058

LADIES/GENTLEMEN:

We, the following undersigned property owners of Wasco County, hereby petition you to vacate the following described portion of:

DESCRIPTION ALL OF 4TH & 5TH STREETS & LEONARD AS WELL AS  
PORTIONS OF LAWRENCE, ST. CHARLES & CHURCH AVE (SEE MAP)

Attached hereto and by this reference made a part hereof is a map marked Exhibit "A", which shows in detail the above described road or street.

REASON TO Roads are not necessary & land would be better used  
as larger parcels.

LIST OF ALL ABUTTING LANDOWNERS

ADDRESS

HAROLD LINDELL

80661 Friend Rd, Dufur, 97021

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_


\_\_\_\_\_

All petitioners must be owners of property abutting the road sought to be vacated. Each petitioner must attaché a signature page signed before a Notary. If 100% of the abutting landowners sign the petition, the road may be vacated without Public Hearing.

PETITIONED ROAD: 4TH, 5TH, Lawrence, St. Charles, Leonard, Church

NAME OF PETITIONER/ADDRESS

Coyote Ridge Properties, LLC  
57589 Church Ave  
Tygh Valley OR 97063

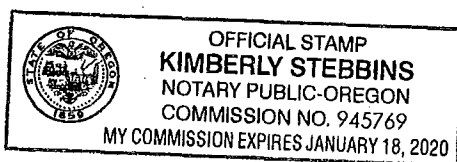
  
Signature Howard McClung  
X

STATE OF Oregon

COUNTY OF Wasco

DATE October 07<sup>th</sup> 2018

Personally appeared the above named Howard McClung, Melissa McClung & David Colburn  
and acknowledged the foregoing instrument to be a voluntary act and deed. Before me:

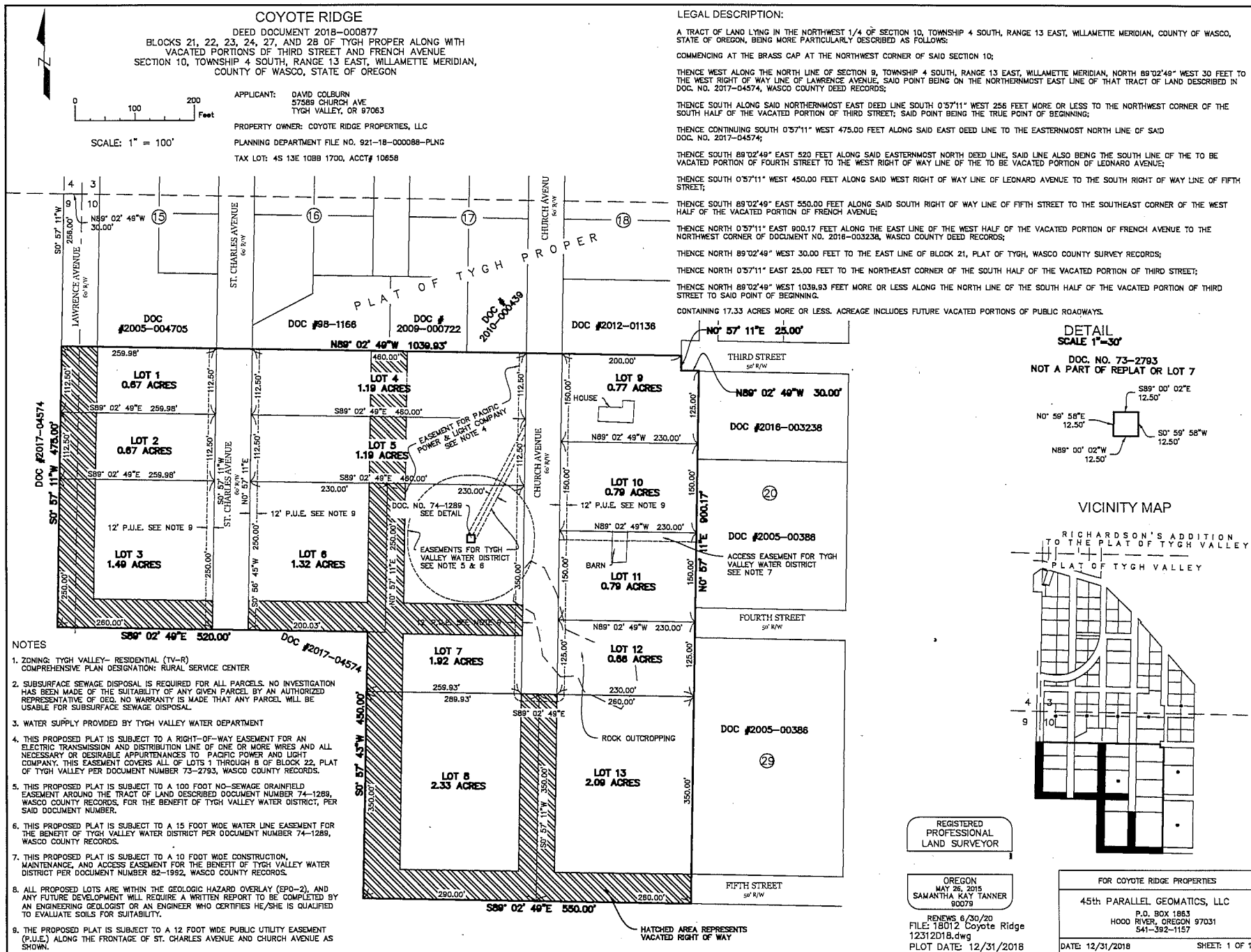


Kimberly Stebbins

Notary Public for Oregon (State)

My Commission Expires: January 18, 2020

Note: If ownership is jointly held, simply add another signature line.





IN THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF THE VACATION OF CERTAIN ROADS AND SECTIONS OF ROADS IN TYGH VALLEY, OREGON

**ORDER #19-078**

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Commissioners being present; and

IT APPEARING TO THE BOARD: That a petition, attached and by this reference incorporated herein, has been duly filed with this Board seeking the vacation of the below described Road; That upon initiation of these proceedings by said petition the County Road Official was directed by this Board to prepare and file with this Board a written report describing the ownership and uses of the Road and a determination of whether the vacation would be in the public interest; That said report, attached and by this reference incorporated herein, has been received by this Board; and

IT FURTHER APPEARING TO THE BOARD: That as provided in ORS 368.351 because the report indicates that the County Road Official assessment is that the vacation is in the public interest and these proceedings were initiated by a petition under ORS 368.341 that contained the acknowledged signatures of owners of 100% of any private property proposed to be vacated and acknowledged signatures of owners of 100% of property abutting any public property proposed to be vacated approving the proposed vacation a hearing in this matter may be dispensed with and vacation of the subject road ordered.

NOW, THEREFORE, IT IS HEREBY ORDERED: That the following described Road located in Wasco County, Oregon, be and is hereby declared vacated:

CERTAIN ROADS AND SECTIONS OF ROADS IN TYGH VALLEY, OREGON

LEGAL DESCRIPTION

A portion of Lawrence Avenue (60 feet in width) from the North line of Lot 8 - Block 24, (Third Street) to Fourth Street;

Leonard Avenue (60 feet in width) between Block 23 and 22, from (Third Street) to Fourth Street and Leonard Avenue (60 feet in width) West of Block 27, from Fourth Street to Fifth Street;

A portion of Church Avenue (60 feet in width) from between the South line of Lot 1 – Block 27 and the South line of Lot 8 – Block 28, to Fifth Street;



A portion of Fourth Street (50 feet in width) between Church Avenue and Leonard Avenue and Fourth Street (50 feet in width) from Leonard Avenue to Lawrence Avenue, excepting that road section between Lot 5 - Block 23 and Lot 4 - Block 24, along the South line of St Charles Avenue;

Fifth Street (50 feet in width), between the South line of Lot 4 – Block 28 (French Avenue) and Leonard Avenue;

All lying within the Plat of Tygh Valley, located in Section 10 BB, Township 4 South, Range 13 East, Willamette Meridian.

Attached hereto, and by this reference made a part hereof, is a map with photos marked as Exhibit “A” showing the location of the above described roads and sections of road.

DATED this 5<sup>th</sup> Day of June, 2019.

**WASCO COUNTY BOARD OF COMMISSIONERS:**

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Steven D. Kramer, Commission Chair

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Scott C. Hege, Vice-Chair

APPROVED AS TO FORM:

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Brad Timmons, County Counsel

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Kathleen B. Schwartz, County Commissioner



## MOTION

**SUBJECT: Road Vacation Hearing**

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APPROVAL: I move to approve Order 19-078 in the matter of the vacation of certain roads and sections of roads in Tygh Valley, Oregon.

DENIAL: I move to deny the request to vacate certain roads and sections of roads in Tygh Valley.



## AGENDA ITEM

### Planning Commission Appeal Hearing

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#### STAFF PRESENTATION

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#### STAFF SUMMARY

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- [ATTACHMENT A RECOMMENDATIONS AND OPTIONS](#)
  - [ATTACHMENT B MAPS](#)
  - [ATTACHMENT C STAFF REPORT](#)
- 

#### EXHIBITS

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- [EXHIBIT 1 TRANSITION LANDS STUDY](#)
  - [EXHIBIT 2 TRANSITION LANDS STUDY AREA](#)
  - [EXHIBIT 3 2000 SETTLEMENT AGREEMENT](#)
  - [EXHIBIT 4 TRANSITION LANDS STUDY AREA – GROUNDWATER STUDY](#)
  - [EXHIBIT 5 SOIL INFORMATION](#)
  - [EXHIBIT 6 GUIDE FOR USING SOIL SURVEYS](#)
  - [EXHIBIT 7 SOIL MAP](#)
  - [EXHIBIT 8 SUBMITTED MAPS](#)
- 

#### APPLICATION

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#### PLANNING COMMISSION MINUTES

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#### PLANNING COMMISSION MEETING AUDIO

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#### PUBLIC COMMENT – SHEILA DOOLEY

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PLANNING DEPARTMENT



Board of Commissioners  
Public Hearing  
June 5, 2019

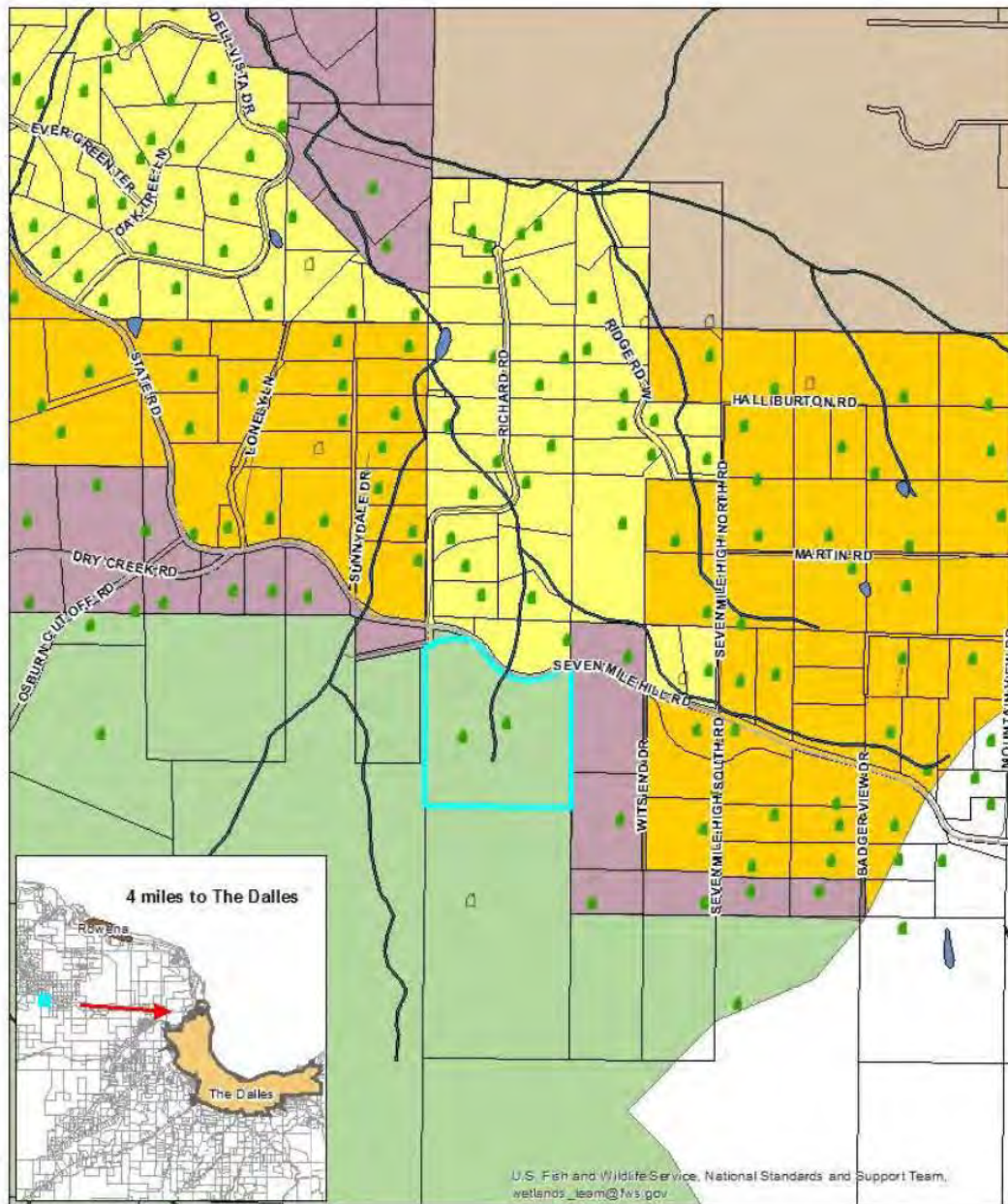
Applicant/Owner: David Wilson  
(921-18-000086-PLNG)



# Request

- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm
  - Applicant/Owner: David Wilson
  - Location: 7100 Seven Mile Hill Road
  - Size: ~40 acres

# Vicinity Map



- A-1(160)
  R-R(10)
  F-2(80)
  R-R(5)
  F-F(10)
- Riverine
  Freshwater Pond
  Wilson Property
  Taxlots
- Addresses

Board of County Commissioners Agenda Packet  
March 16, 2022

U.S. Fish and Wildlife Service, National Standards and Support Team,  
wetlands\_team@fws.gov

0 240 480 960 1,440 1,920 Feet

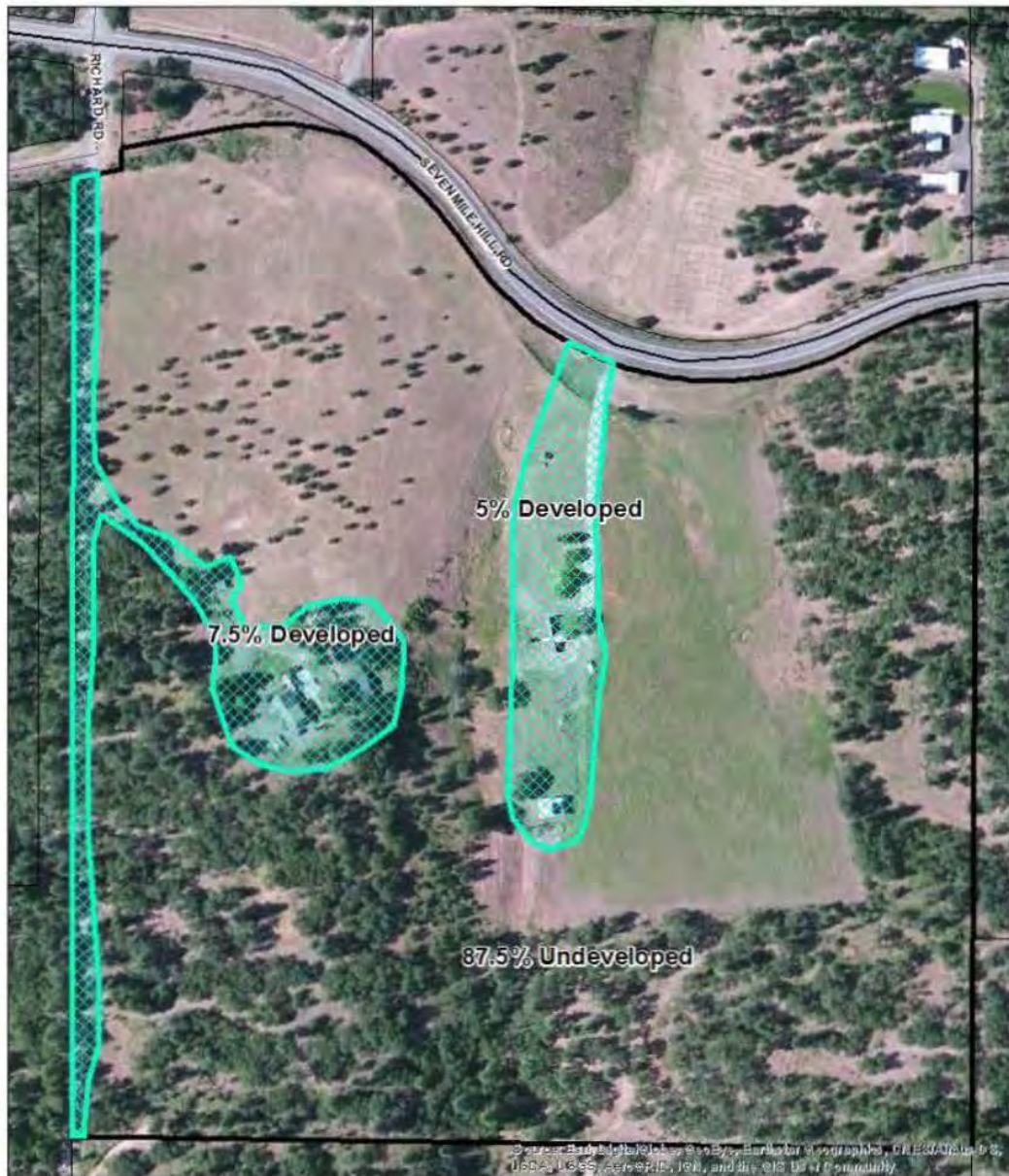
This product is for informational purposes only. It is not intended to be used as a legal document. The user assumes all liability for any use of this product. The primary data and information sources to ascertain the quality of the information.

# Planning Commission Recommendation

- On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend APPROVAL of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.



# Site Visit Photos



Wilson Property

Total Acreage = 40 Acres  
Undeveloped Property = 35 Acres  
Developed property = 5 Acres

Total percentage undeveloped = 87.5%  
Total developed = 12.5%

Board of County Commissioners Agenda Packet  
March 16, 2022

- Developed Property
- Wilson Property
- Taxlots





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21

# State Standards Addressed

## Oregon Administrative Rules (OAR)

- OAR 660
  - Division 4 – Interpretation of Goal 2 Exception Process
  - Division 6 – Goal 4 Forest Lands

## Oregon Revised Statute (ORS)

- 197.732 – Goal Exceptions

# County Standards Addressed

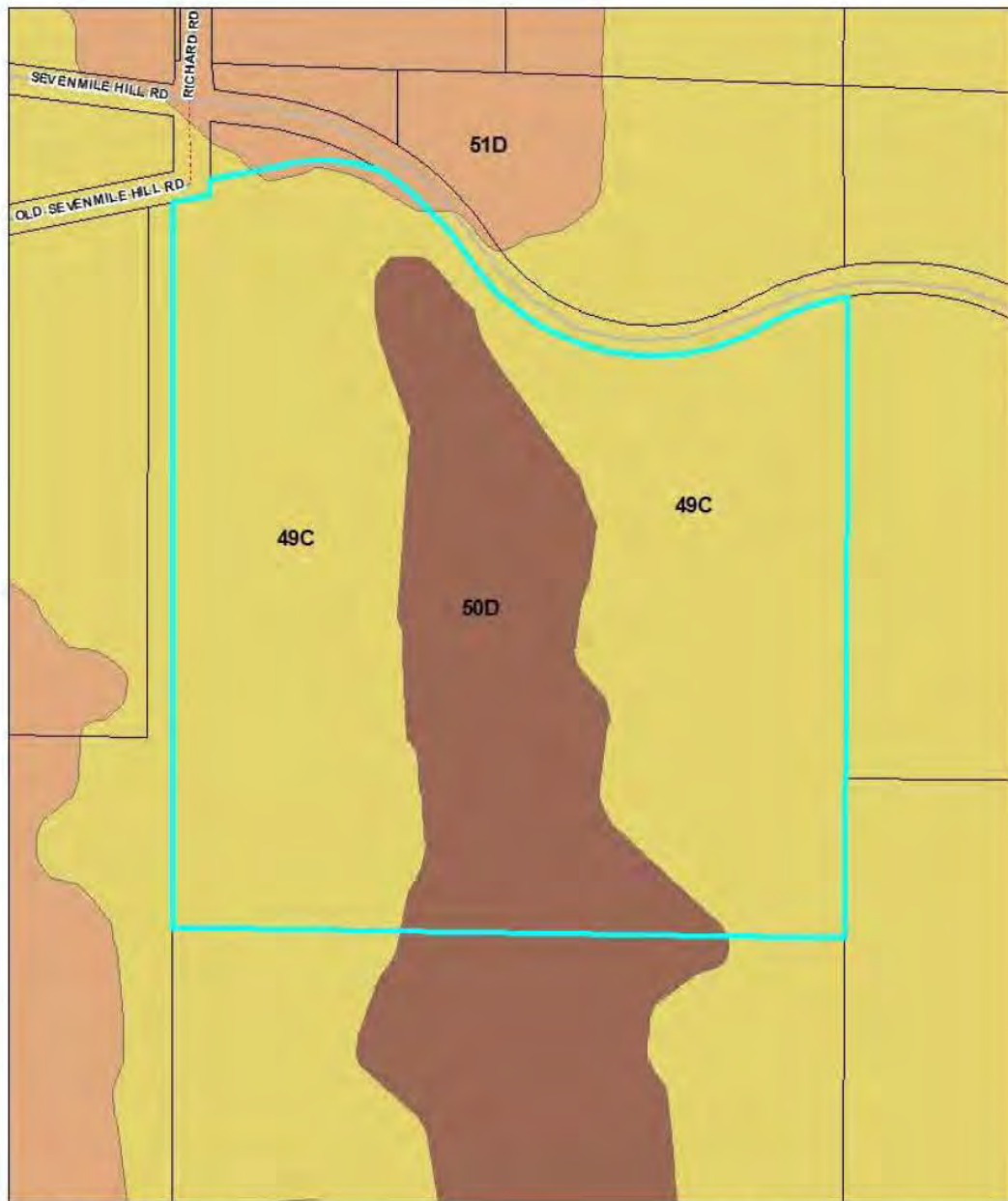
- Comprehensive Plan
  - Chapter 11 - Revisions Process
    - Section A. Intent and Purpose
    - Section B. Form of Comp Plan Amendment
    - Section C. Who May Apply for a Plan Revision
    - Section E. Quasi-Judicial Revisions
    - Section H. General Criteria
    - Section I. Transportation Planning Rule Compliance
    - Section J. Procedure for the Amendment process



# County Standards Addressed (cont.)

- Wasco County Land Use & Development Ordinance
  - Chapter 9 – Ordinance Amendments
    - Section 9.010 - Application for Zone Change
    - Section 9.020 - Criteria for Decision
    - Section 9.030 - Transportation Planning Rule Compliance
    - Section 9.040 - Conditions Relative to the Approval of a Zone Change
    - Section 9.050 - Amendments to the Zoning Ordinance
    - Section 9.070 - Notice of Planning Commission Recommendation
    - Section 9.080 - Action by County Governing Body

# Soil Map



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property**
- Taxlots**

Soil Map

Board of County Commissioners Agenda Packet  
March 16, 2022

This product is for informational purposes only and does not constitute an offer of insurance or any other financial product. Please consult your agent for more information. The primary data and information sources to ascertain the reliability of the information.

# Staff Comments

- Apprehensions
  - Conducting forestry operations are not currently impracticable (Goal 4).
  - More residences would result in the loss of more wildlife habitat (Goal 5).
  - The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
  - The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).
- Advantages
  - Three new dwellings will increase rural residential housing supply (Goal 10).
  - On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

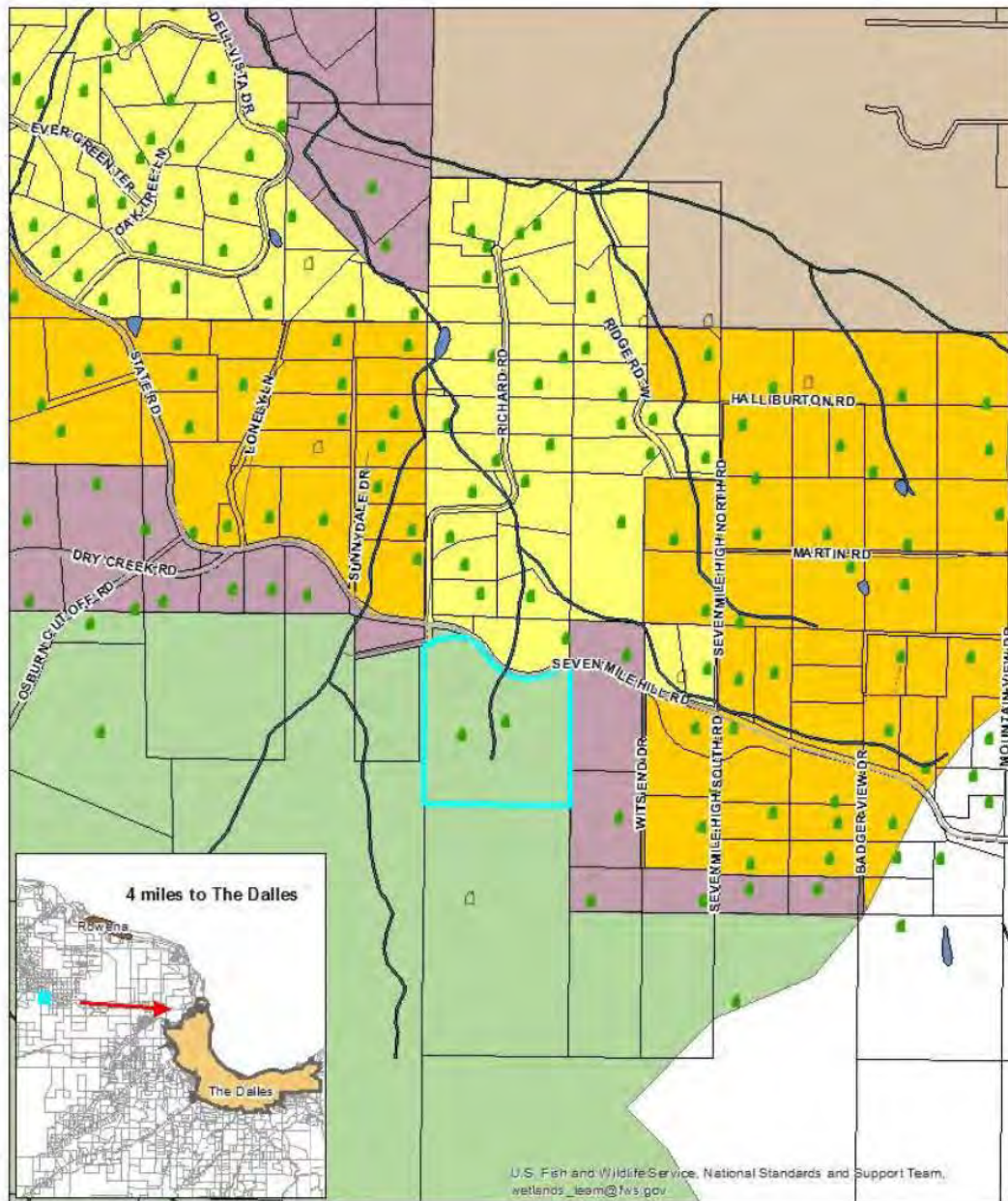
# Questions?



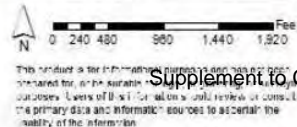
# Next Steps

- Applicant presentation
- Presentations from those already on the record, if they wish
- Applicant rebuttal
- Questions of staff, applicant, or those on the record
- Commissioner deliberation/decision
- Decision mail out (no earlier than 6/6)
- 21 day appeal period to LUBA

# Vicinity Map



- A-1(160) R-R(10) Riverine Wilson Property
- F-2(80) R-R(5) Freshwater Pond Taxlots
- F-F(10) Addresses





**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

**PLANNING COMMISSION RECOMMENDATION  
to The Wasco County Board of Commissioners**

FILE # 921-18-000086-PLNG

**BOARD OF COMMISSIONERS HEARING DATE:** June 5, 2019

**NEWSPAPER PUBLISH DATE:** May 15, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**PLANNING COMMISSION  
RECOMMENDATION:**

Approval, with conditions

**APPLICANT/OWNER:**

David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY  
LOCATION:**

The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:**

F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:**

EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Planning Commission Recommendation and Board of Commissioners Options
- B. Maps
- C. Staff Report
- D. Exhibits

## ATTACHMENT A

### PLANNING COMMISSION RECOMMENDATION AND BOARD OF COMMISSIONERS OPTIONS

The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the May 15, 2019, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **PLANNING COMMISSION RECOMMENDATION**

On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend **APPROVAL** of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

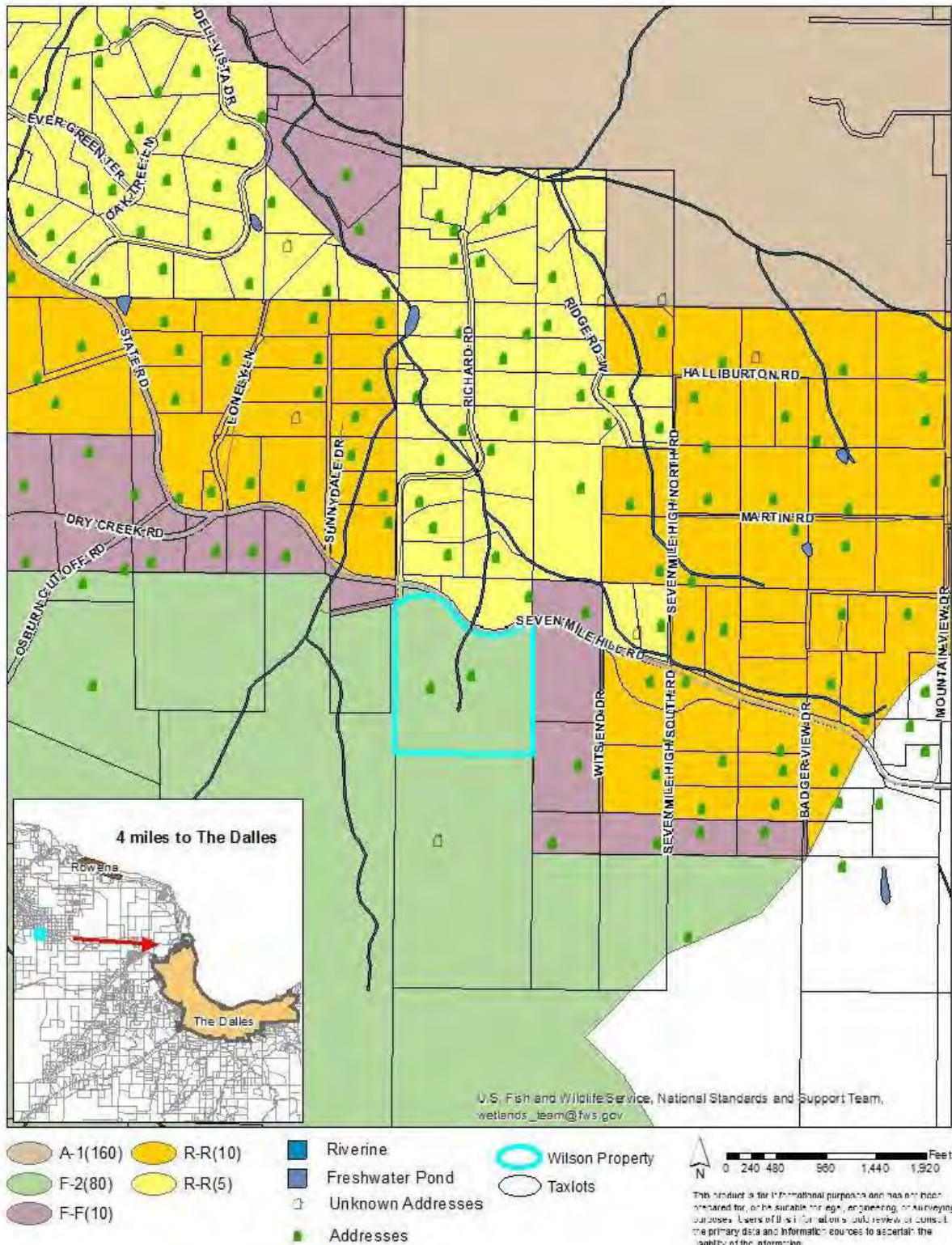
#### **BOARD OF COMMISSIONERS OPTIONS**

- A. Approve, with Recommended Conditions and Findings: Based upon all of the findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- B. Approve, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- C. Deny, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, deny this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- D. Remand, to the Planning Commission: Based on specified insufficient information to make a decision, Remand this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment back to the Planning Commission for further review.
- E. Continuation: Continue the hearing to a date and time certain.



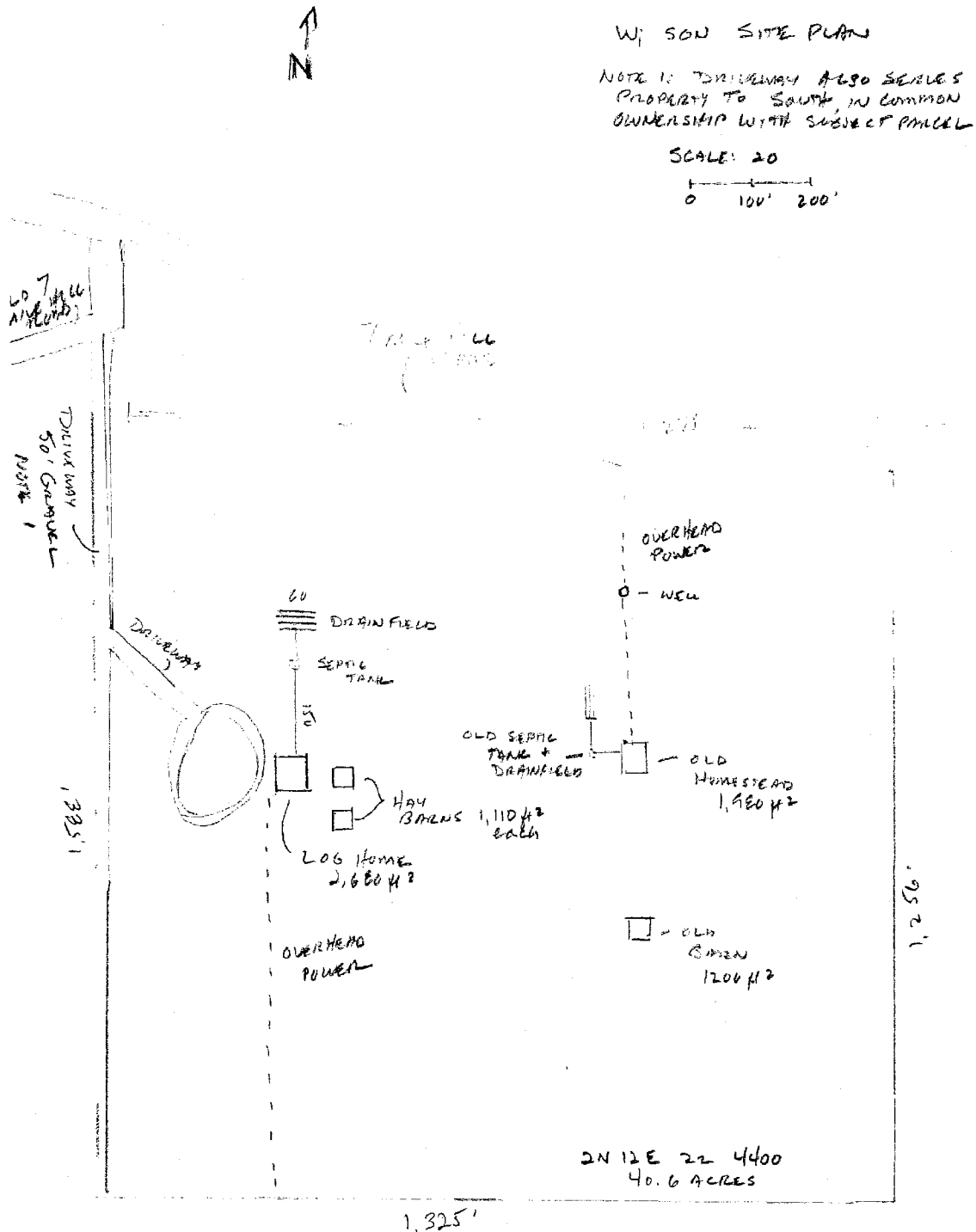
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B – MAPS

## Site Plan



## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Board of Commissioners

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Planning Commission Recommendation:** Approval, with conditions

**Board of Commissioners Hearing Date:** June 5, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

- PLALEG-13-08-0002 (Rezone)
- PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)
- CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)
- PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)
- PLAPAR-17-05-0002 (Partition and Agricultural Structure)
- PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile



Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### **C. Land Use History:**

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to

low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.



### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

\* \* \*

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

\* \* \*

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*

(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The subject parcel has several features that lead it to be “Physically Developed.” A driveway runs along the western property line, accessing the single family dwelling and accessory structure on the western portion of the parcel, as well as providing access to the single family dwelling located on the parcel directly to the south (also owned by the applicant). In the center of a property, an old farm house stands (no longer used as a dwelling), with an additional driveway feature bisecting the property. In this area there are further accessory structures including a pump house and an old barn. The property is served by two wells. Two wells would be capable of serving four dwellings as each well is permitted to serve two dwellings each. The applicant submitted well records for these to demonstrate their capacity. To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability



- This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under “potential for habitat elements”, hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the house at about 1650’ and 210’ below the high point to the southeast at 1760’. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant’s adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a “Dwelling in conjunction with agricultural use.” Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*“According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years...”*

The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000’ driveway, the old farmhouse in the center after a 400’ driveway and the old barn another 240’ further south, within 450’ of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. The property is also

served by two wells, and a pump house located in the north central portion of the parcel, approximately 190 feet south of the road. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**b. OAR 660-004-0028(2):** *“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

The immediately adjacent lands on both sides of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Seven Mile Hill Road are already F-F (10), or are Rural Residential zoning, with 5 or 10 acre minimum parcel sizes. This demonstrates how irrevocably committed the area is to residential use.

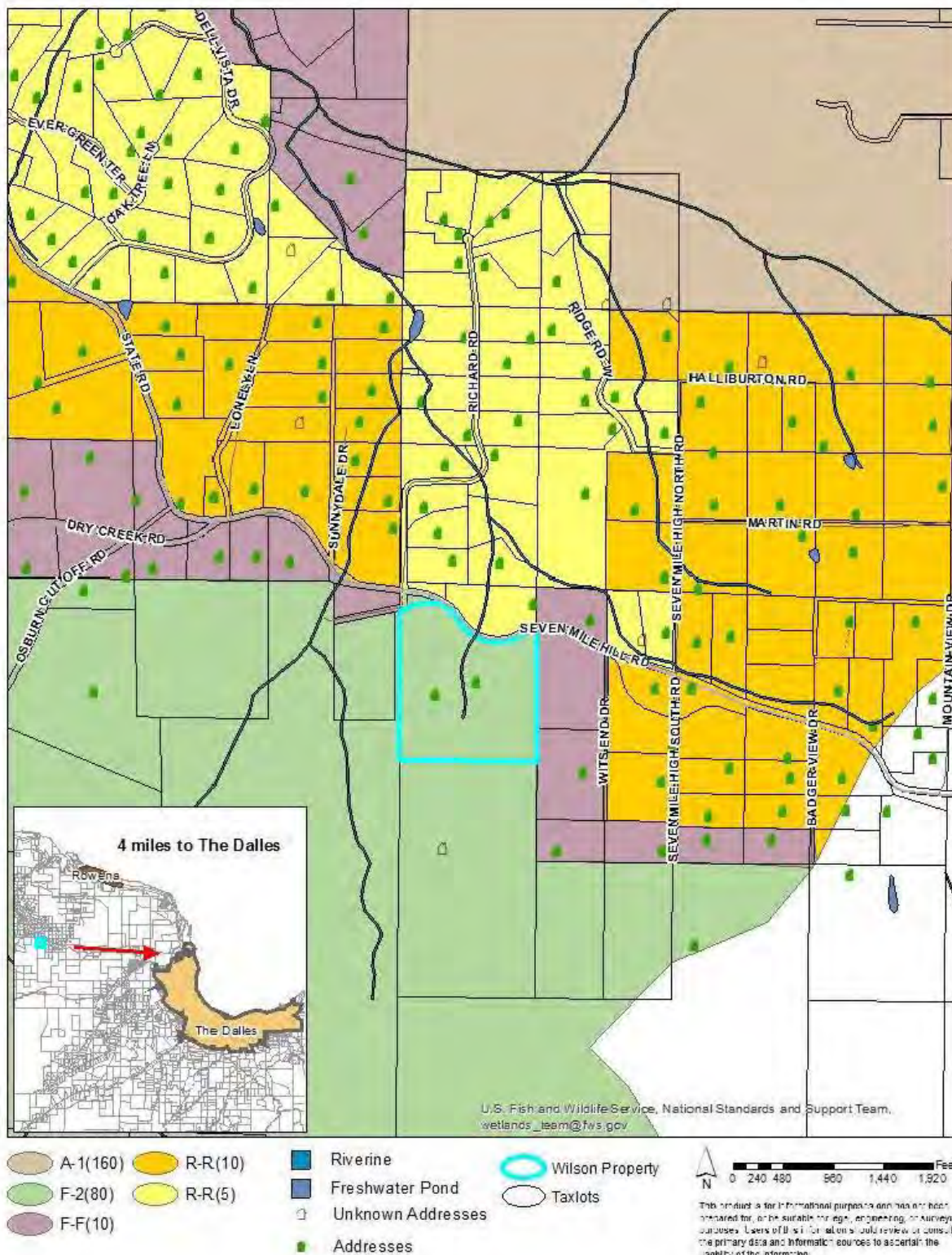


Figure 2: Wilson Vicinity Map



**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and south west are resource zones while those to the north, north west, and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it, however, it is unique in its zoning. It is the only parcel on all of Seven Mile Hill Road that is zoned F-2 (80), Forest. All other parcels are either already the non-resource zone, F-F (10), or else are zoned Rural-Residential with five and 10 acre minimum lot sizes. This creates a unique situation where the subject parcel is enclosed on three of its sides by residentially zoned properties, most of which are used for residential purposes. If the subject parcel was used for a forestry operation it could be potentially disruptive to this residential community. This area is irrevocably committed to a residential use, and changing the zoning of the subject parcel to the same would enable this status quo to continue, limiting potential conflict with any future resource use at this location.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

(b) *Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

(c) *Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine *"the relationship between the exception area and the lands adjacent to it"* when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

"(a) Uses related to and in support of forest operations;



(b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;

(c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about its location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral”

farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below. The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*

*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads*

*and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land’s actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are

residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

*(f) Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”*



**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g.** *OAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h.** *OAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or

water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

OAR 660-004-0040 (5) and (6):

- (5) *The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) *A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) *A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

- (7) *After October 4, 2000, a local government’s requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division.”*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

- (8)(a) *The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule.”*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

- (b) *Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial

forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

- (c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

- (d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

- (e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

- (A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

- (B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

- (C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

- (D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

- (E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco County LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners"



Association formed to maintain common open space and other common improvements.” Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

- (f) *Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) *In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule’s requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) *A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

(A) *The parcel to be divided has two or more permanent habitable dwellings on it;*

(B) *The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*

(C) *Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*

(D) *The partition would not create any vacant parcels on which a new dwelling could be established.*

(E) *For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) *For rural residential areas designated after the effective date of this rule, the affected county shall either:*

(A) *Require that any new lot or parcel have an area of at least ten acres, or*

(B) *Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'*"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

*OAR 660-004-0118 Planning and Zoning for Exception Areas*

(2) *For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

(a) *That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

(b) *That meet the following requirements:*

(A) *The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

(B) *The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in

a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as “to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space.” This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### *A. Intent and Purpose*

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*



**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

*B. A Comprehensive Plan Amendment May Take the Following Forms:*

(\*\*\*)

*5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:*

*Comprehensive Plan Revision may be initiated by:*

(\*\*\*)

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

(\*\*\*)

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

(\*\*\*)

#### *H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance is achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-

forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “*To maintain and improve the quality of the air, water and land resources of the state.*” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “*To protect people and property from natural hazards.*” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “*To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “*To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation. The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “*To provide for the housing needs of citizens of the state.*” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in

existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.



Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also

recognizes that the character of the neighborhood south of Sevenmile Hill Road has changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

*4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

*5. Proof of change in the inventories originally developed.*

The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

*6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**I. Transportation Planning Rule Compliance**

*1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed*

*to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*

- a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. Change standards implementing a functional classification system; or*
  - c. As measured at the end of the planning period identified in the adopted transportation system plan:*
    - (1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
    - (2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
    - (3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
- 2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
- a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
- 3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips

(ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a “significant impact” under OAR 660-12-0060, the Transportation Planning Rule (TPR).

**J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

*(\*\*\*)*

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission’s recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.”*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with the requirements in (1). This was submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing, meeting the requirements of (2). At that hearing, five Planning Commissioners were present for the vote, greater than the four needed to form a quorum, which meets the requirements of (3). They voted 4-1 to recommend approval of the proposal, meeting the requirements of (4). Notice of this recommendation was mailed out on May 9, and scheduled to be posted in The Dalles Chronicle on May 15. The Board of Commissioners hearing is scheduled for June 5, which is 21 days after May 15, within the 20-40 day requirement of newspaper notification noted in (2). It is also at least twenty (20) days after notice was mailed, as required in (5). Staff finds that Criteria (1)-



(5) were met and are being met for both the Planning Commission hearing and the Board of Commissioners hearing.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

***Section 9.010 – Application for Zone Change***

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

***Section 9.020 – Criteria for Decision***

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. *The original zoning was the product of a mistake; or*

**FINDING:** As discussed above in the Comprehensive Plan Chapter 11 Section H.3., the application materials assert that it was a mistake, stating that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads, leaving the subject property as the sole F-2 zoned property along the length of Seven Mile Hill Road, with the rest being Forest-Farm or Rural-Residential. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change. This land was zoned for Forestry initially, but has not been used for that purpose. Staff finds that the subject parcel is physically developed with residential uses, and irrevocably committed to that use, indicating that the zoning of this land to be used for Forestry, as determined by the Comprehensive Plan, was a mistake.

- B. *It is established that*

1. *The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards

that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found to be in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote

clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including “the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area,” all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The “specific zoning” includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”).  
“Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

Capacity for State Rd/7-Mile Hill Rd      1,500/day

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

*A. Special yards and spaces;*



*B. Fences and walls;*

*C. Special parking and/or loading provisions;*

*D. Street dedication and improvements or bonds in lieu of improvements;*

*E. Control of points of vehicular ingress and egress;*

*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**Section 9.080 - Action by County Governing Body**

*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

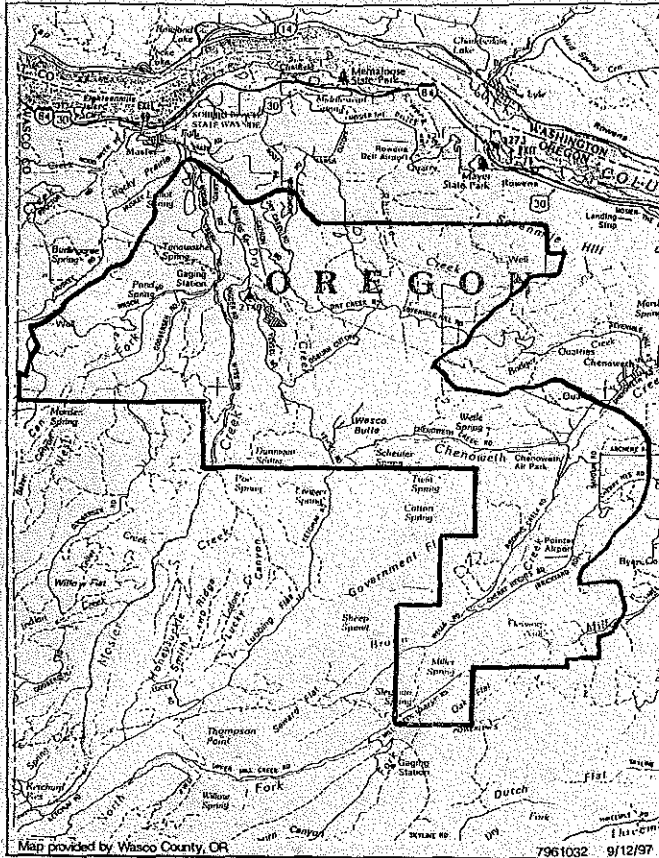
**FINDING:** The Planning Commission met on April 2, 2019 and recommended Approval. Due to a procedural oversight by staff, notification was not distributed to interested parties within ten (10) days of the hearing. However, this notification (which included a statement of the facts and reasons upon which it was based) was distributed to all interested parties, agencies, and those that signed in and spoke at the Planning Commission Hearing as required by mailing and/or email on May 9, 2019. A hearing that had been scheduled for May 15 was postponed to June 5 to meet the requirements of Section 9.080 to ensure the County Governing Body would not act for at least twenty (20) days from the date the Notice of Planning Commission Recommendation was mailed. The County Governing Body is the Board of Commissioners, who will meet to take action that they deem appropriate on this request on June 5, 2019, more than twenty (20) days after the Planning Commission Recommendation was mailed. Despite missing the ten day window, all individuals and agencies that needed to be notified were, and action was not taken by the Governing Body until sufficient time had passed. Staff finds that Sections 9.060, 9.070, and 9.080 were met.

**EXHIBIT 1**

**Transition Lands Study Area**

**(Full Report)**

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
**Wasco County**

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**



# **Wasco County Transition Lands Study Area (TLSA)**

## **Prepared for**

**Wasco County**  
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The Dalles, Oregon 97058

## **Prepared by**

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Suzanne Rock  
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**September 12, 1997**

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- Appendix 2. Record of Community Involvement
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- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites



## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

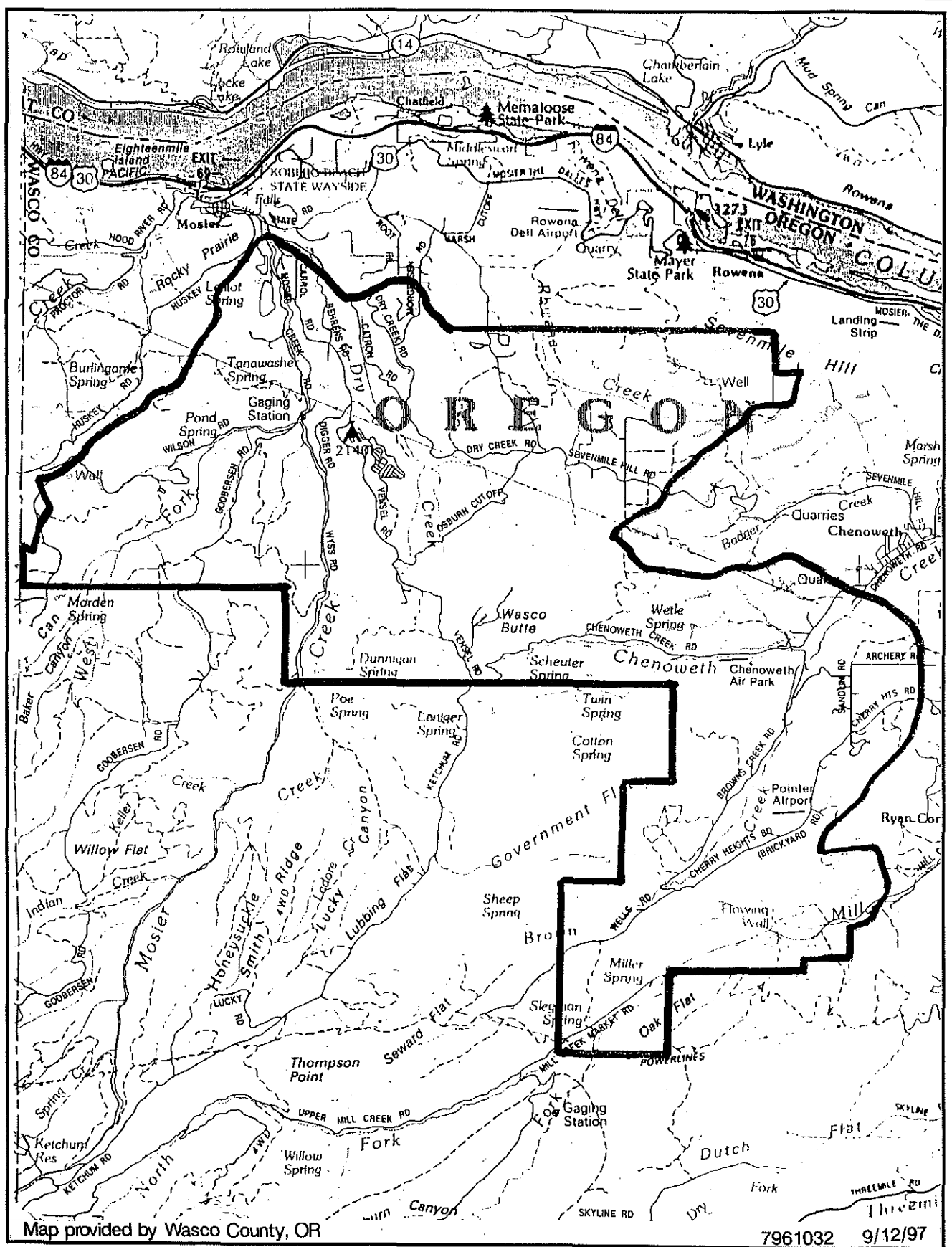
### **1.2 Purpose**

#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



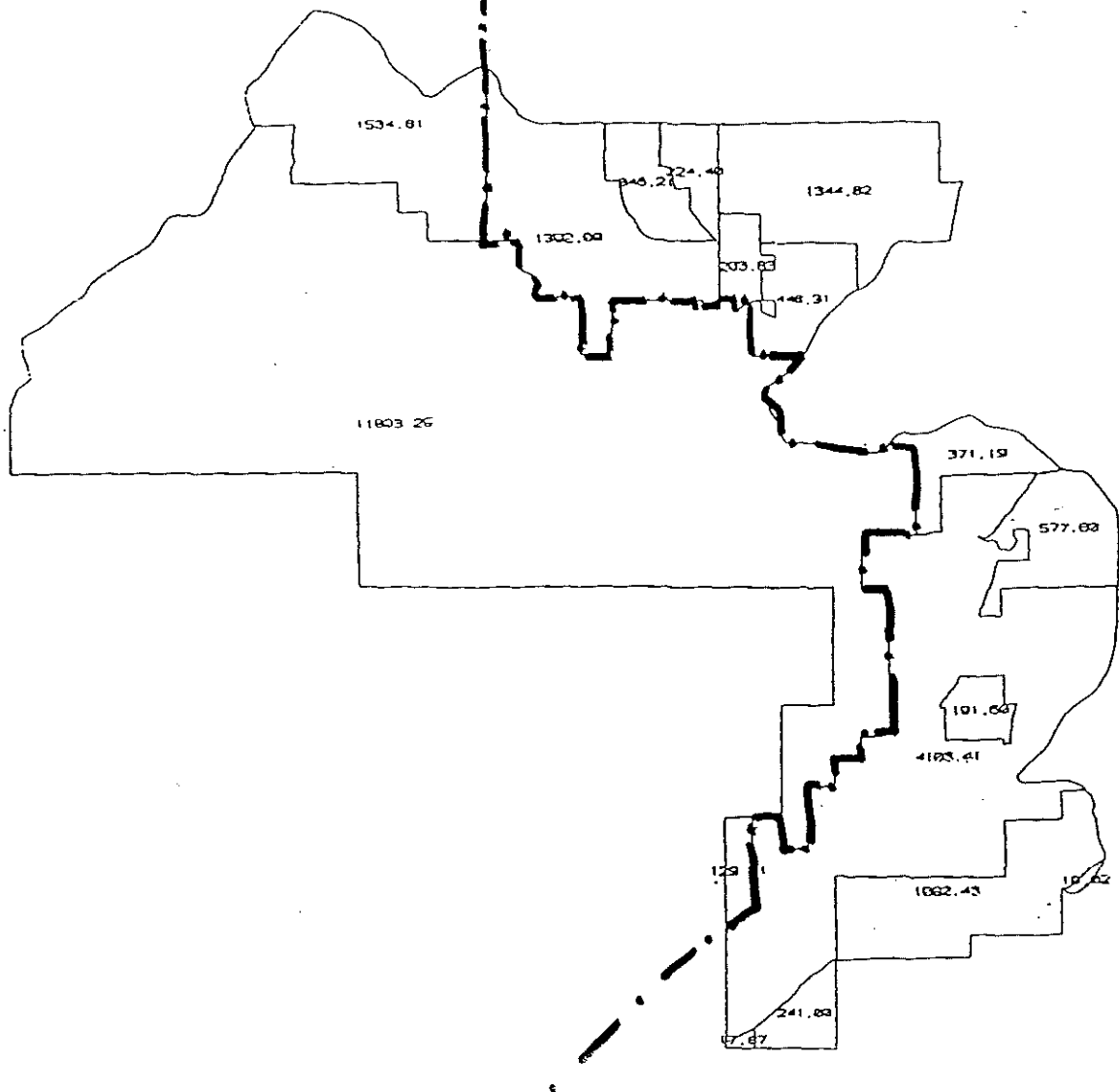
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.2 & ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. & RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## **2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS**

*What plan does the Steering Committee recommend?  
What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,



evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

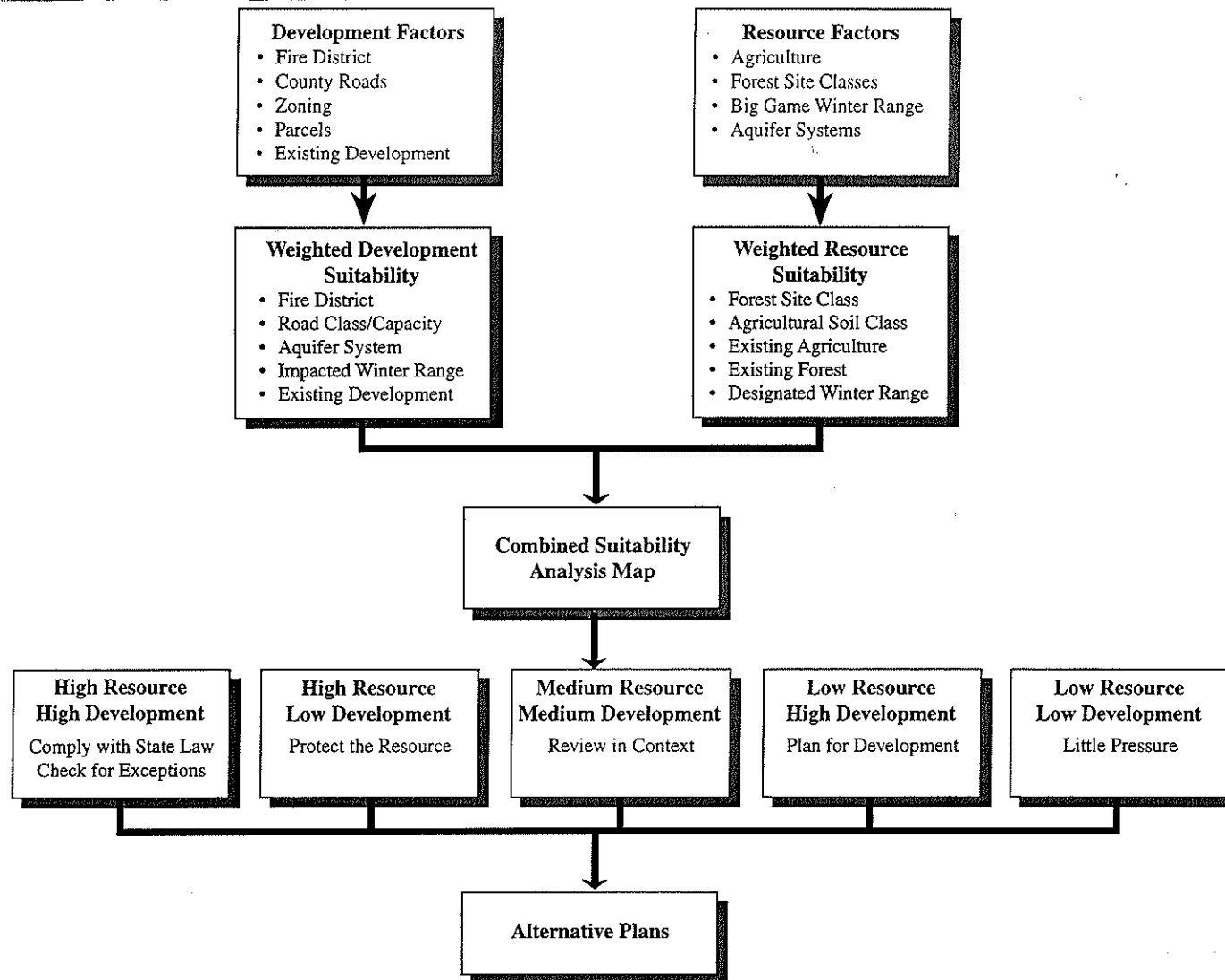
The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems



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Wasco County Transition Lands Study Area  
Simplified Flow Diagram

FIGURE  
4



# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
High Value (Class 1-2) = 2 pt.  
Class 3 - 6 = 2 pt.  
Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
Class 6 = 1 pt.  
Class 5 = 2 pt.  
Class 4 = 3 pt.  
Existing Forest Use  
≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a



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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 3: Big Game Winter Range Availability

## 4: Fire Districts/Response Time

SOURCE MAPS

Big Game Winter Range	Big Game Winter Range boundary from Comprehensive Plan
Impacted Winter Range	Impacted winter range inventory from ODFW
Low Elevation Winter Range	Low elevation winter range inventory from ODFW
Rivers and Streams	Surface water features coverage

Fire Hazard	Extreme and High fire hazard
Fire Districts	Wasco County Rural Fire District (RFD) boundaries Mosier RFD Oregon Department of Forestry
Response Time	Fire response time (in minutes) by section and Wasco Co. RFD

ANALYSIS MAPS

Big Game Winter Range	1 pt.
-----------------------	-------

Fire District Coverage	1 pt.
------------------------	-------

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
--

Development Values Weighted Compositions
--

Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)
--

CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5b

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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads

Roads in TLSA

Road Capacity

Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning

Zoning

Developed  
Parcels

Existing Developed (house)

Aquifer Units

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.

†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

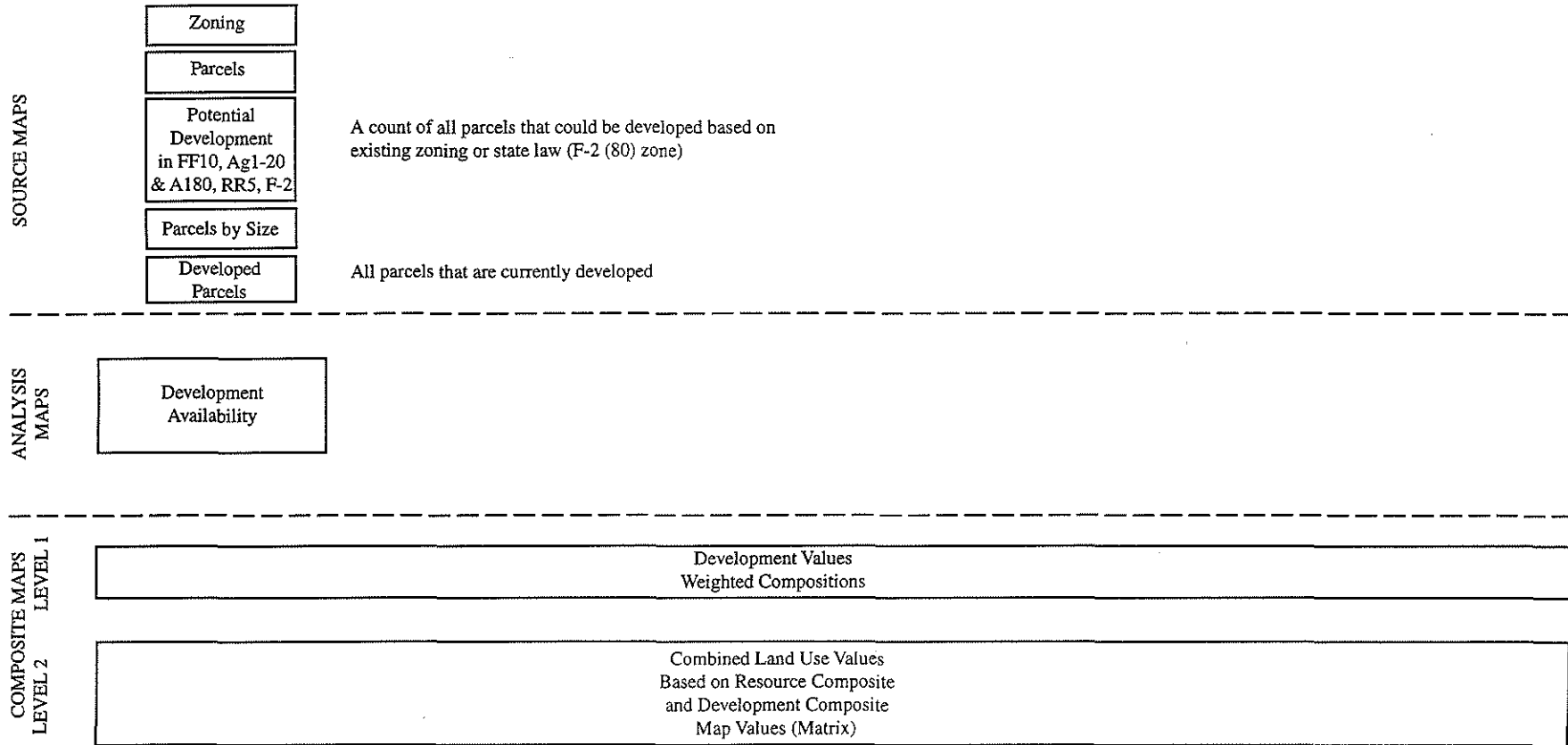
FIGURE  
5C



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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

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### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

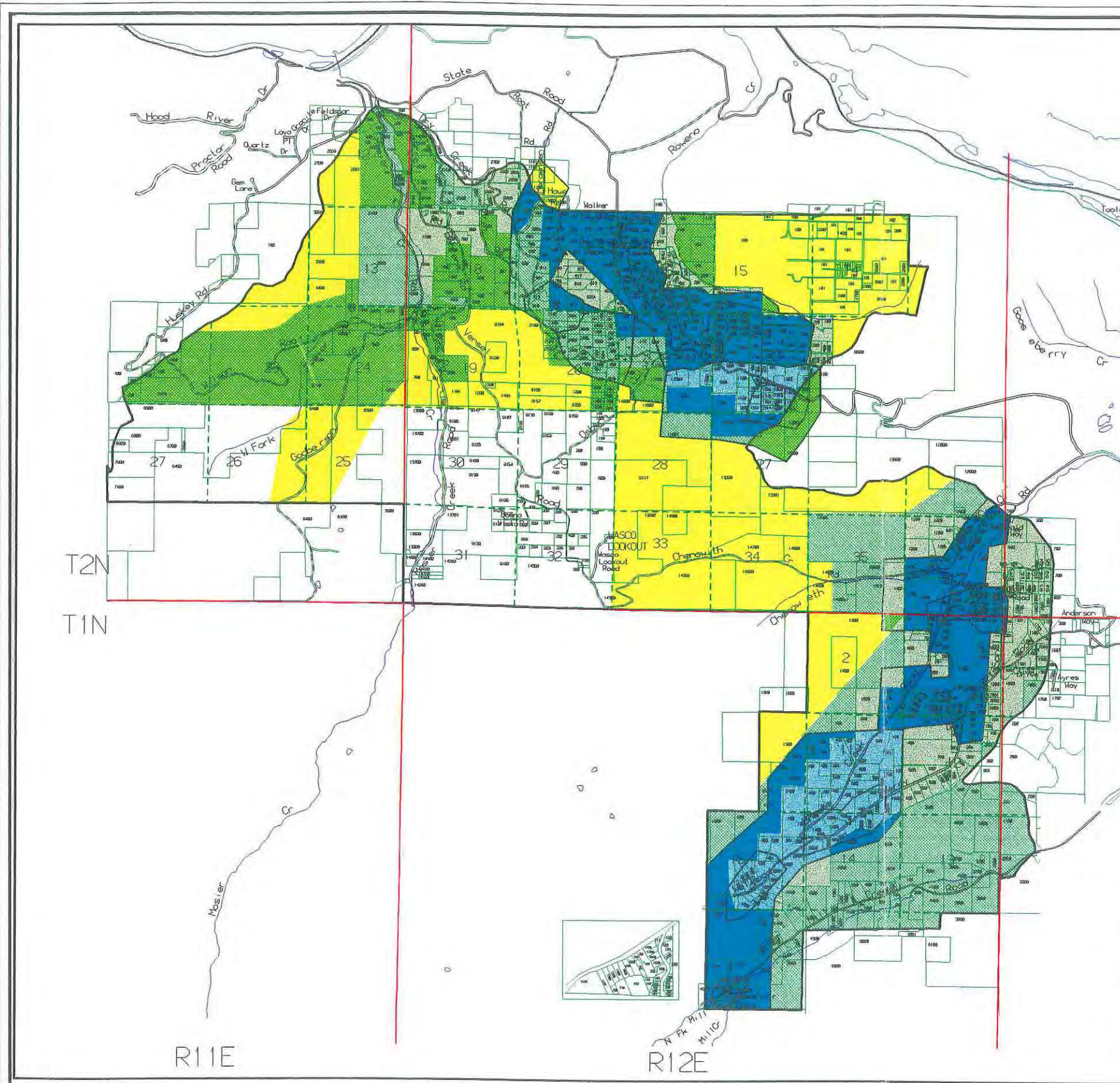
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

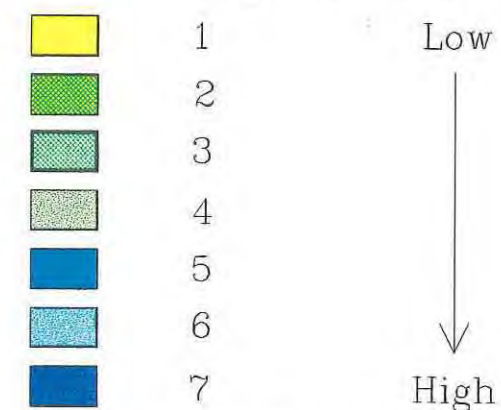




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

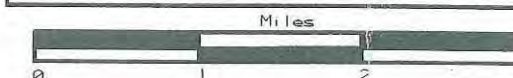
#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



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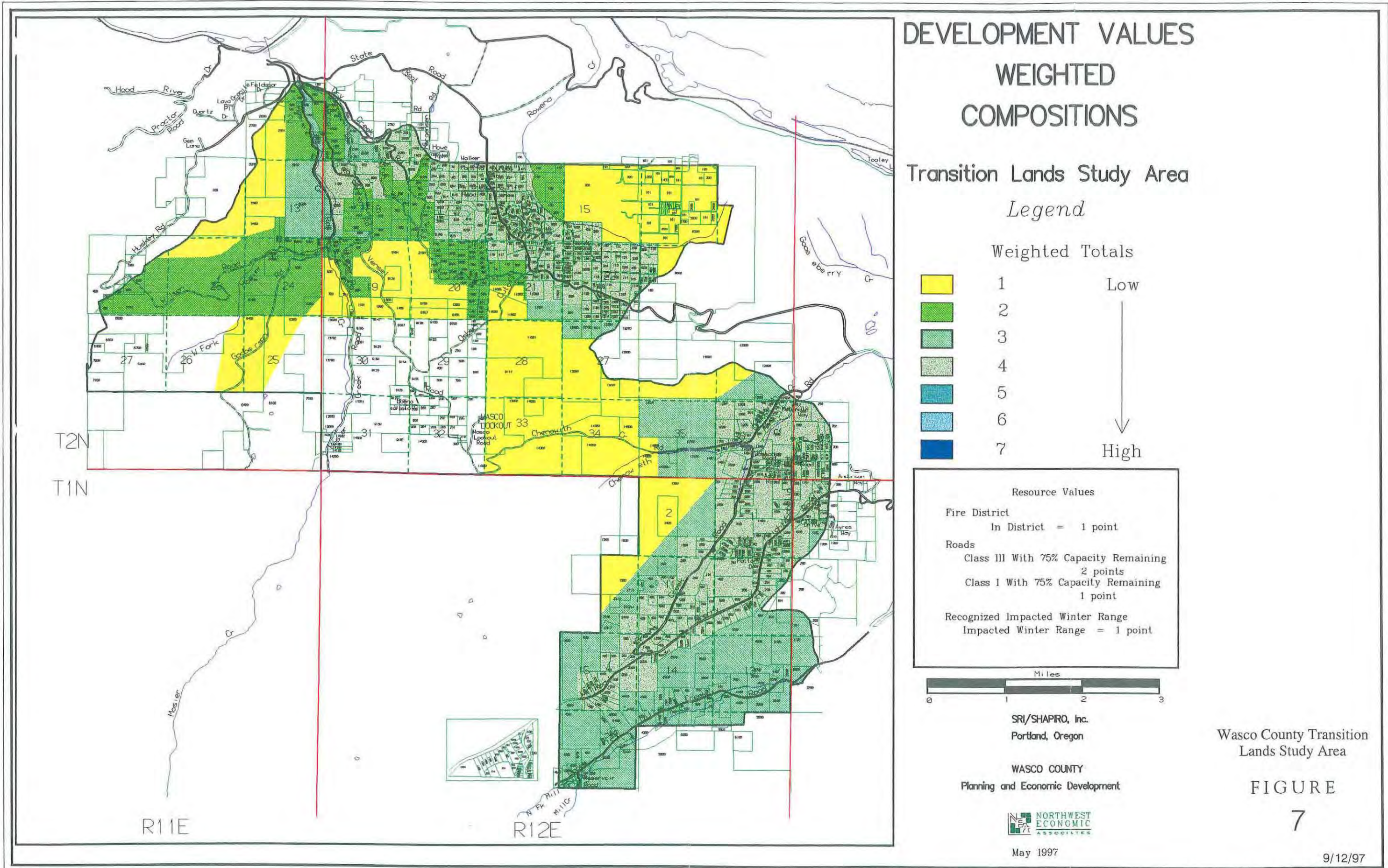
May 1997

Wasco County Transition  
Lands Study Area

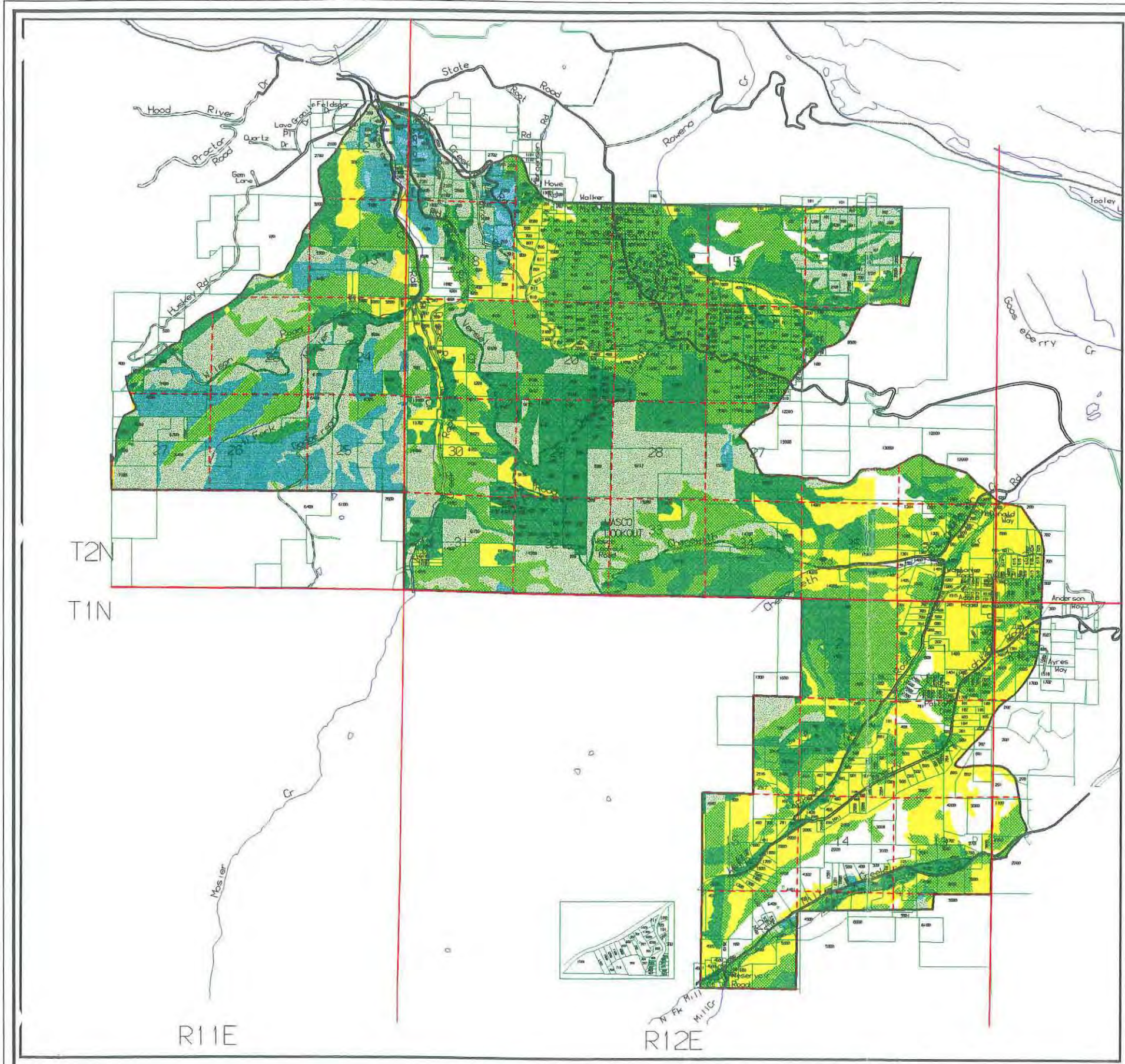
FIGURE  
6

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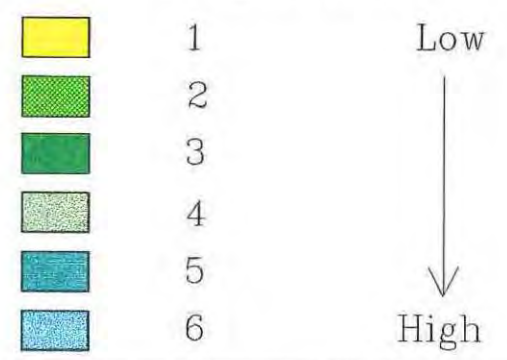


# FOREST & AGRICULTURE RESOURCES WEIGHTED COMPOSITIONS

Transition Lands Study Area

Legend

Weighted Totals



Resource Values	
Forest Site Classes	
Class 4	= 3 points
Class 5	= 2 points
Class 6	= 1 point
Agricultural Soil Classes	
Class 1-2	= 2 points
Class 3-6	= 1 point
Existing Agriculture	
Agriculture	= 1 point
Existing Forest	
F2(80) Parcels >= 80	= 1 point
Designated Big Game Winter Range	
Big Game Winter Range	= 1 point



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Lands Study Area

FIGURE  
8

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# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill	Mill Creek-Cherry Heights
FF-10 = 125	FF-10 = 256
RR-5 = 52	RR-5 = 50
Ag = 8	Ag = 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

Tables from Wasco County, OR, 1997

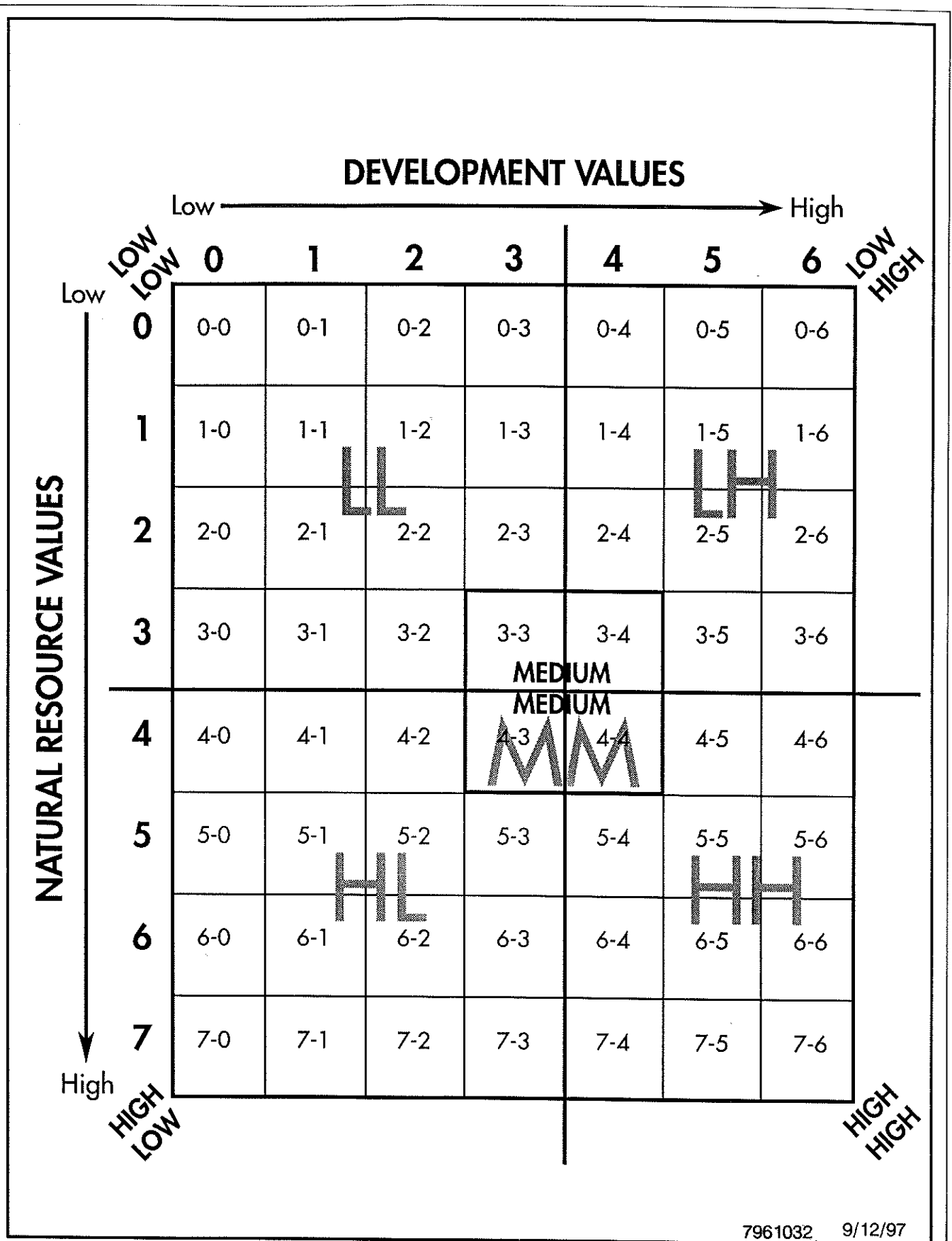
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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

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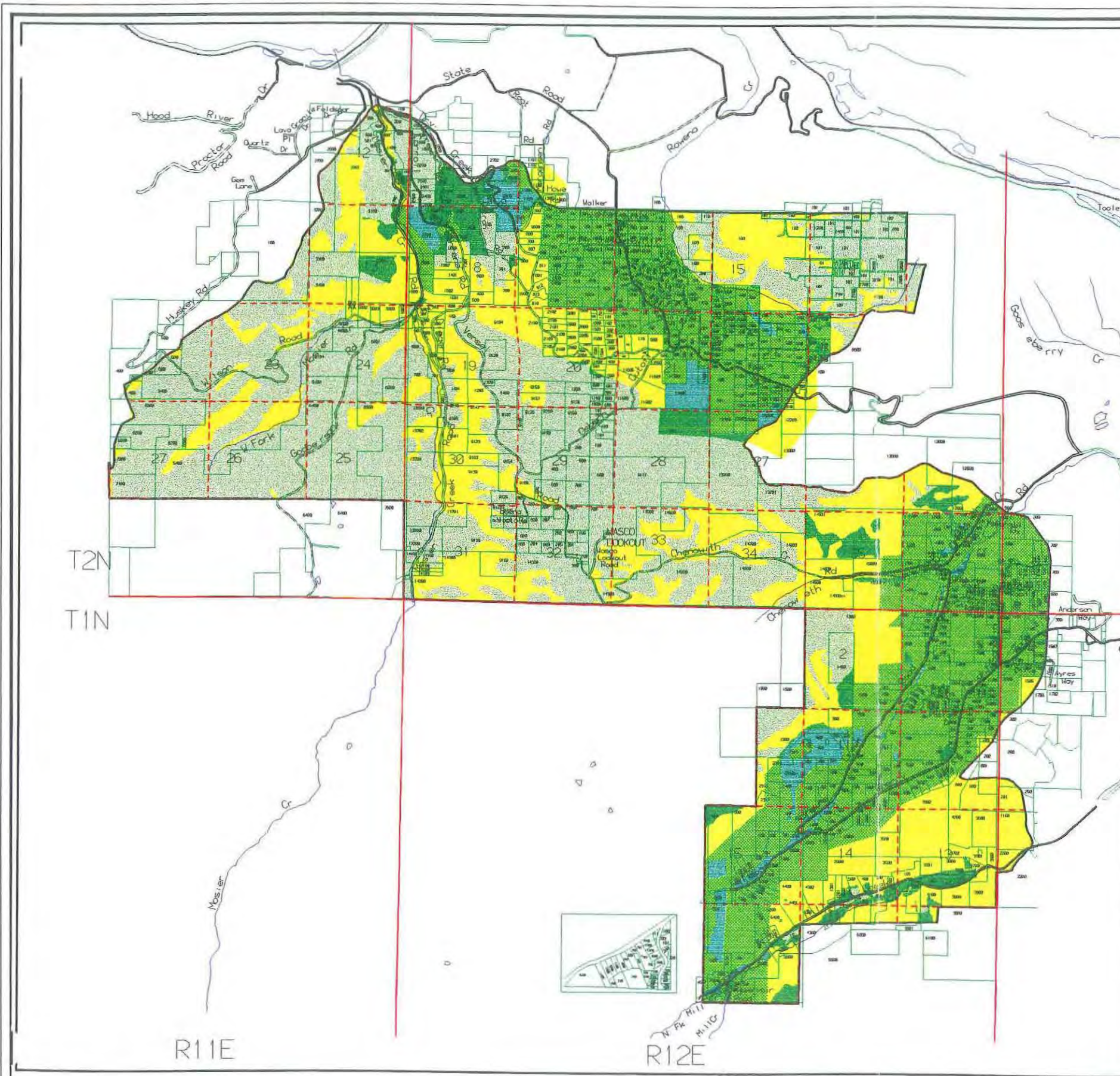


Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

FIGURE  
10





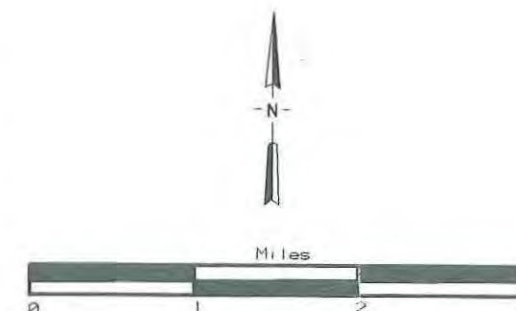


# COMBINED LAND USE VALUES (based on resource composite & development composite map values) Transition Lands Study Area

Value Comparison

	Forest & Agriculture Values	Development Values
L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7
F&A-Dev Medium Ranges	3-3, 3-4, 4-3, 4-4	

0 1 2 3 4 5 6 7  
Low High



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Lands Study Area

FIGURE  
11

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- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

#### 5.1.1 Seven Mile Hill Area

In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

[illegible]

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

FIGURE  
12



# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend

 IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

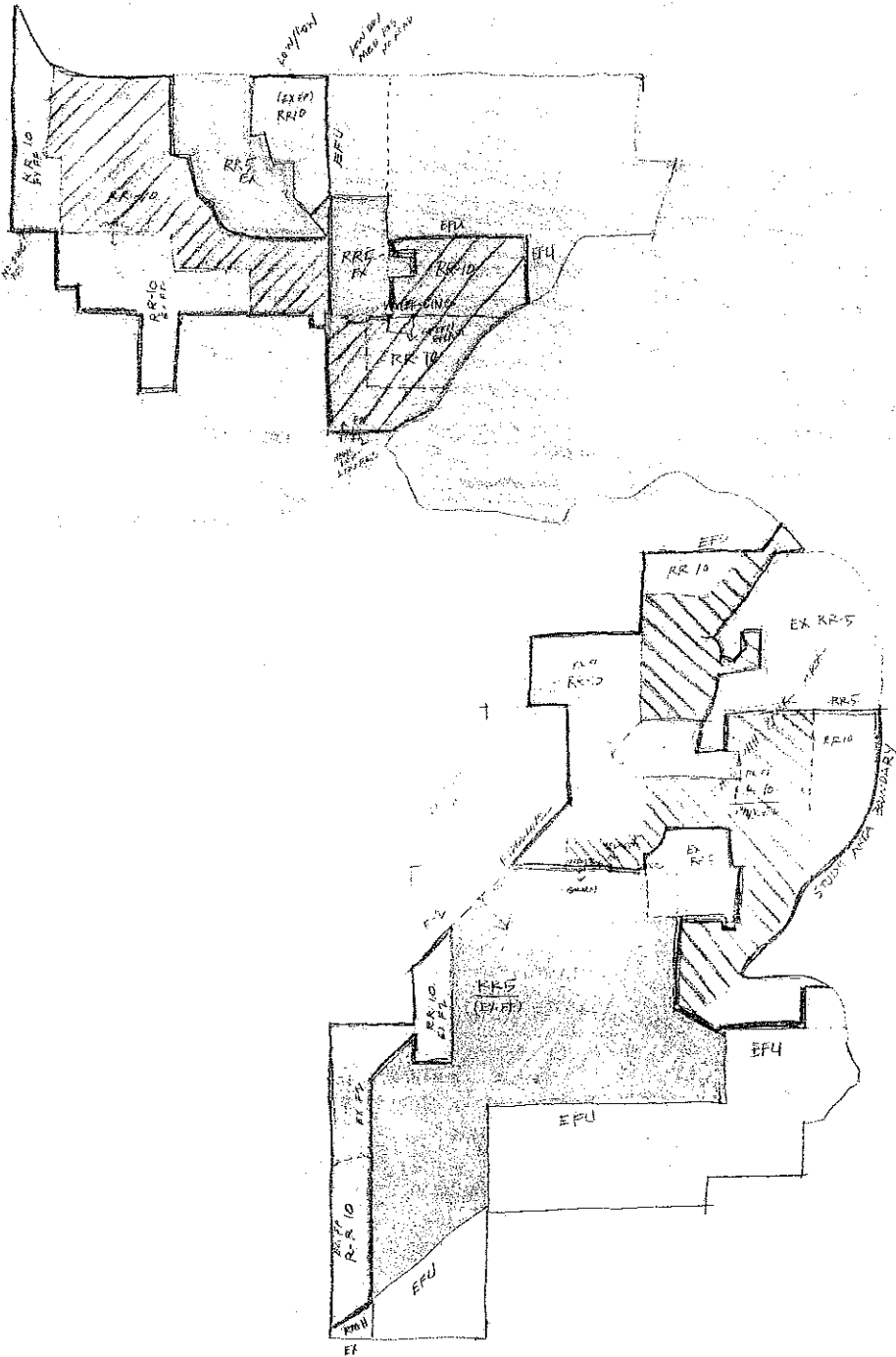
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



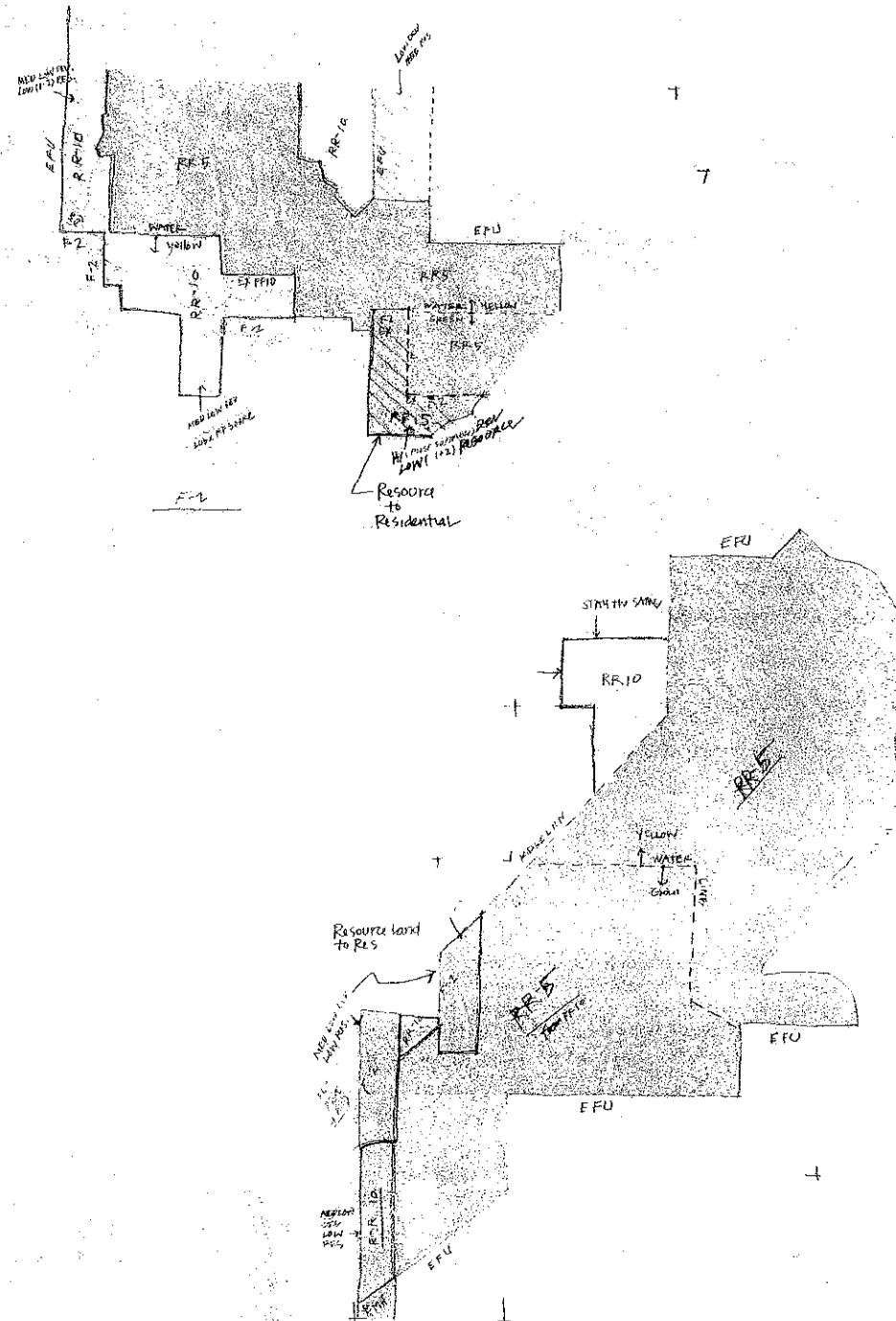
Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

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FIGURE  
13

# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

### PROS:

- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
- Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
- Not limited by possible ground water shortages - water can be purchased or hauled if needed.
- Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
- Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
- Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
- Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

### CONS:

- Impacts other wildlife habitat- quantifiable data not available.
- Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
- Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
- Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
- Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
- Impacts on rural character.
- Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).



- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

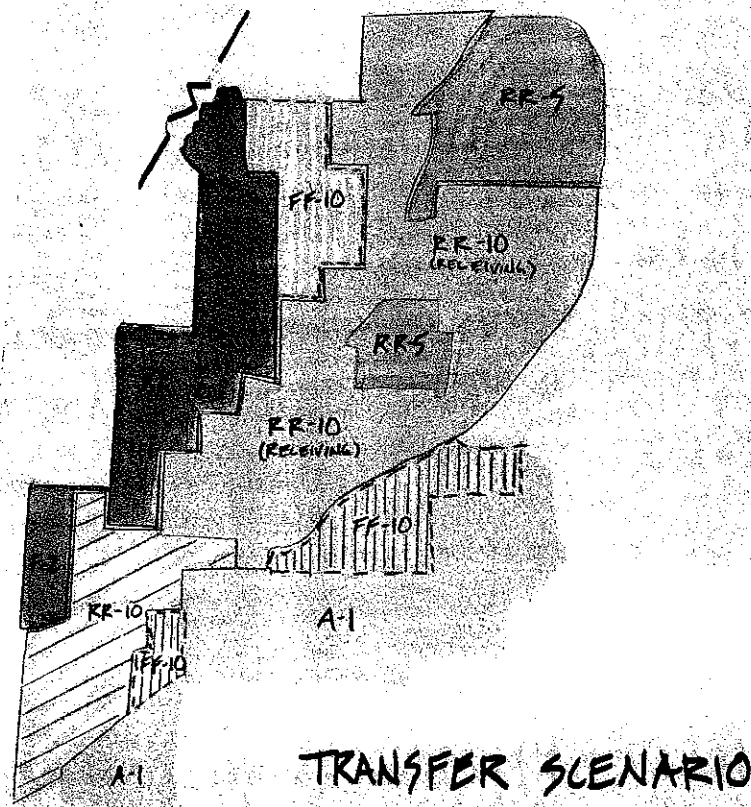
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

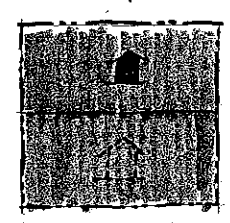
FIGURE  
15



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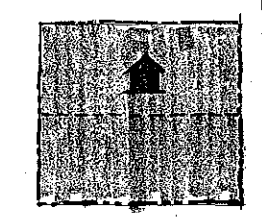
VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE (45,000<sup>00</sup>)  
205,000<sup>00</sup>



VALUE WITHOUT  
DEVELOPMENT  
RIGHT

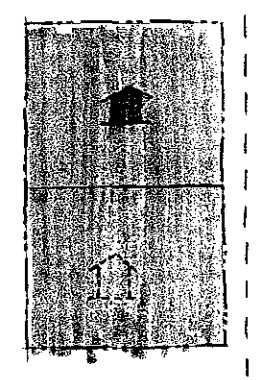


10AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

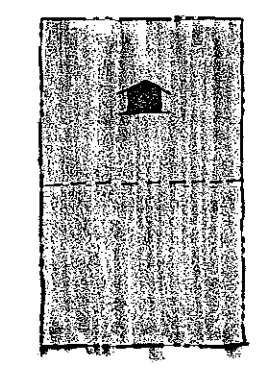
VALUE WITH  
DEVEL. RT. ON 10 AC.



10AL WITH HOUSE (160,000<sup>00</sup>)  
10AL HOME SITE (50,000<sup>00</sup>)  
210,000<sup>00</sup>



VALUE WITHOUT  
DEVEL. RT.



20AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSIER  
7 MILE HILL)

(160,000<sup>00</sup>)  
(70,000<sup>00</sup>)  
(230,000<sup>00</sup>)

(170,000<sup>00</sup>)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16

### **6.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### **6.1.3 Intent and Impacts of the TDR Alternative**

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

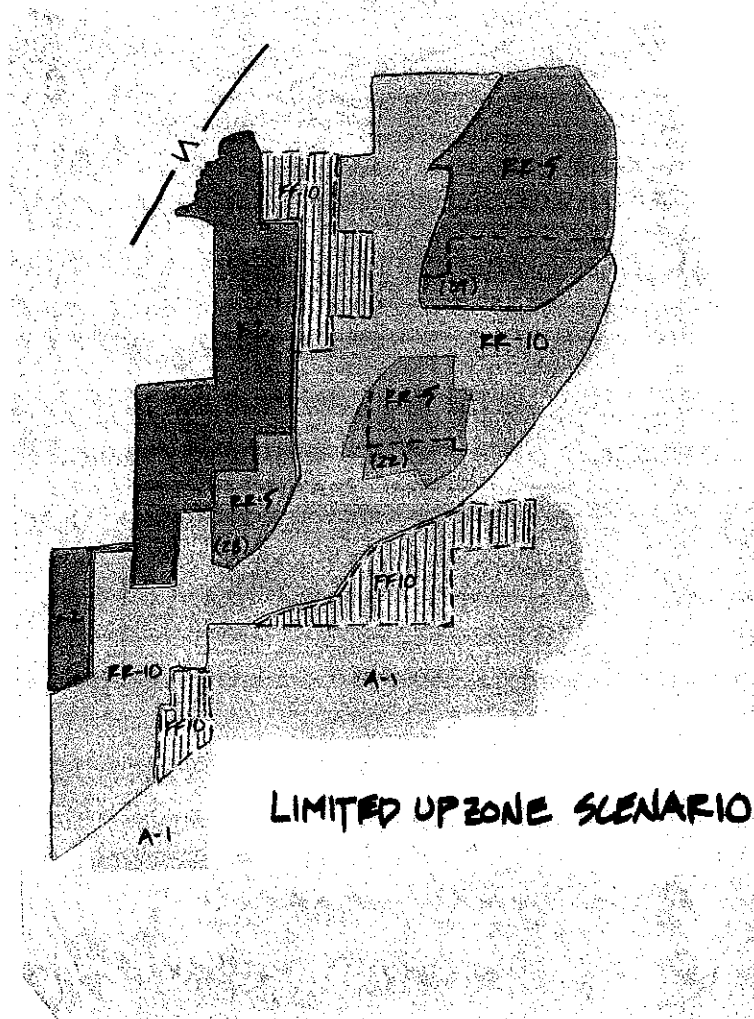
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### **6.2 Limited Upzone Alternative**

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### **6.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### ***What is the intent of the Limited Upzone Alternative?***

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### ***What are the impacts of the Limited Upzone Alternative?***

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

### **6.3.1 Intent and Impacts of the Future Expansion Alternative**

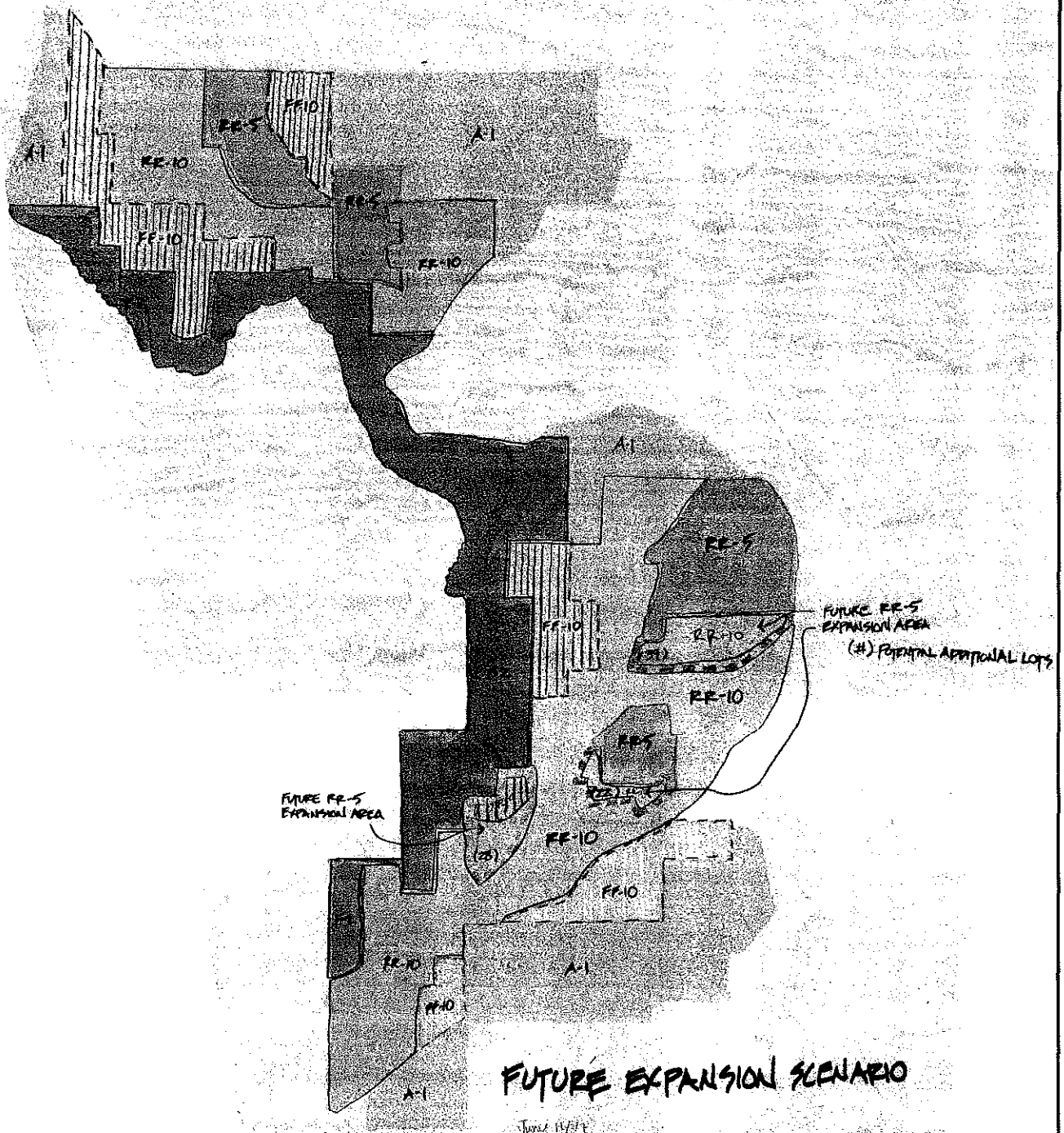
#### ***What is the intent of the Future Expansion Alternative?***

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

#### ***What are the impacts of the Future Expansion Alternative?***

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.





Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Future Expansion Alternative

FIGURE  
18



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## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.

**EXHIBIT 2**

**Transition Lands Study Area**

**(Memo)**

## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

**EXHIBIT 2**



**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR) Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus. on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

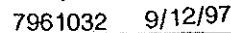
Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

#### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**

FIGURE  
1

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March 16, 2022

# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

December 1997

page 1

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in **Average Daily Traffic (ADT)**, along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below .

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page 2

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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page 3

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

December 1997

page 4

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# **EXHIBIT 3**

## **2000 Settlement Agreement**



## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not

approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.


15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

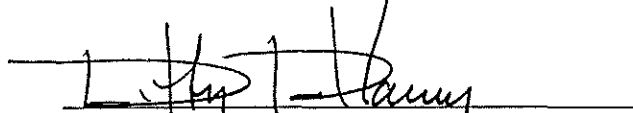
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

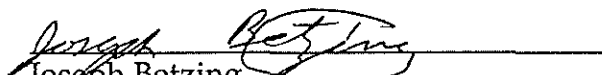
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

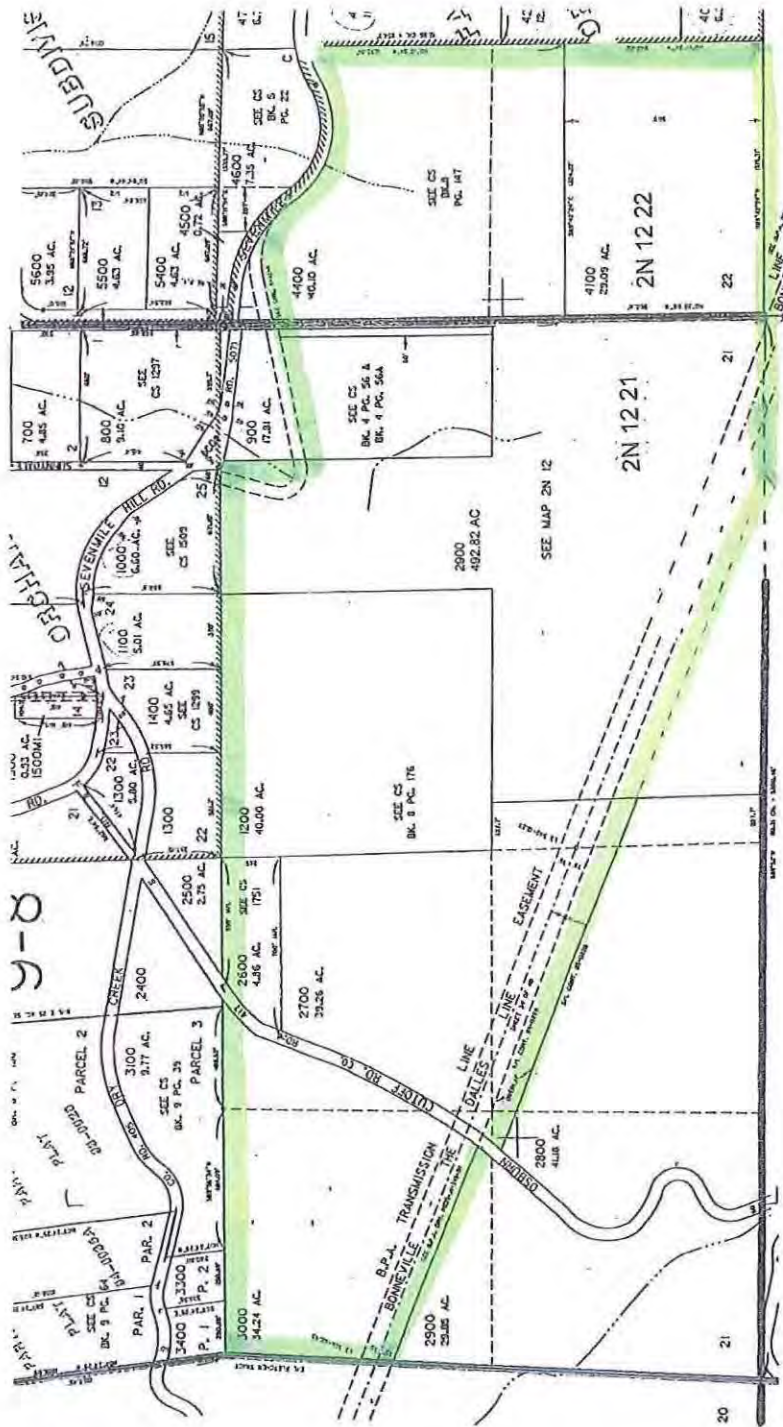
18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing





**EXHIBIT 4**

**Transition Lands Study Area**

**Groundwater Study**



**JERVEY** Geological  
Consulting

810 FELDSPAR DR. / P.O. BOX 328  
MOSIER, OREGON 97040

TELEPHONE (541) 478-3883  
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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

---

Gay M. Jervy

**EXHIBIT 4**



## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervey

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

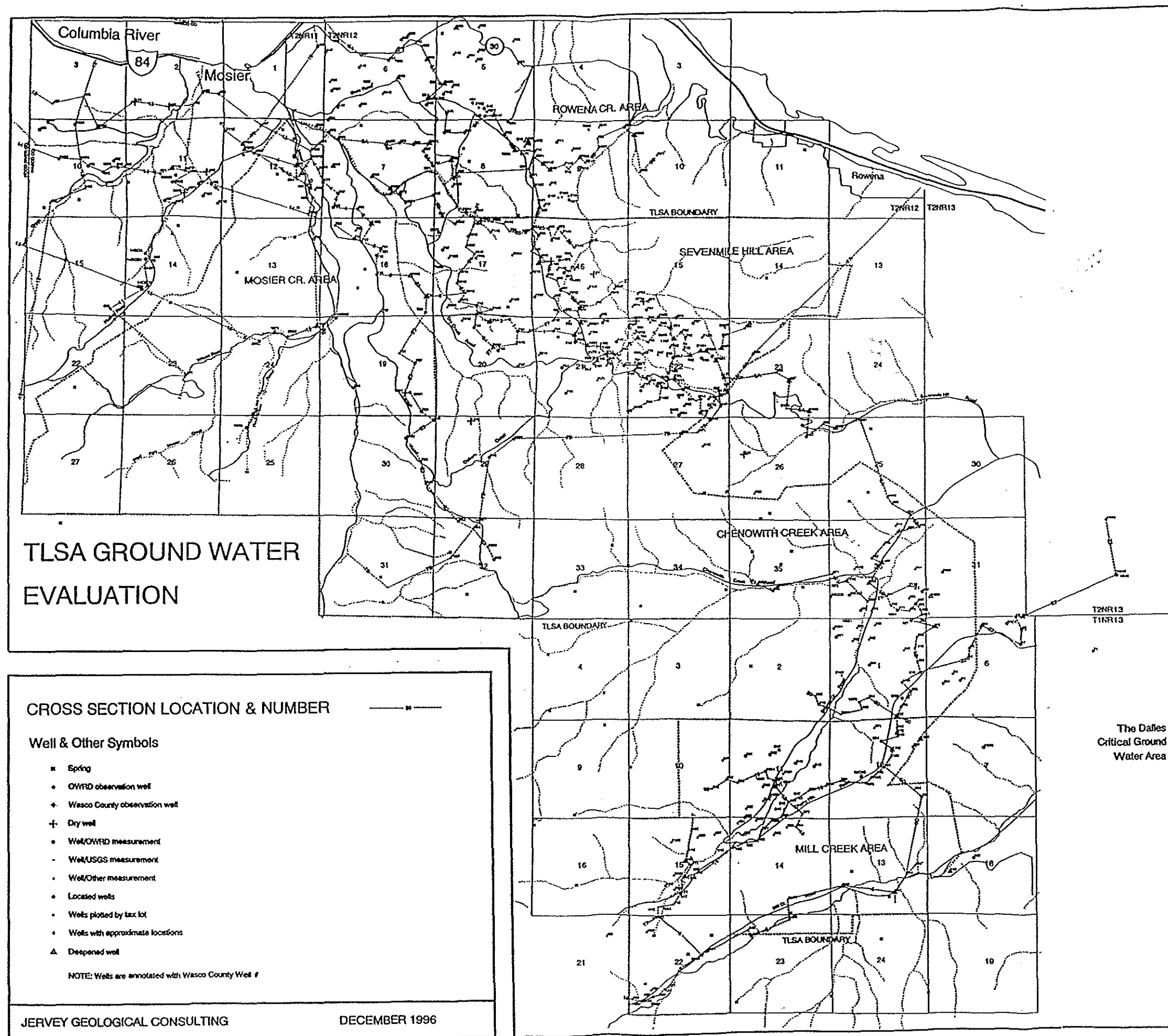
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward





locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

## GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

## DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year

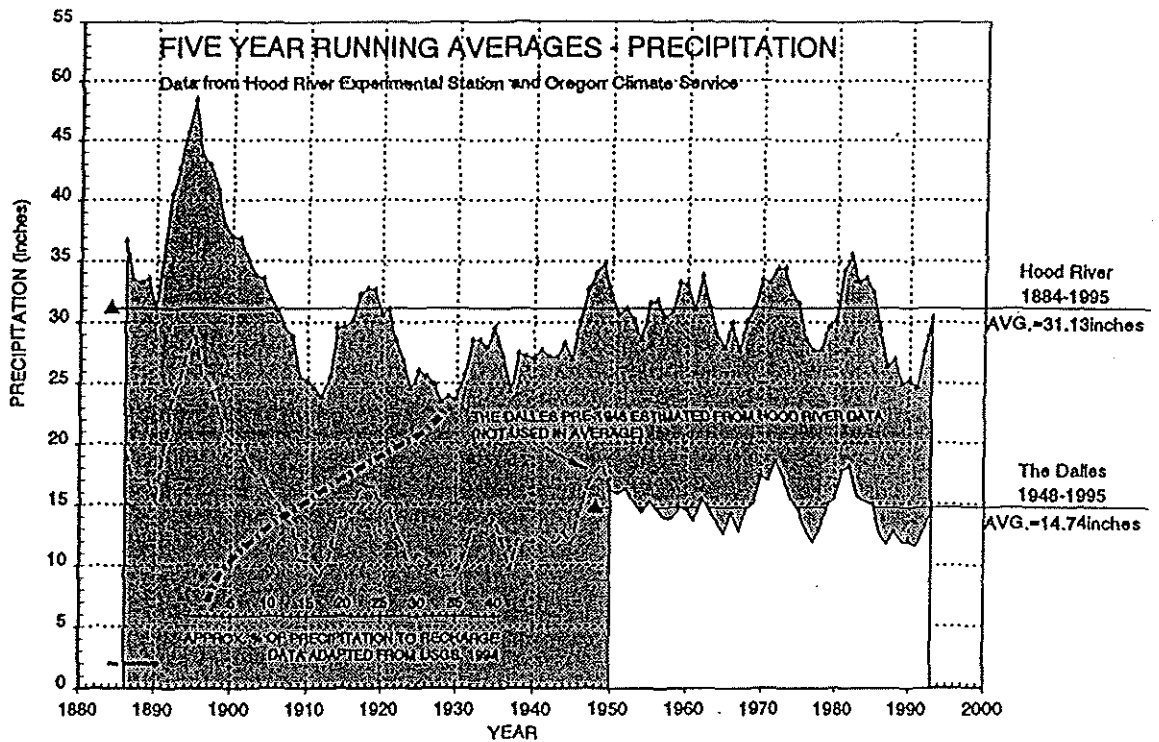


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

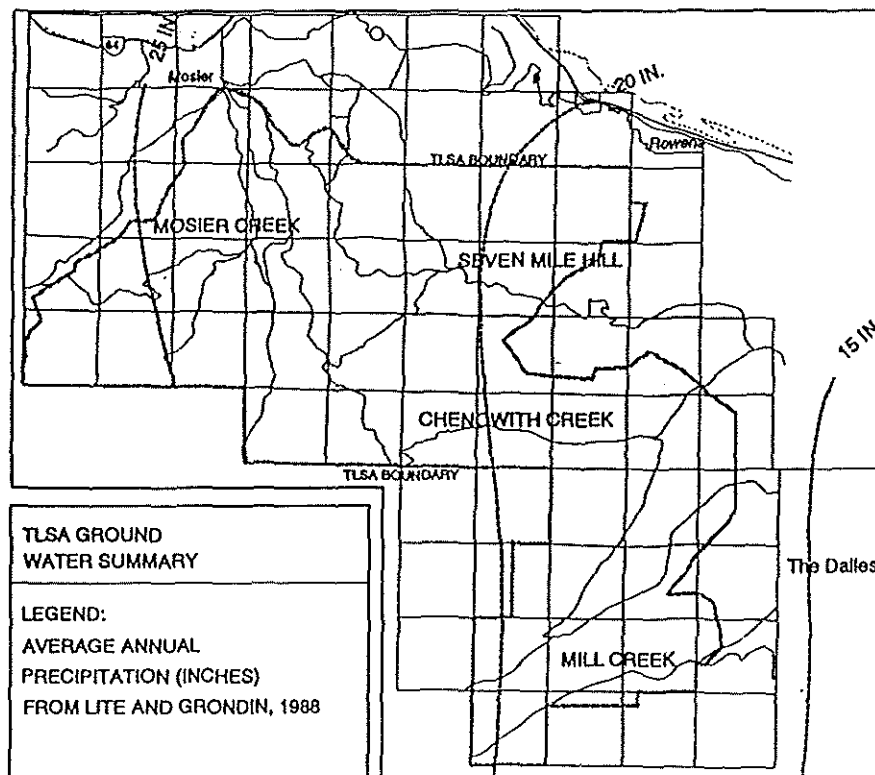


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE

EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				89,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS

	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS

	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR {C/D}
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

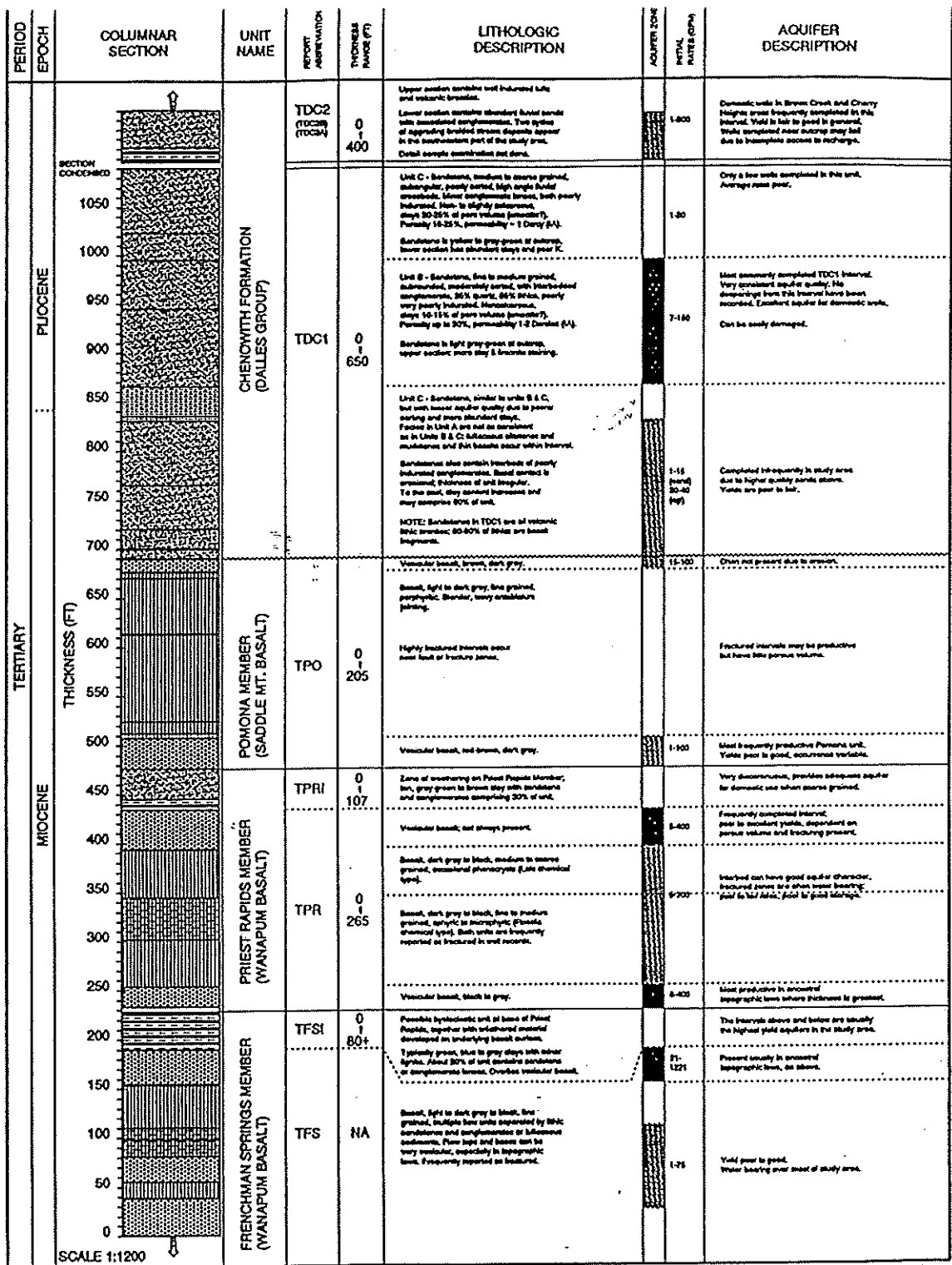
## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In





GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON



Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).

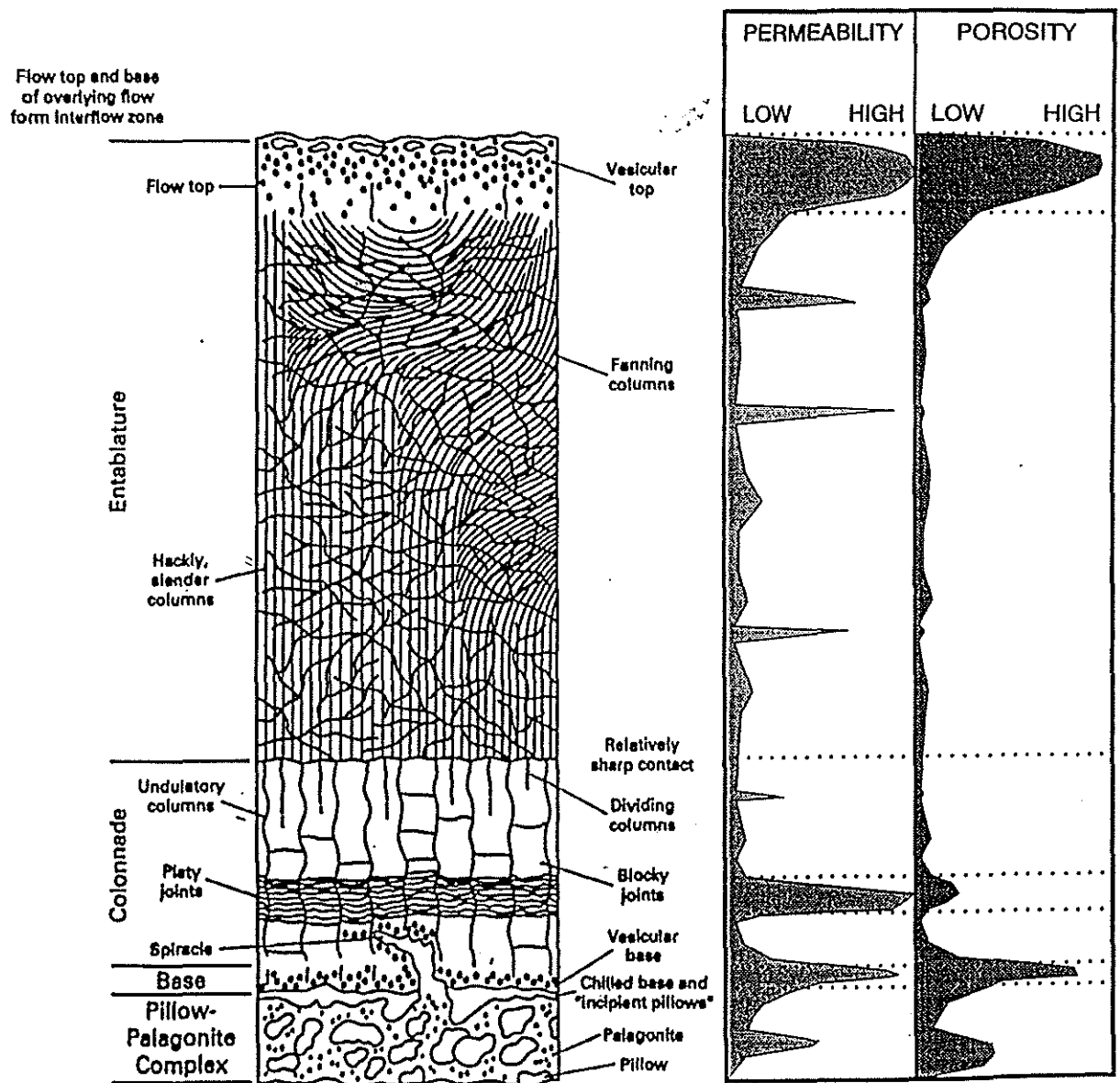


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).

general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

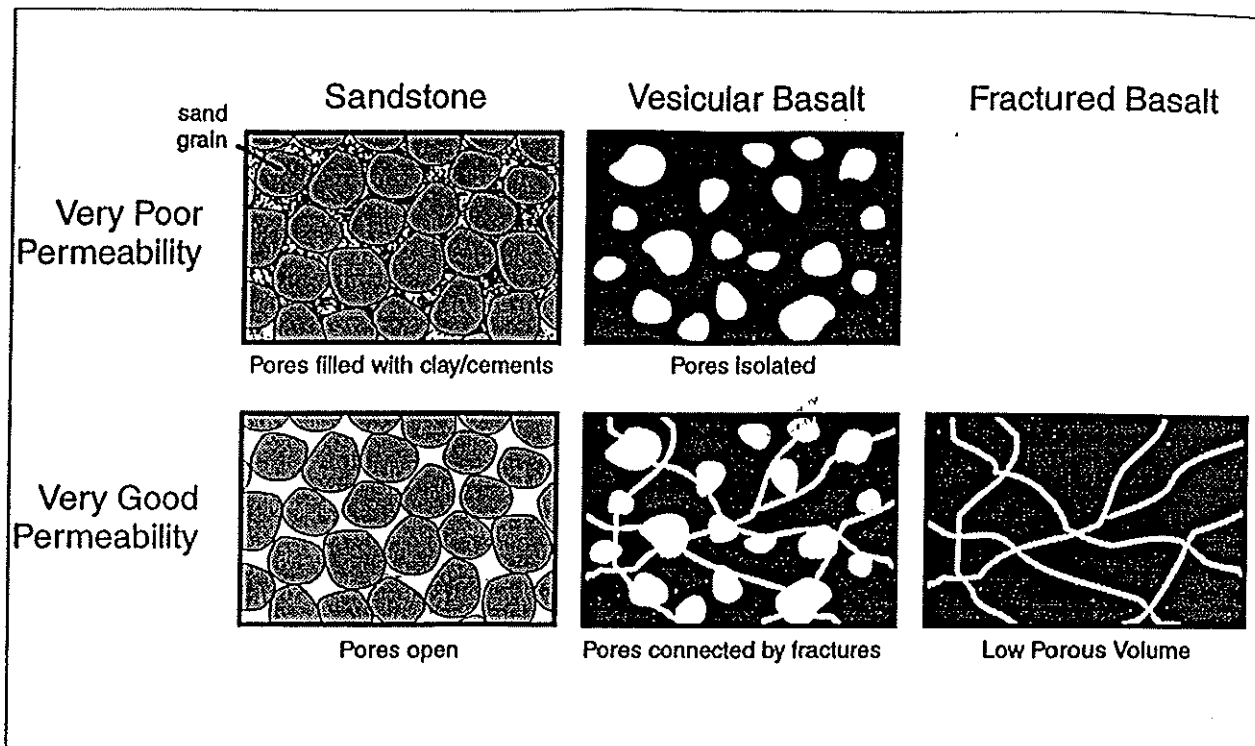


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

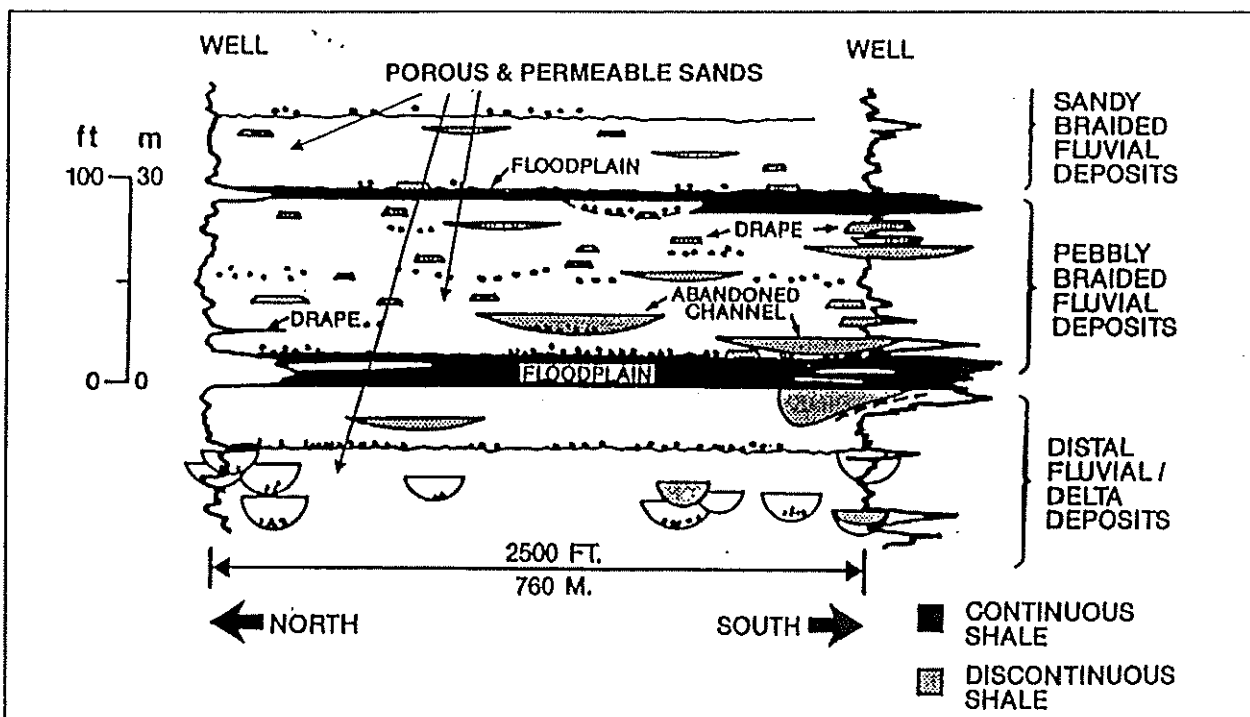


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).



quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

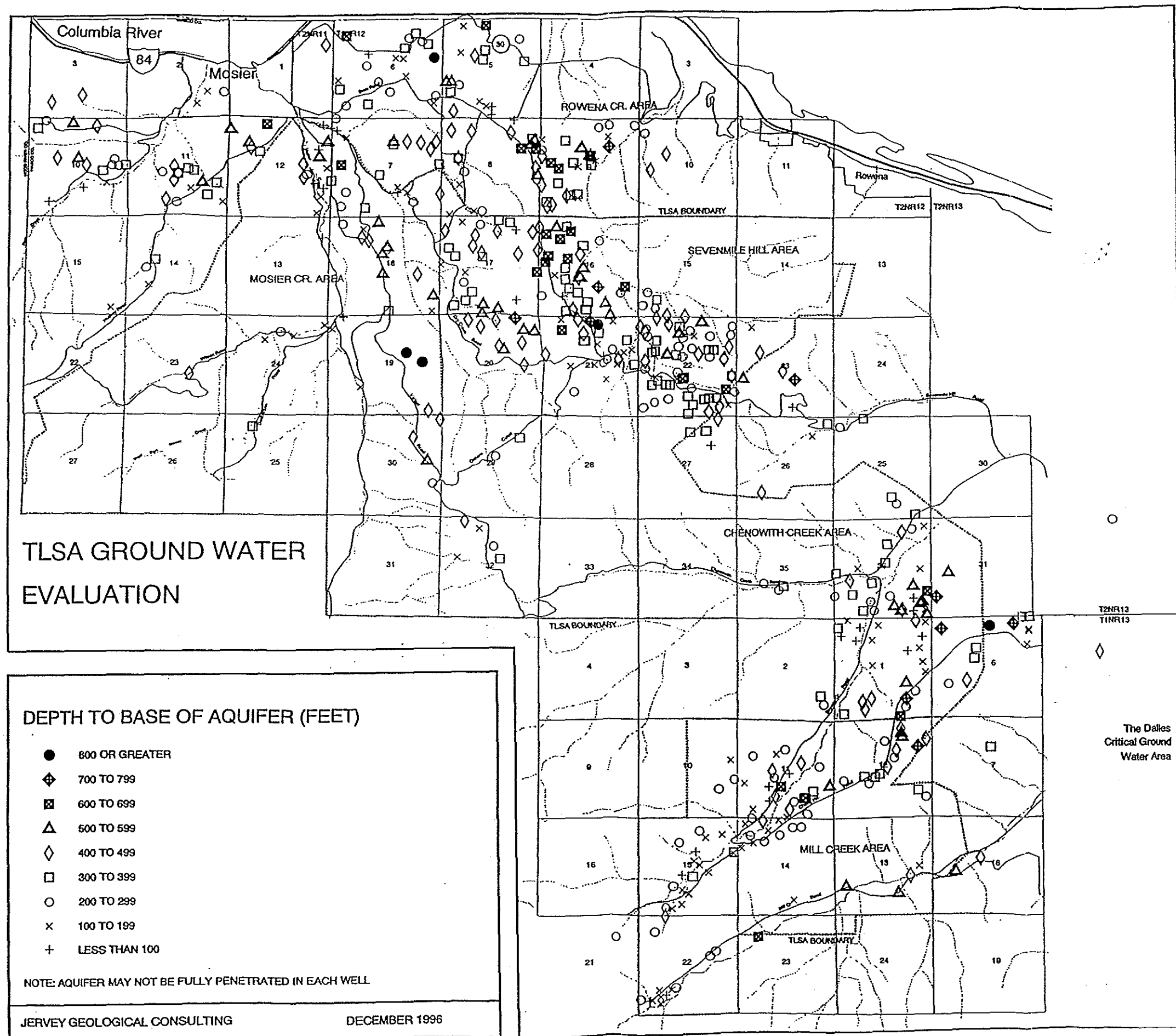
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

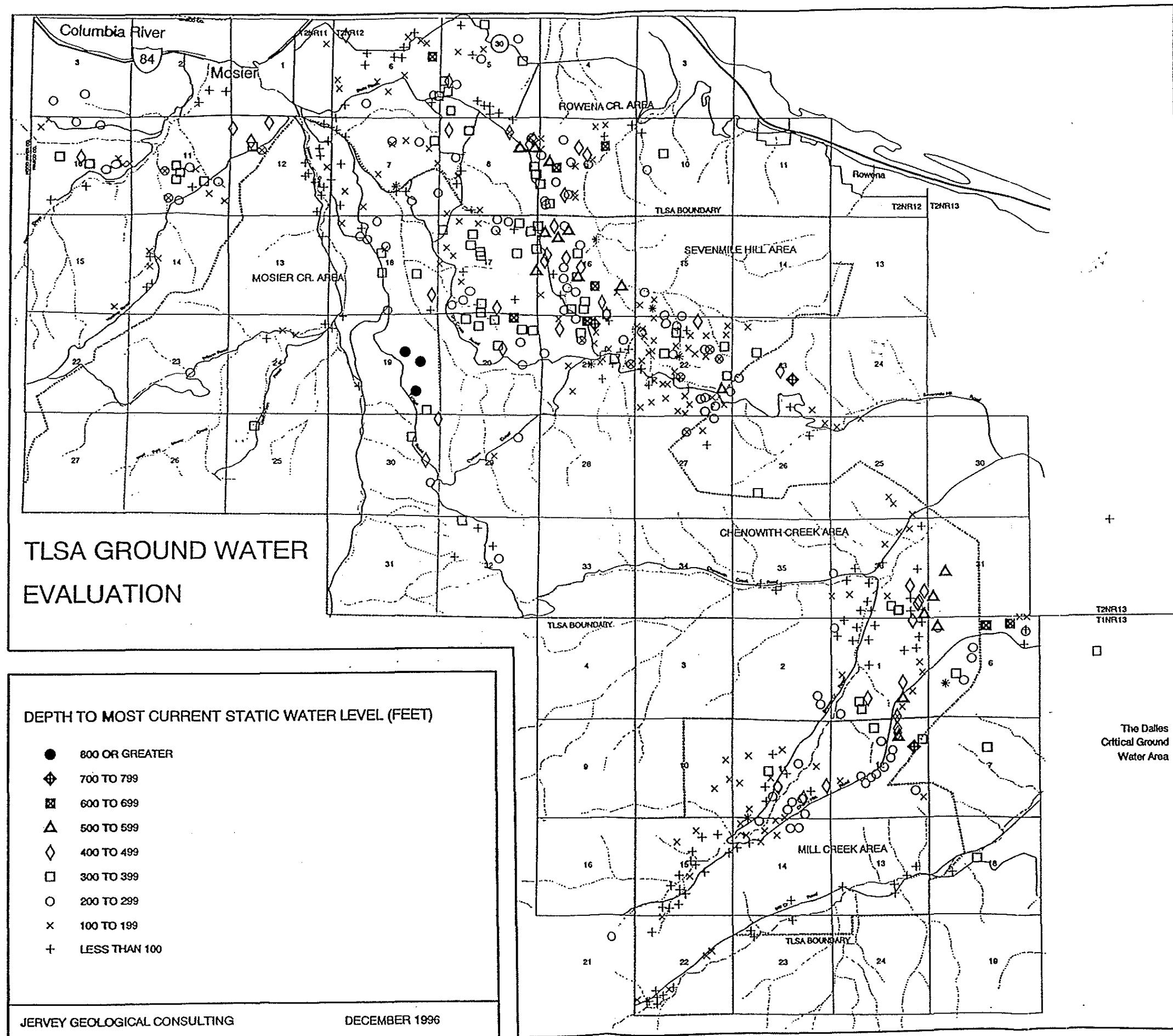
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

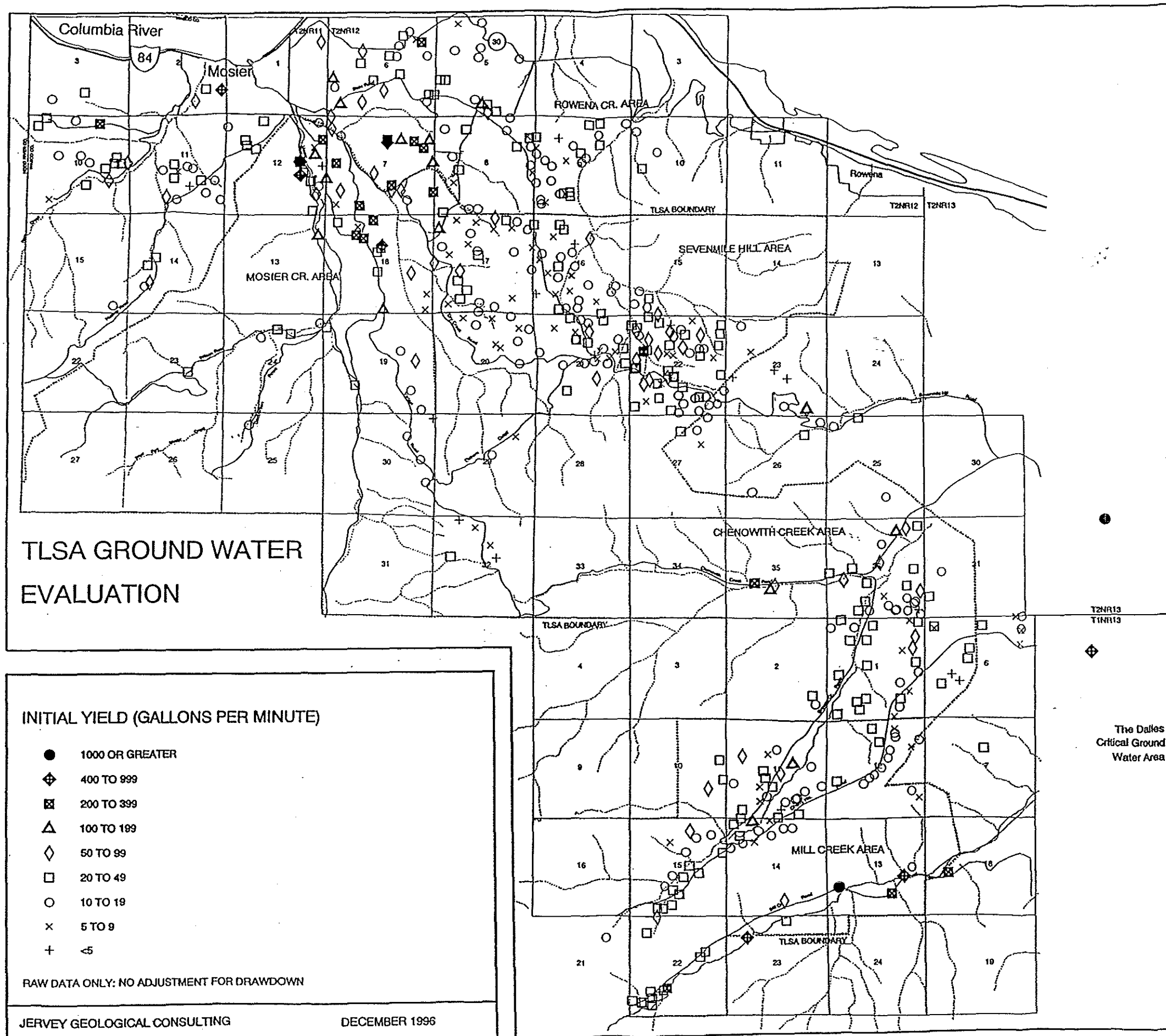
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST

ROCK CREEK TRIBUTARY

SOUTH

NORTH

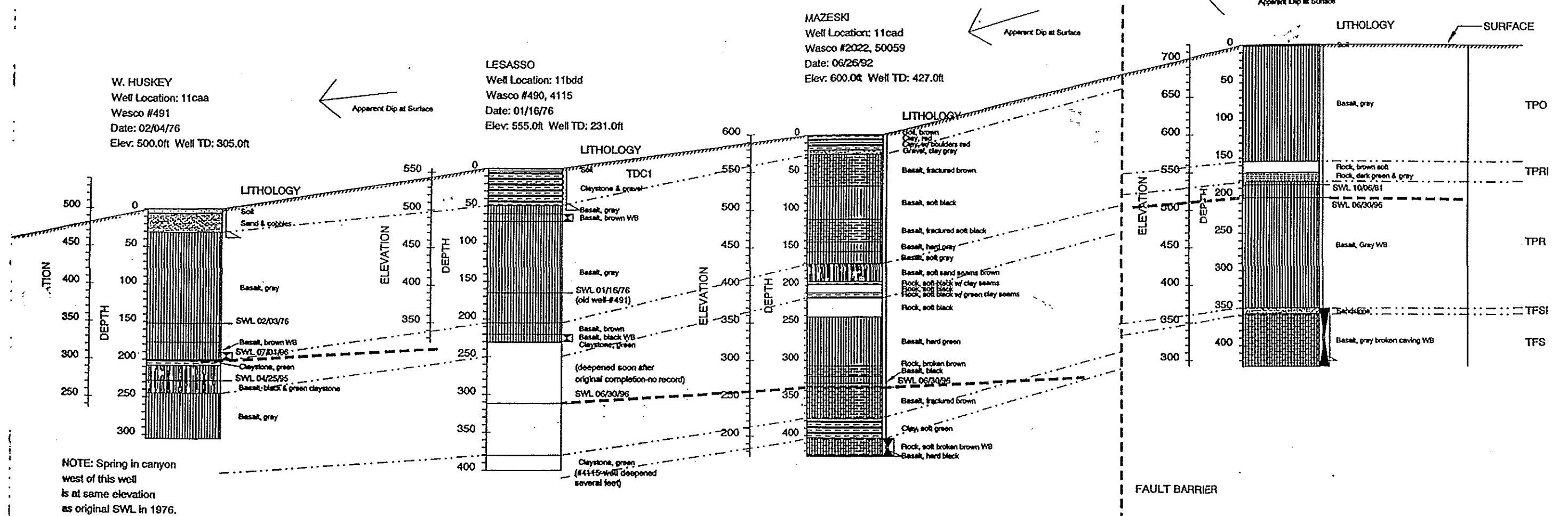
HUSKEY ROAD

NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft



TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Duffies Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt

as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepening (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

## STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

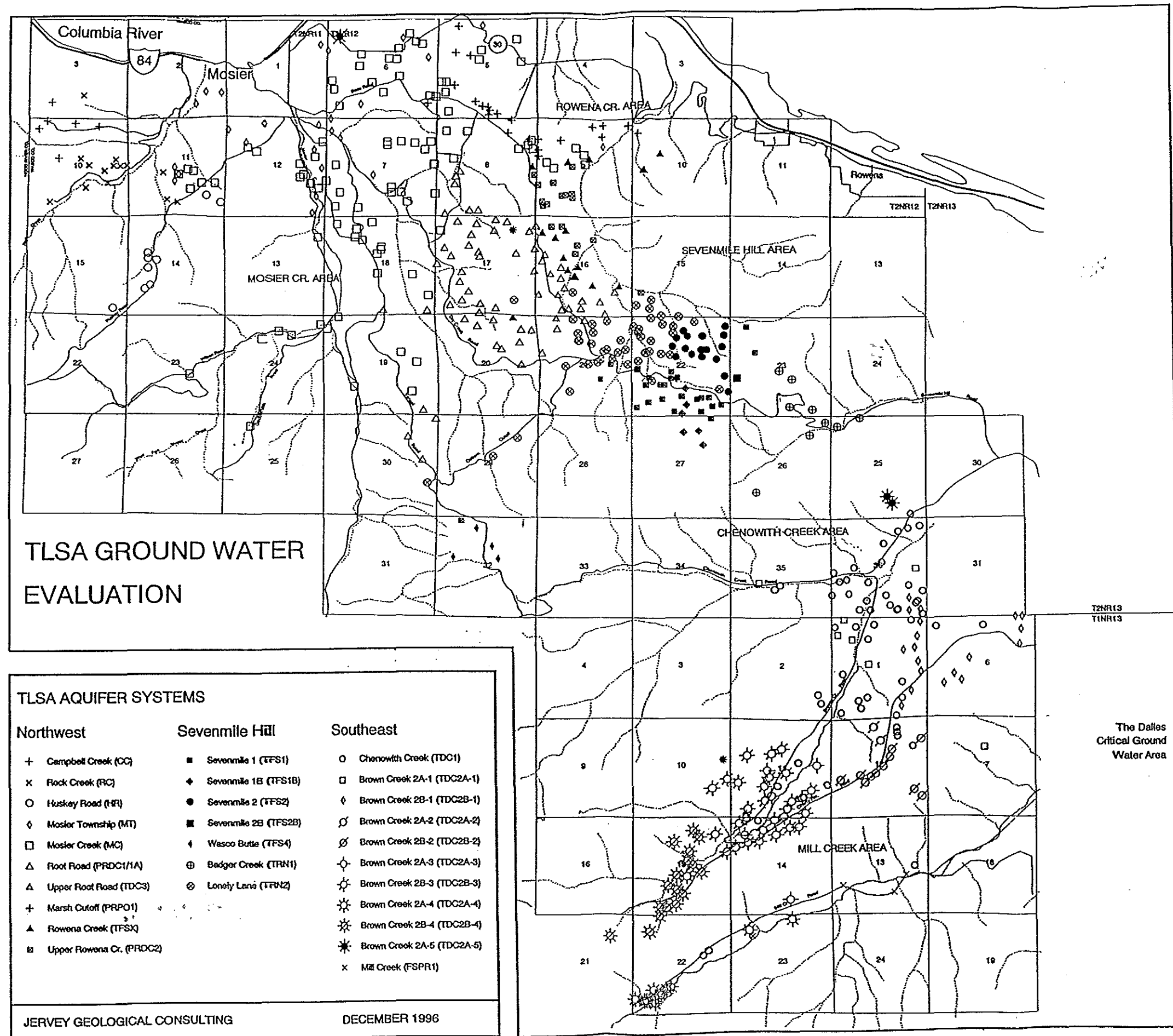
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DPTH	AVG RATE GPM	AVG SWL ELEV	AVG DPTH H2O CLMN	# OF DEEPEENINGS MAJ	# OF MOD	# OF MIN	# OF WELLS SWLS	AVG CHNG SWL	AVG TEMP F	COMMENT	
NORTHWEST TLSA															
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61	1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TPR	14	719	286	30	545	174	113	0	1	0	4	-26	56	
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58	
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0	*	1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58	HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61	HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60	2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60	SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53	
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56	SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61	
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59	
SEVENMILE HILL															
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57	HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55	
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53	
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60	
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53	ALL 4 WELLS: DEEPEENED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52	SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*	*	SIMILAR TO TRN2?
SOUTHEAST TLSA															
Chenowith Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58	
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	58	
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56	1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77	

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.





WASCO COUNTY,  
OREGON  
TLSA

Ground Elevation vs.  
Static Water Level  
Elevation

AQUIFERS

- |            |         |
|------------|---------|
| • TF80C    | • TDC26 |
| • TF801    | • TDC3  |
| ○ TDC18    | • TFS1  |
| □ WOH18 CR | • TF818 |
| • WOH18    | • TF82  |
| ▲ PRO1     | • TF820 |
| • PRO2     | • TF84  |
| • PRO1     | • TF8X  |
| • TFF1C    | • TFH1  |
| • TDC1     | • TFH2  |
| • TDC2     | • PRO1A |

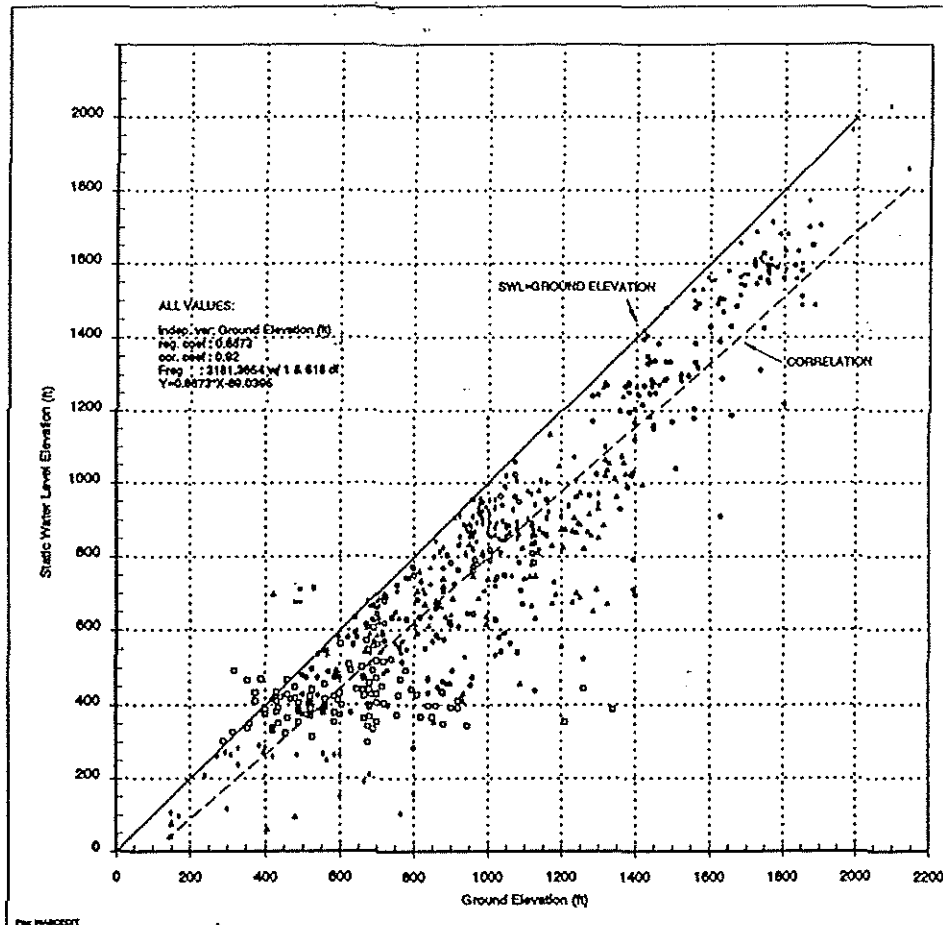


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

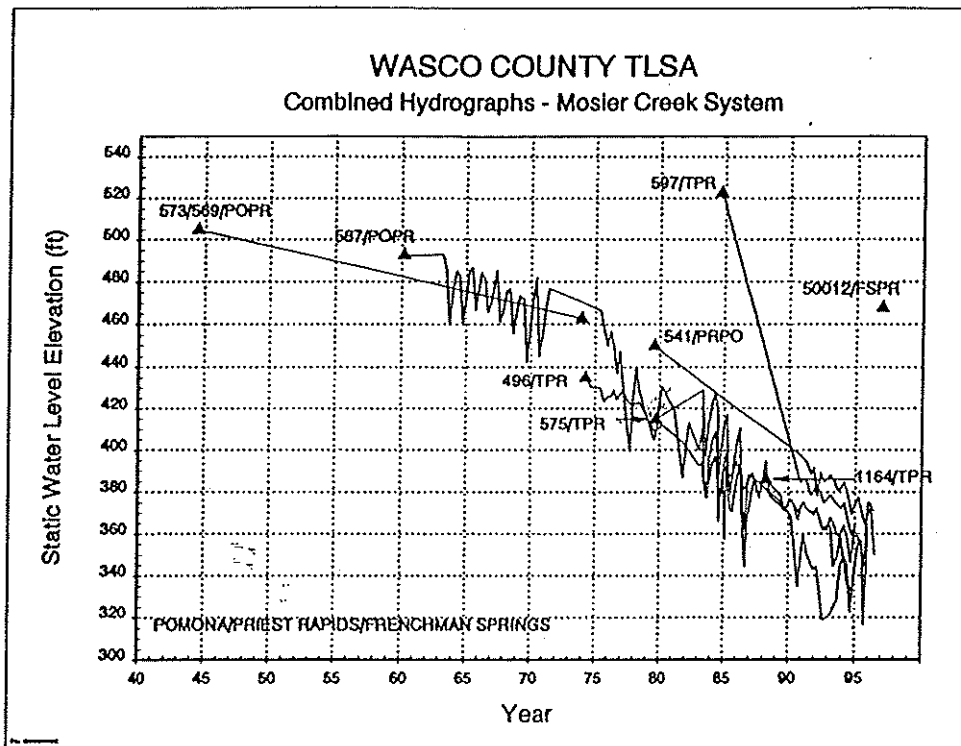


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

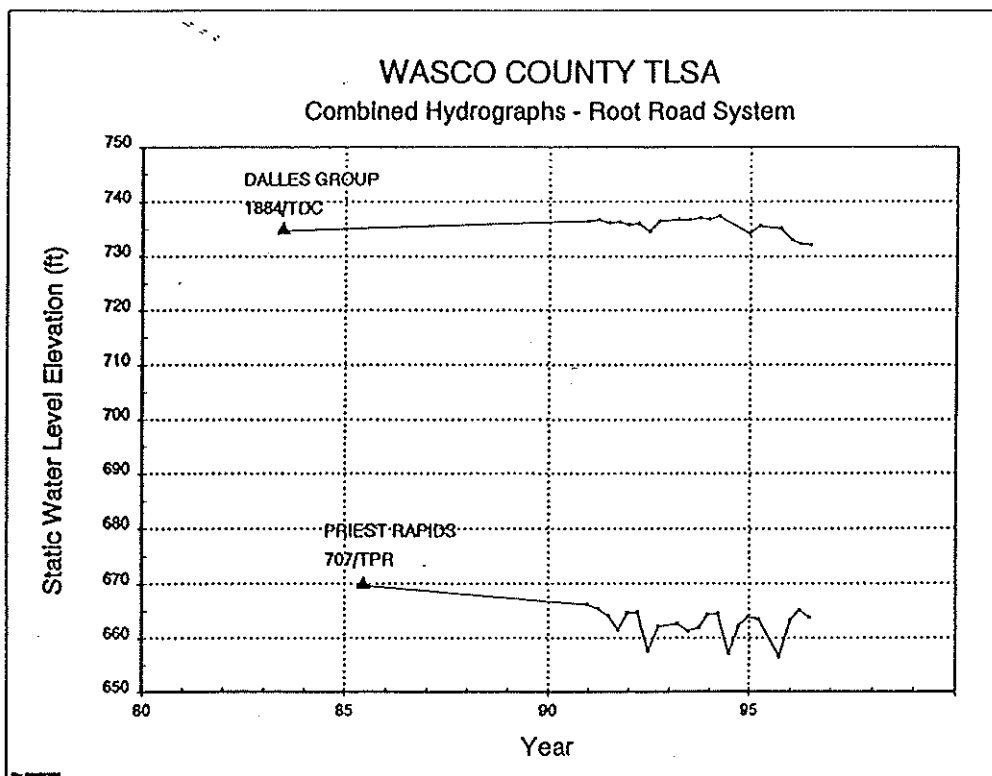


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

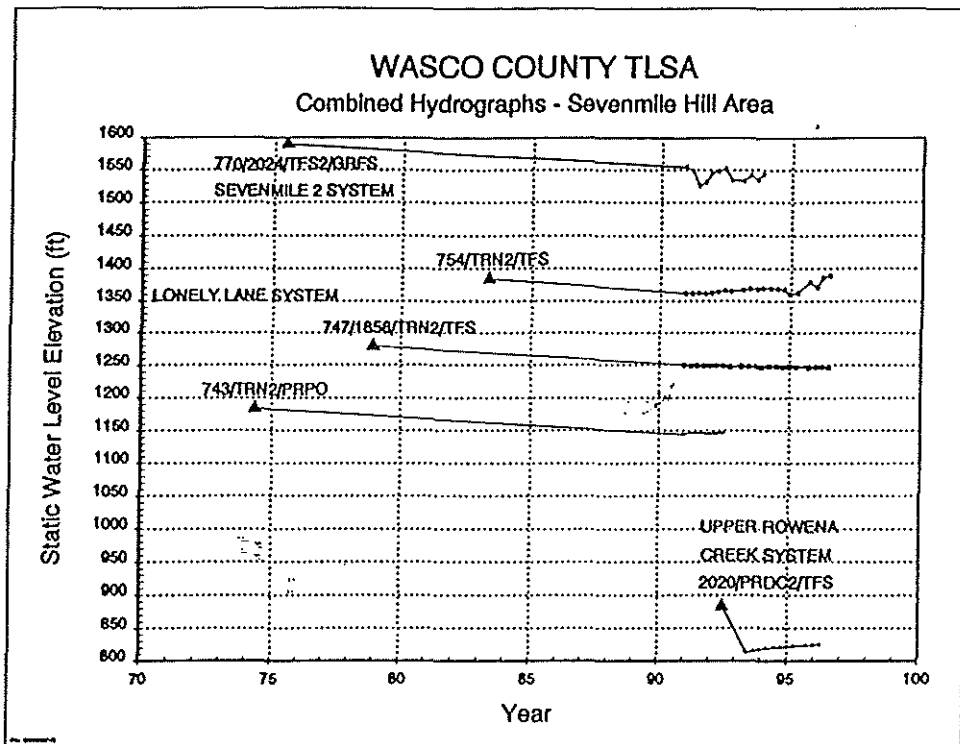


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

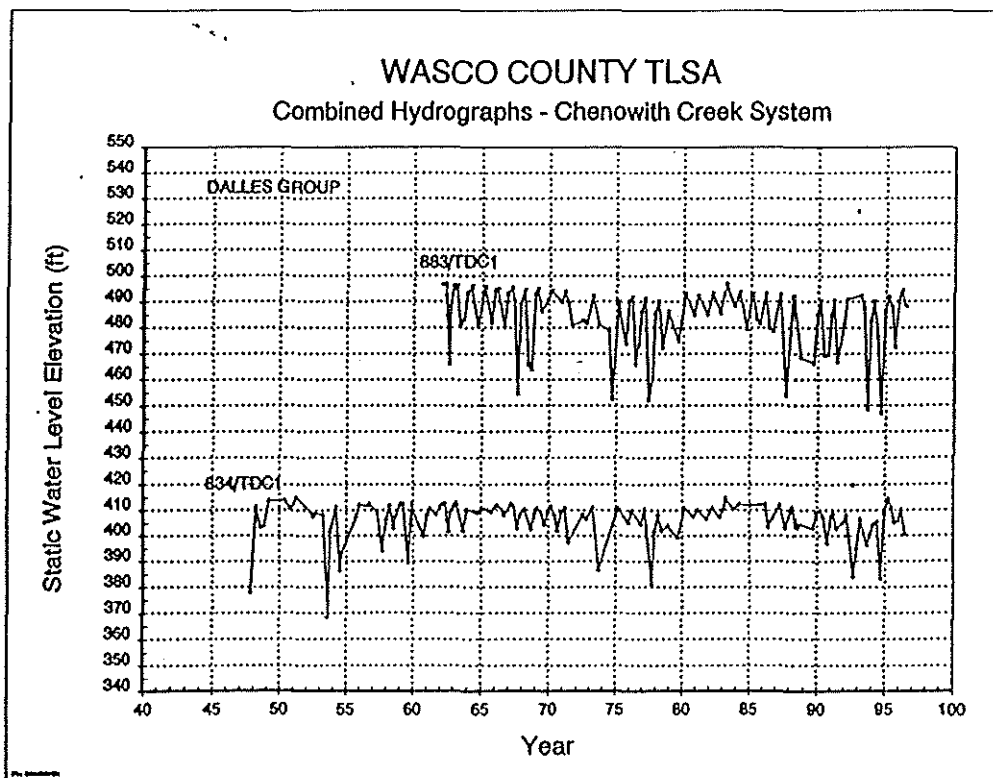


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

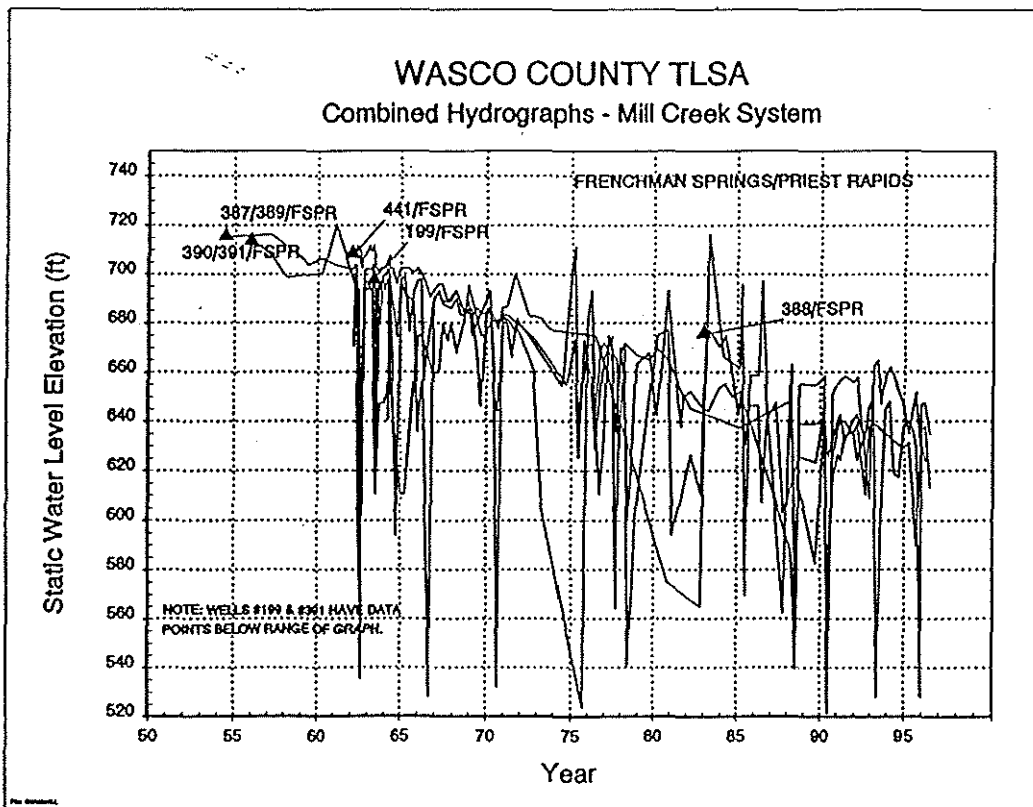


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.



prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no

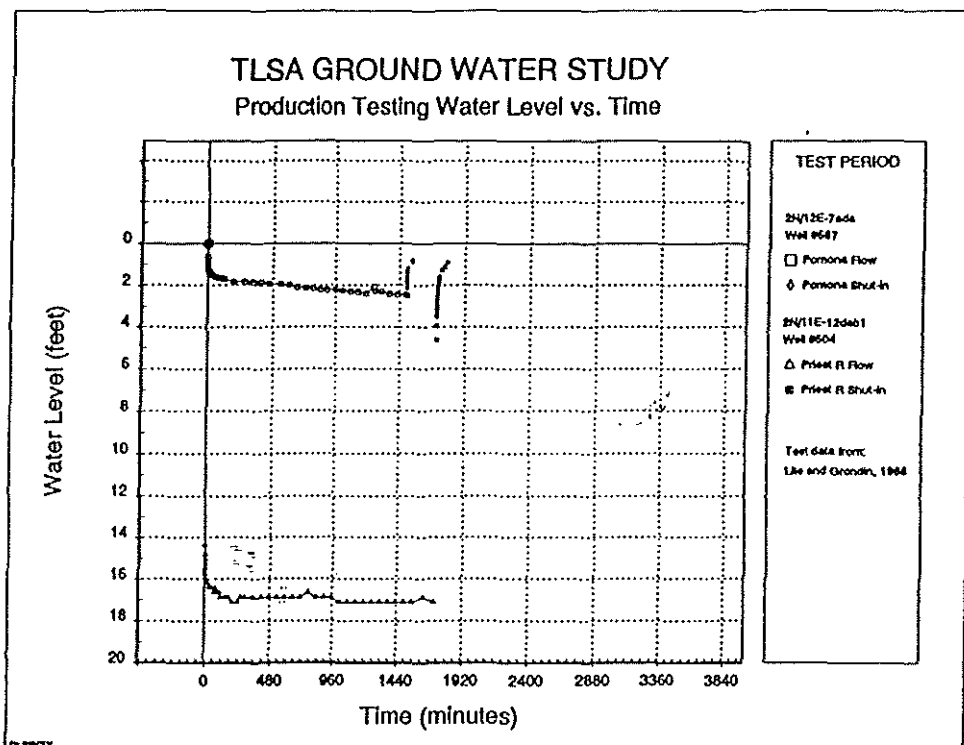


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

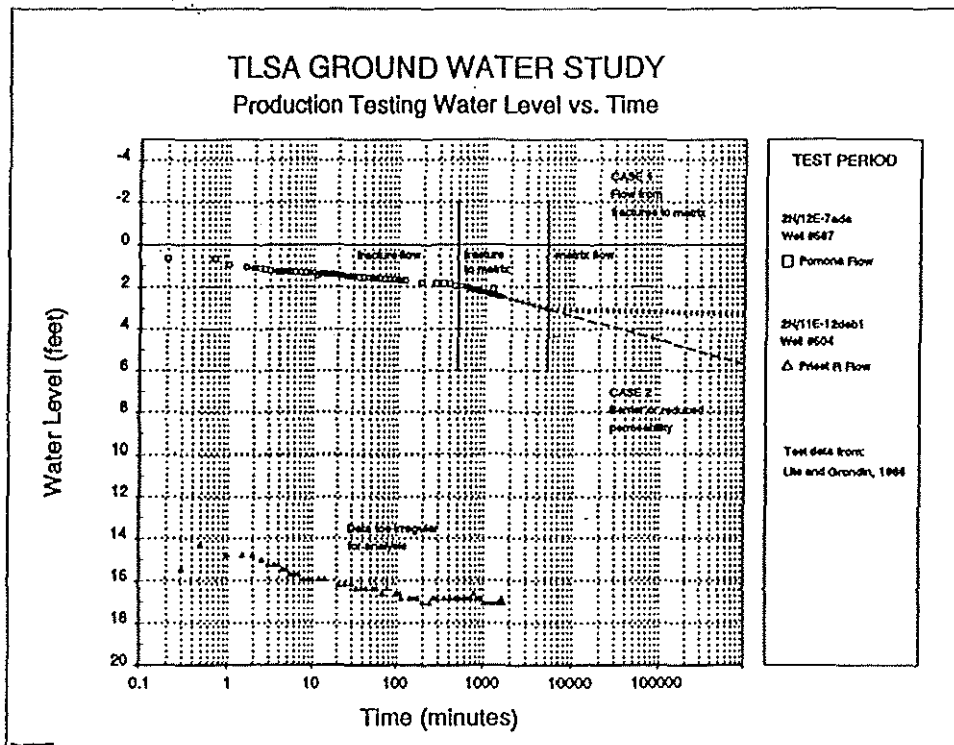


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

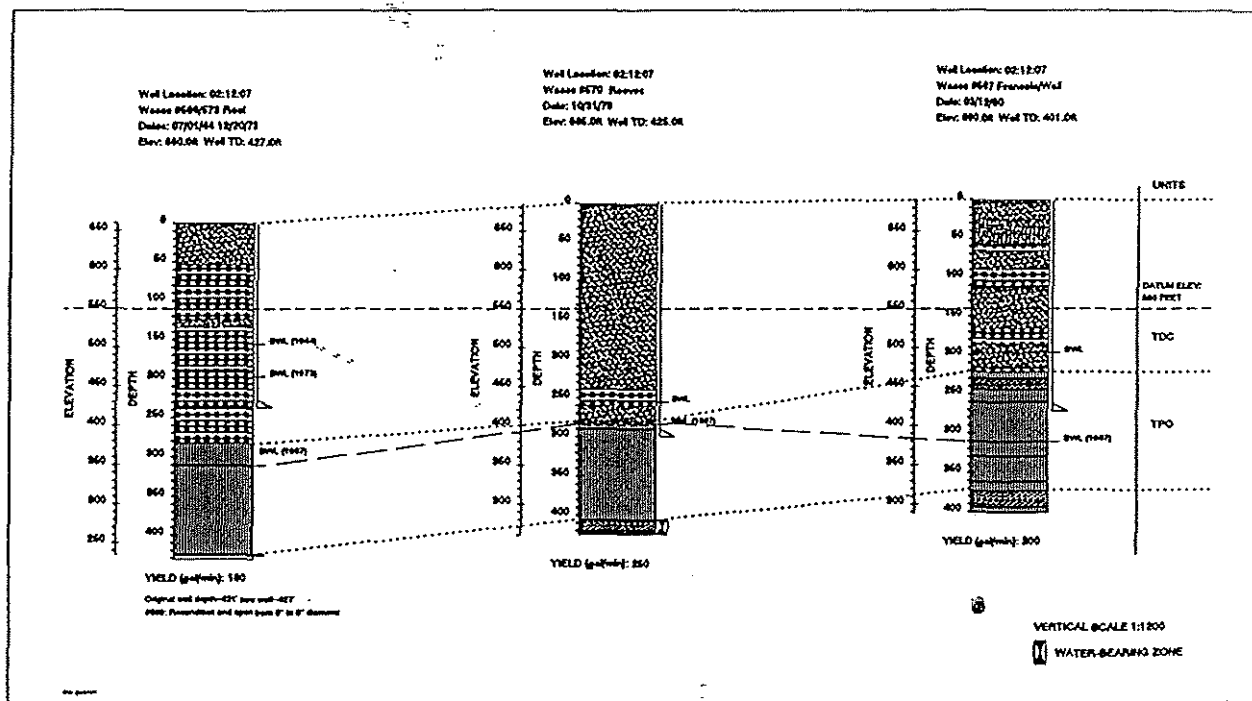


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

# WASCO COUNTY TLSA STATIC WATER LEVEL ELEVATIONS SOUTHERN AREA

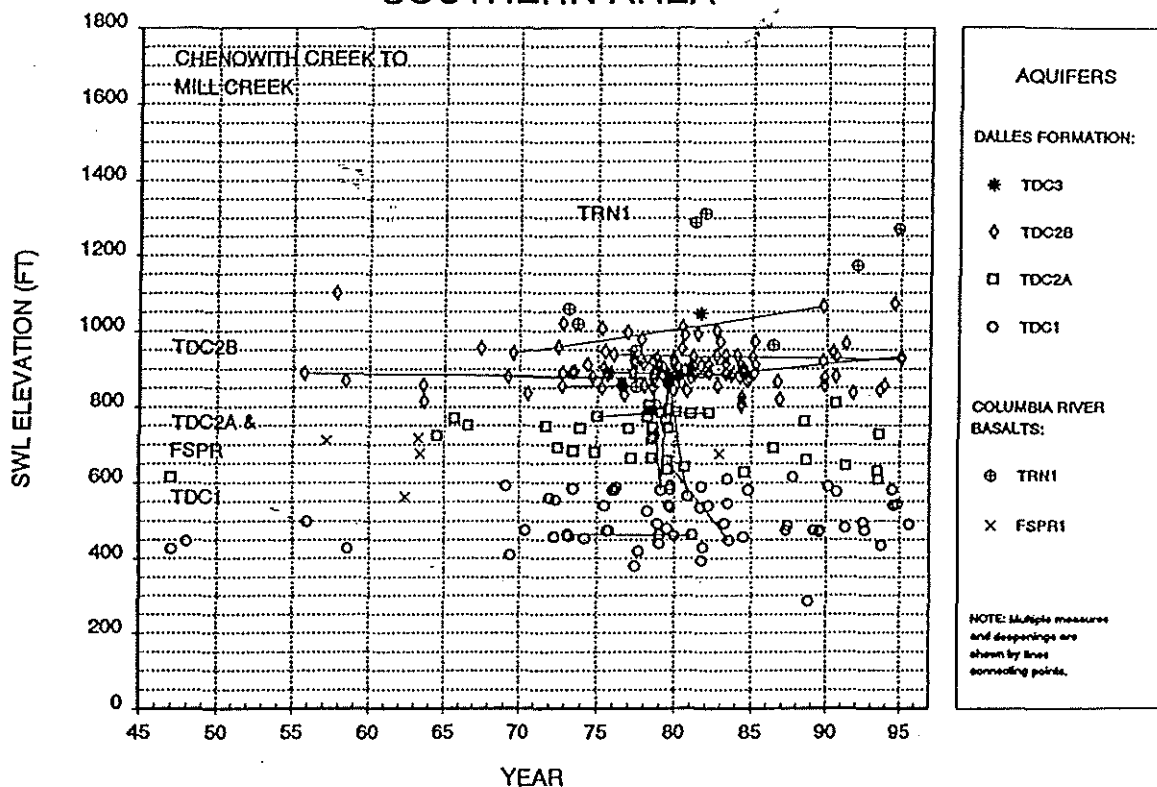


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.



# WASCO COUNTY TLSA STATIC WATER LEVEL ELEVATIONS CENTRAL AREA

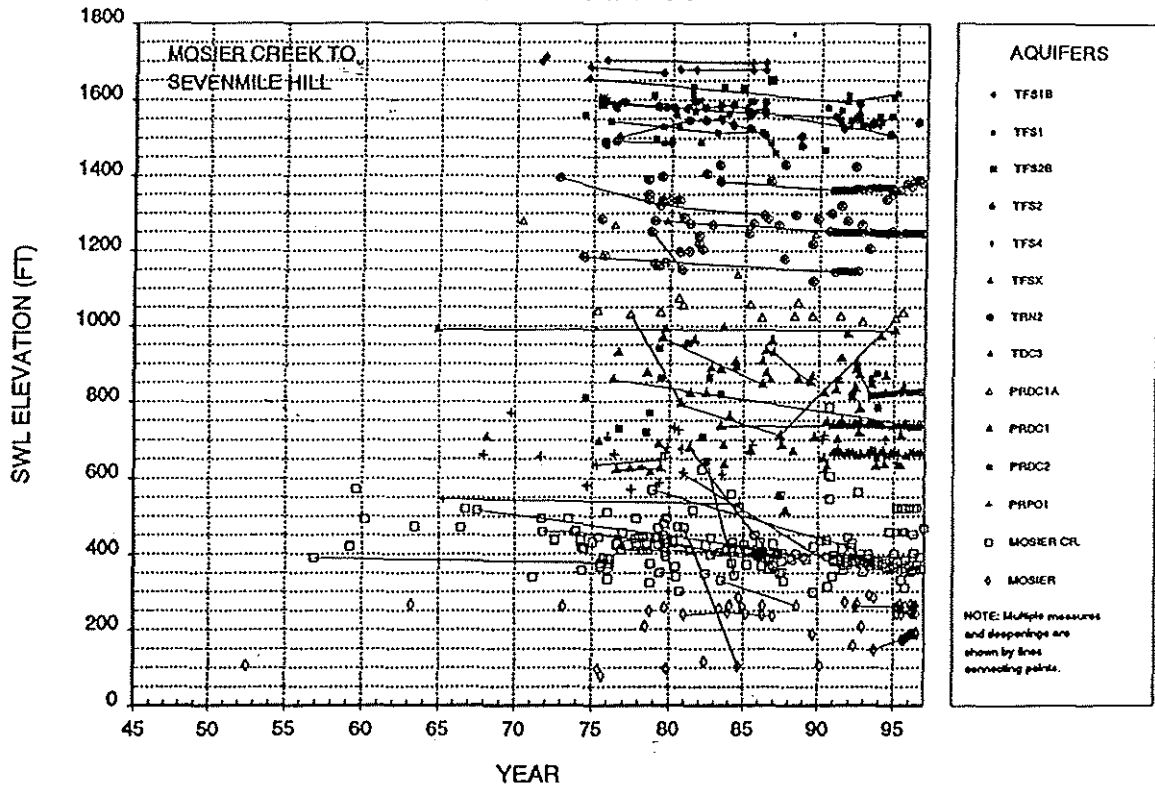


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.

significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

## DEEPENED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A

# WASCO COUNTY TLSA

HYDROGRAPH - WASCO#1046/STATE OBSERVATION WELL #916

CHENOWITH CO-OP WELL #2 (MUNICIPAL)

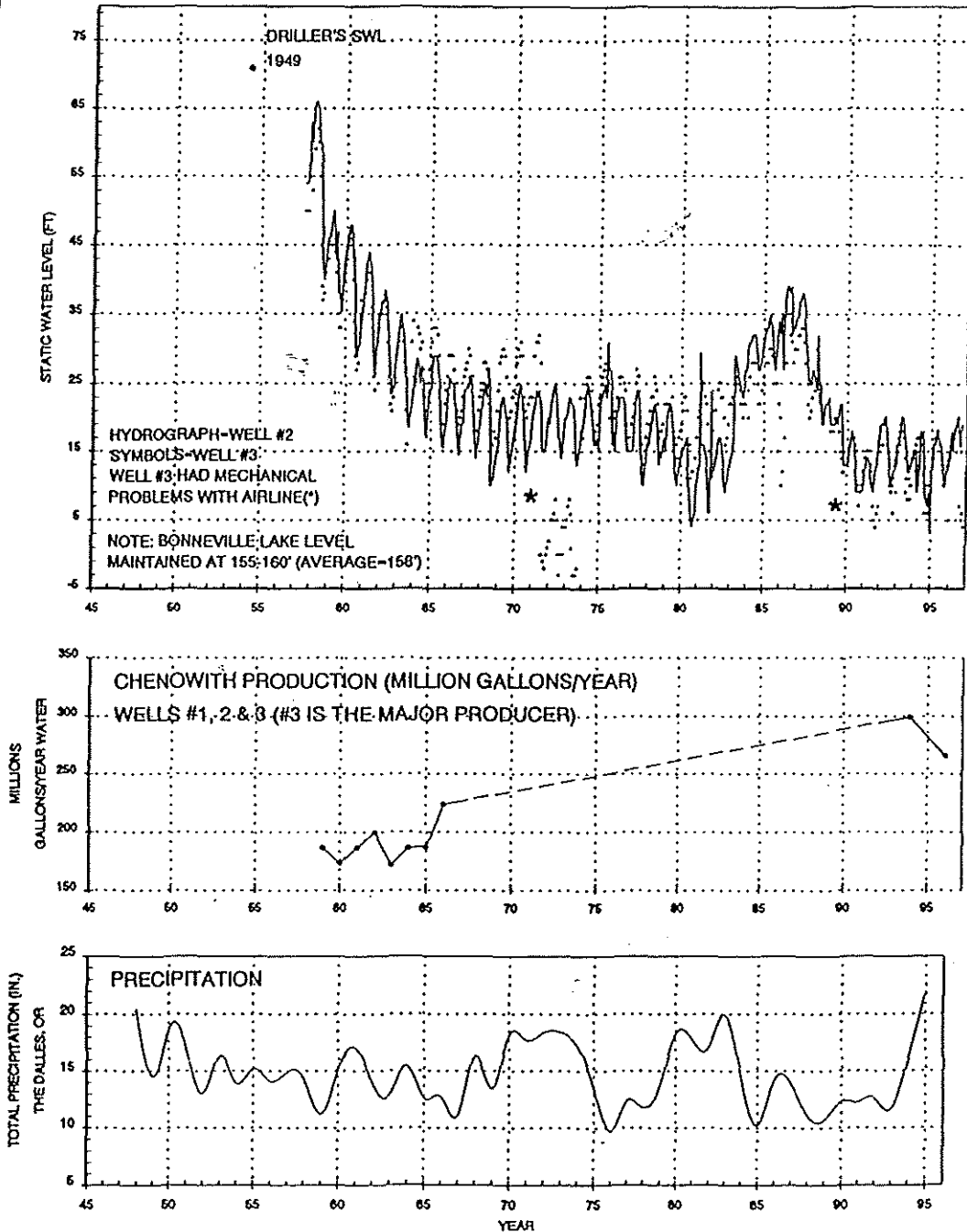


Figure 14. Chenowith Co-op water well data, 1949-1996.

# TLSA GROUND WATER EVALUATION

Chenoweth Co-op Well #3 Data

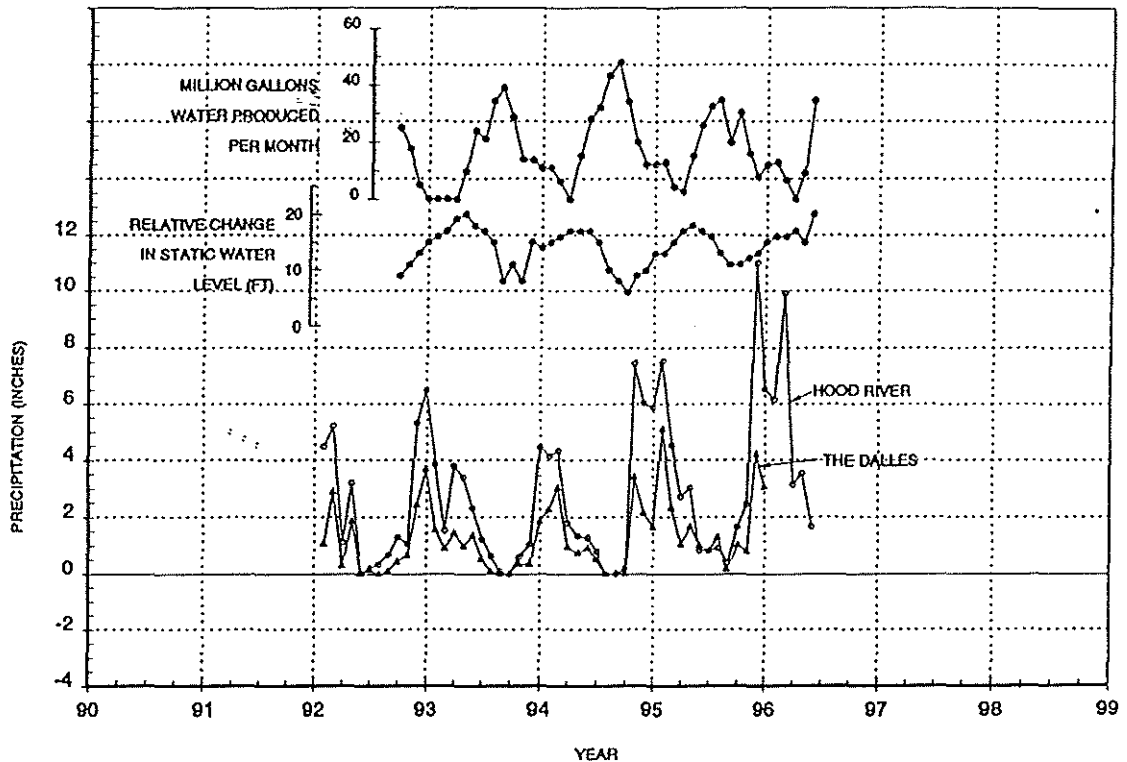


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.



similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level ( $>30'$ ).

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

#### 1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

#### 2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

# WASCO COUNTY TLSA General Water Well Data

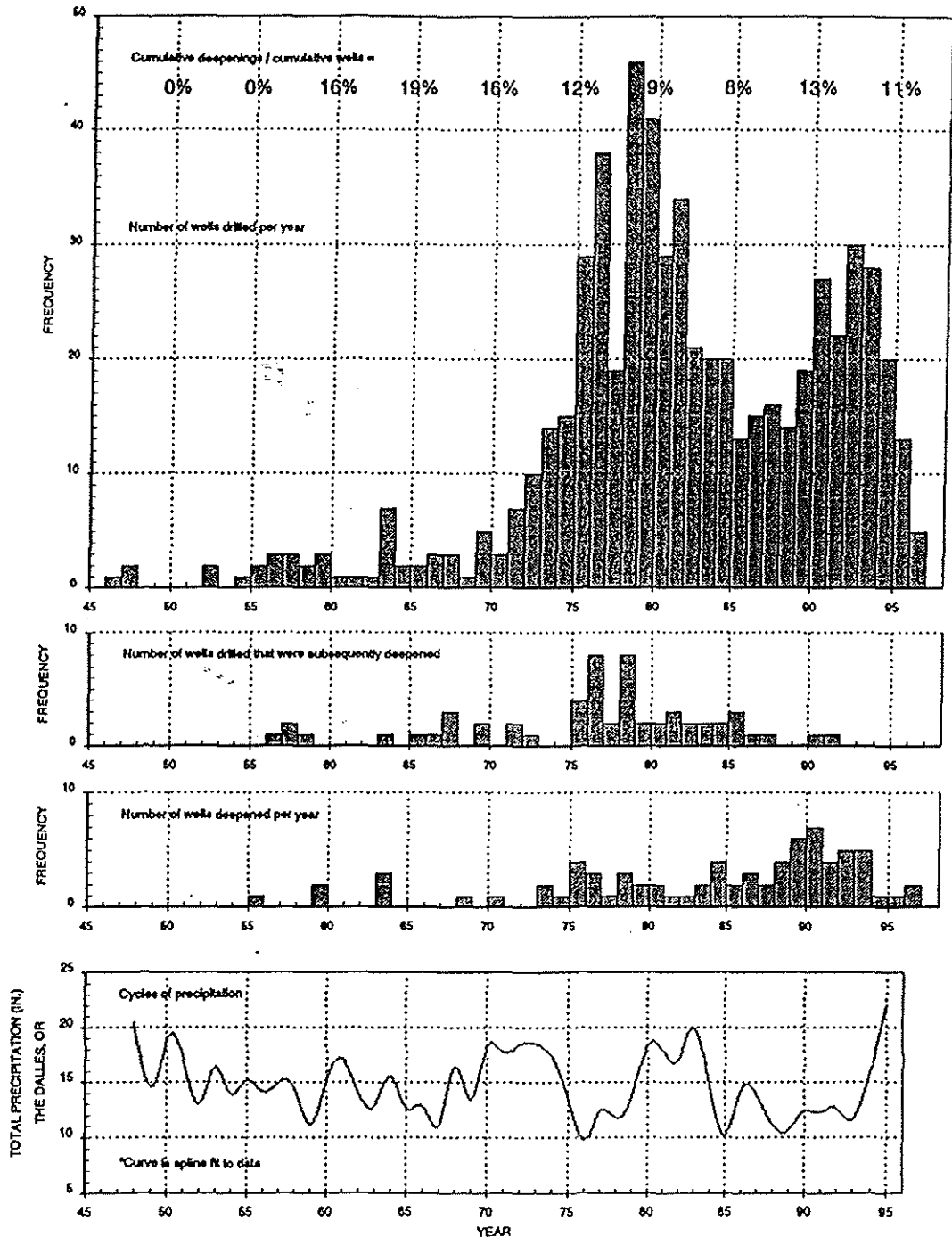


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepenings, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

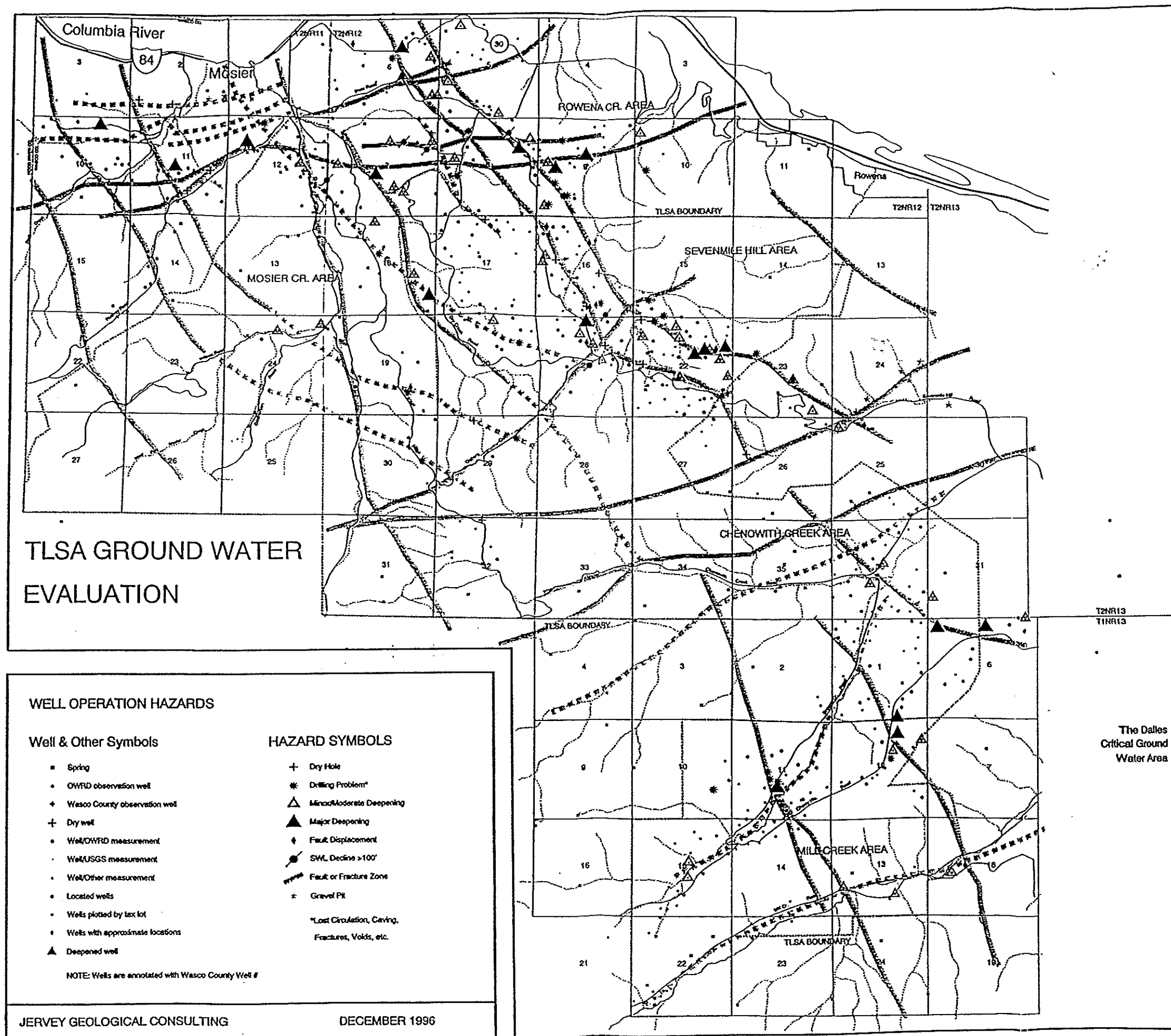






Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

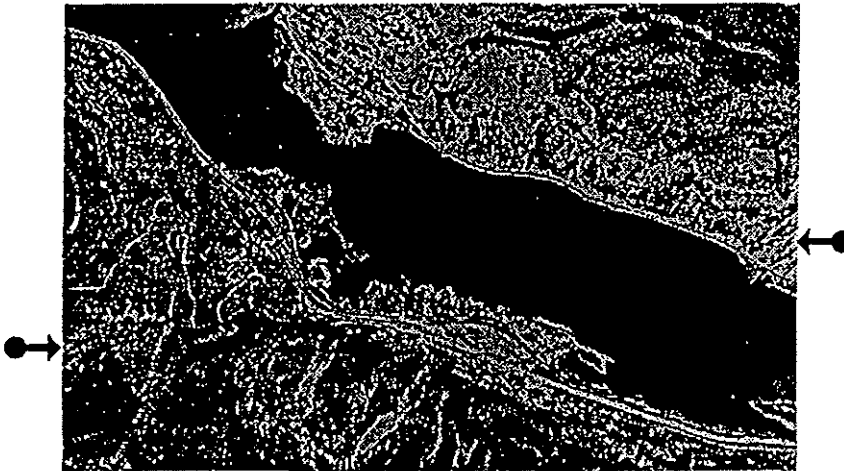
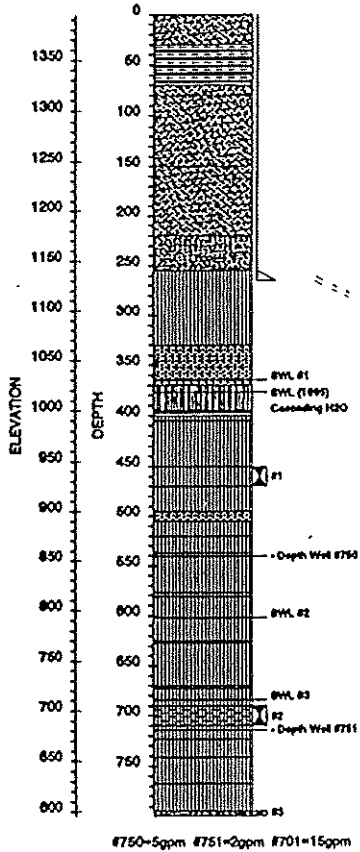


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

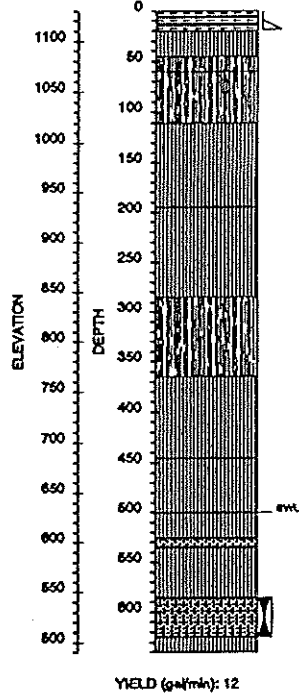


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

Well Location: 02:12:21  
 Wasco #750/751/701 Wicks  
 Date: 06/17/77 1030/80 06/01/87  
 Elev: 1395.0ft Well TD: 799.0ft  
 Well #750 deepened to well #751 and #701



Well Location: 02:12:16  
 Wasco #1859 Ringlebauer  
 Date: 07/24/90  
 Elev: 1130.0ft Well TD: 840.0ft



VERTICAL SCALE 1:1200  
 WATER-BEARING ZONE

Well Location: 02:12:09  
 Wasco #2004 Murray  
 Date: 04/25/92  
 Elev: 800.0ft Well TD: 770.0ft

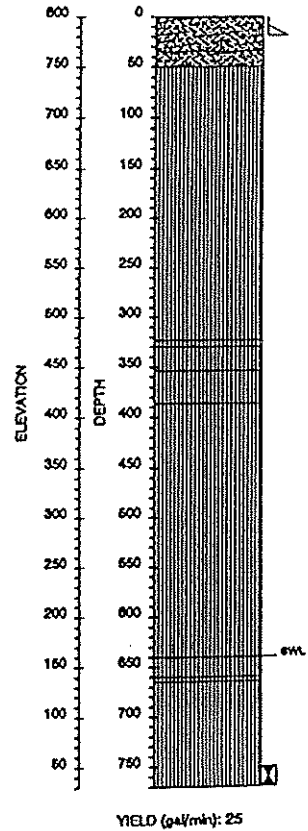


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

## WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

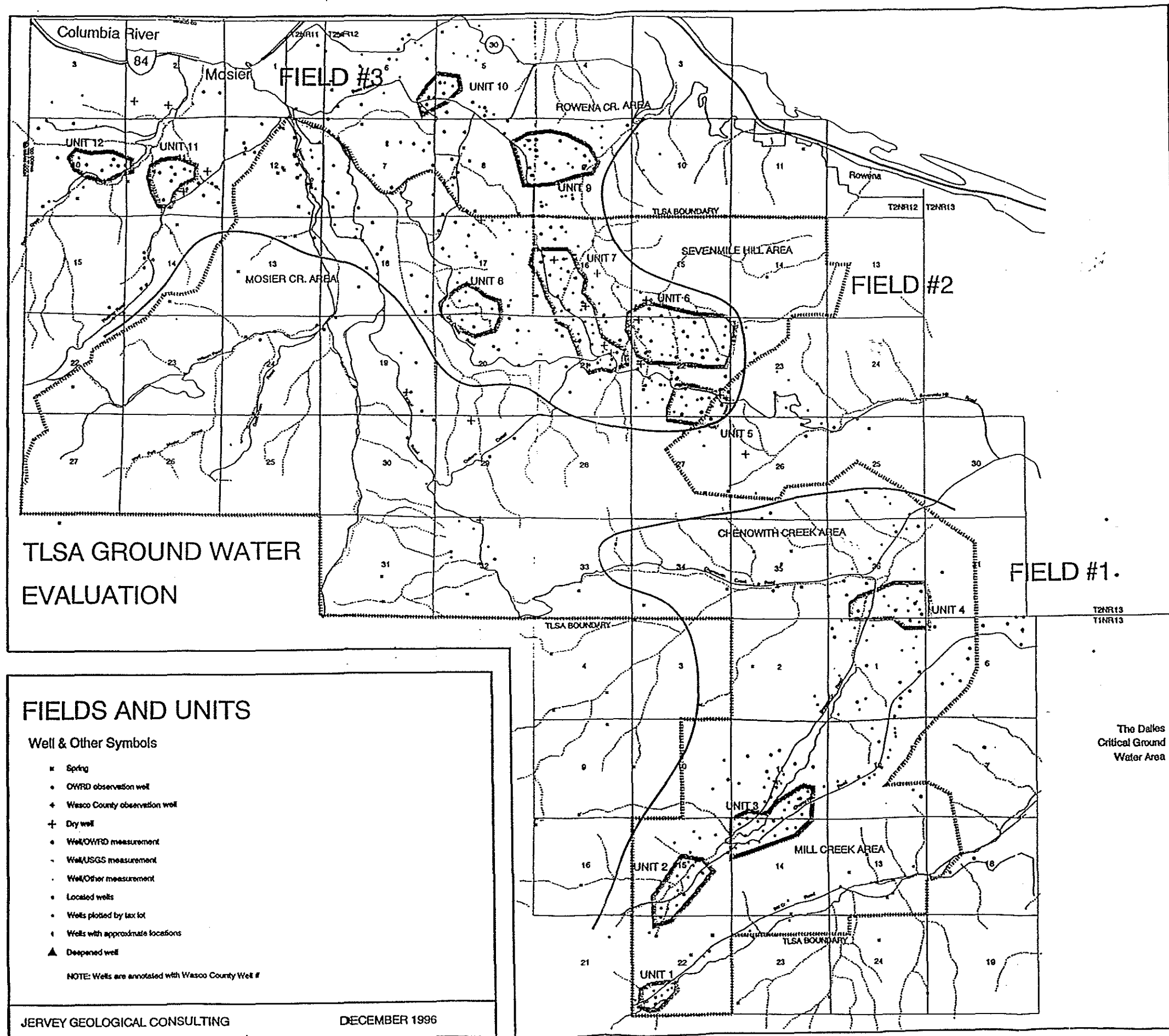
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

## REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.





## REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by land-owners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL WELLS	AREA ACRES	PER WELL	AVERAGE WELL DISTANCE FEET	AVERAGE LOWER 1/3 WELL DISTANCE FEET	DENSEST ACRES PER WELL	PRIORITY
1	TDC2A	8	49	6	388	318	3	
2	TDC2A&B	12	142	12	604	416	4	
3	TDC2B	19	212	11	653	478	5	
4	TDC1&2B	17	177	10	708	491	5	HIGH
5	TFB1&1B	12	123	10	602	393	4	
6	TFB2/TRN2	33	342	10	599	386	3	HIGH
7	TRN2 PRDC1A TFBX	32	322	10	563	333	3	HIGH
8	PRDC1	9	138	15	798	580	8	
9	PRPO1 MC TFBX	18	216	12	-	-	-	HIGH
10	MC	7	68	10	-	-	-	
11	HT/RC	7	97	14	-	-	-	
12	RC	7	91	13	-	-	-	

Table 3. Summary of well spacing in TLSA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### **WELL SPACING - IRRIGATION AREAS**

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### **WATER QUALITY**

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### **CONCLUSION**

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

## ACKNOWLEDGEMENTS

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

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Sue Bennett	Carol Goter	Mark and Diane Mazeski
Frans Bosman	Wayne Haythorn	Sandra and Deane Preston
Steven Cain	Delbert and Elaine Huskey	Bill and Jeanne Reeves
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Jim Deaton	Frank and Mary Kurz	Fred and Sylvian Stewart
Jackie Fulps	Nick and Mary Linebarger	

### PUBLIC AGENCIES/PRIVATE COMPANIES

Larry Toll/Staff Wasco County Watermasters Office	Jerry Schmidt Oregon Water Consultants, Inc.
Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenoweth Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

### WATER WELL DRILLERS

All well drillers in the past and present have contributed information to this study. Those who were especially helpful (in the detail of their well records and/or their comments on the subject) include:

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Harry Douthit	Clyde Root

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## Exhibit B

### Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.

**EXHIBIT 5**

**Soil Information – 49C and 50D**

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)	USDA TEXTURE		UNIFIED		AASHTO		PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY
							(PCT)	4	10	40	200		INDEX
0-7 IL			ML, CL-ML		A-4		0	195-100	95-100	90-95	55-75	20-25	NP-5
7-28 IL, SIL			ML, CL-ML		A-4		0	195-100	95-100	90-95	55-75	20-25	NP-5
28-44 IL, SCL			ML		A-4		0	195-100	95-100	90-95	55-75	30-35	5-10
44 IUWB													
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY	PERMEA- BILITY	AVAILABLE WATER CAPACITY	SOIL REACTION	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND EROD.	ORGANIC MATTER	CORROSIVITY		
		(G/CM3)	(IN/HR)	(IN/IN)	(PH)		(K)	(K)	(GROUP)	(PCT)	STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDROLYTIC	
				DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INITIAL	TOTAL	GRP. FROST
FREQUENCY				DURATION	MONTHS	(FT)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	ACTION
NONE						26.0			140-60	HARD	-		18 MODERATE

SANITARY FACILITIES													
SEVERE-PERCS SLOWLY													
ROADFILL													
IMPROBABLE-EXCESS FINES													
SEVERE-SLOPE													
SAND													
IMPROBABLE-EXCESS FINES													
SEVERE-DEPTH TO ROCK													
GRAVEL													
MODERATE-DEPTH TO ROCK, SLOPE													
TOPSOIL													
FAIR-AREA RECLAIM, SLOPE, THIN LAYER													
WATER MANAGEMENT													
SEVERE-SLOPE													
POND RESERVOIR AREA													
BUILDING SITE DEVELOPMENT													
MODERATE-DEPTH TO ROCK, SLOPE													
EMBANKMENTS DIKES AND LEVEES													
SEVERE-PIPING													
MODERATE-SLOPE													
EXCAVATED PONDS AQUIFER FED													
SEVERE-NO WATER													
MODERATE-DEPTH TO ROCK, SLOPE													
DRAINAGE													
DEEP TO WATER													
SEVERE-SLOPE													
SLOPE, ERODES EASILY													
IRRIGATION													
MODERATE-SLOPE, FROST ACTION													
TERRACES AND DIVERSIONS													
SLOPE, ERODES EASILY													
MODERATE-SLOPE													
GRASSED WATERWAYS													
SLOPE, ERODES EASILY													



## RECREATIONAL DEVELOPMENT

CAMP AREAS	MODERATE-SLOPE, DUSTY	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	MODERATE-SLOPE, DUSTY	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

CAPABILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)											
4E	35	1.5											

Severe limitations  
(e) erosion

## WOODLAND SUITABILITY

ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY COMMON TREES	SITE INDEX	TREES TO PLANT
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	70	PONDEROSA PINE

Index of potential productivity @ avg. water hlt. and 100 yds.  
 54 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac.  
 A = slight or no limitations.  
 U.S. Avg = 41 ft<sup>3</sup>/ac/yr.

## WINDBREAKS

SPECIES	HT	SPECIES	HT	SPECIES	HT	SPECIES	HT
NONE							

## WILDLIFE HABITAT SUITABILITY

POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:			
GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR

## POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)
IDAHO FESCUE	FEID	45
BLUEBUNCH WHEATGRASS	AGSP	10
SANDBERG BLUEGRASS	POSE	5
ARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	QUGA4	5
PONDEROSA PINE	PIPO	5
POTENTIAL PRODUCTION (LBS./AC. DRY WT.):		
FAVORABLE YEARS		950
NORMAL YEARS		800
UNFAVORABLE YEARS		950

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY			
					3	10	40	200		INDEX			
0-7	IL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	INP-5			
7-28	IL, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	INP-5			
28-44	IL, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	UWB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K I T)	EROSION FACTORS (GROUP)	WIND EROD. (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE		
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING													
HIGH WATER TABLE													
CEMENTED PAN													
BEDROCK													
SUBSIDIENCE													
HYDROLYTIC													
FROST													
FREQUENCY	DURATION	MONTHS	(FT)	KIND	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP	FROST	ACTION
NONE			26.0						140-60	HARD	-		MODERATE

SANITARY FACILITIES													
CONSTRUCTION MATERIAL													
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE										FAIR-AREA RECLAIM	THIN LAYER, SLOPE
ABSORPTION FIELDS							ROADFILL						
SEWAGE LAGOON AREAS	SEVERE-SLOPE						SAND					IMPROBABLE-EXCESS FINES	
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE					GRAVEL					IMPROBABLE-EXCESS FINES	
SANITARY LANDFILL (AREA)	SEVERE-SLOPE						TOPSOIL					POOR-SLOPE	
DAILY COVER FOR LANDFILL	POOR-SLOPE												
BUILDING SITE DEVELOPMENT													
SHALLOW EXCAVATIONS	SEVERE-SLOPE						EMBANKMENTS					SEVERE-PIPING	
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE						EXCAVATED PONDS					SEVERE-NO WATER	
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE						DRAINAGE					DEEP TO WATER	
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE						IRRIGATION					SLOPE, ERODES EASILY	
LOCAL ROADS AND STREETS	SEVERE-SLOPE						TERRACES AND DIVERSIONS					SLOPE, ERODES EASILY	
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE						GRASSED WATERWAYS					SLOPE, ERODES EASILY	



SEVERE-SLOPE		RECREATIONAL DEVELOPMENT		SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS			
SEVERE-SLOPE		PATHS AND TRAILS		SEVERE-ERODES EASILY	
PICNIC AREAS					
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)					
CAPABILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)			
4E	35	1.5			
WOODLAND SUITABILITY					
ORD SYM	MANAGEMENT PROBLEMS			POTENTIAL PRODUCTIVITY	
	EROSION: HAZARD	EQUIP. LIMIT	SEEDLING: MORT.Y.	WINDTH. HAZARD	PLANT COMPET.
14A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE
					PONDEROSA PINE
					OREGON WHITE OAK
					170
					PONDEROSA PINE
WINDBREAKS					
SPECIES	IHT	SPECIES	IHT	SPECIES	IHT
NONE					
WILDLIFE HABITAT SUITABILITY					
POTENTIAL FOR HABITAT ELEMENTS					
GRAIN & SEED	PASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS
POOR	FAIR	GOOD	FAIR	FAIR	FAIR
POTENTIAL AS HABITAT FOR:					
WETLAND	SHALLOW	OPENLD	WOODLD	WETLAND	RANGELD
IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	-
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)					
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)			
IDAH0 FESCUE	FEID	45			
SANDBERG BLUEGRASS	POSE	5			
BLUEBUNCH WHEATGRASS	AGSP	10			
ARROWLEAF BALSAMROOT	BASA3	2			
ANTELOPE BITTERBRUSH	PUTR2	10			
OREGON WHITE OAK	OUGA4	5			
PONDEROSA PINE	PIPO	5			
POTENTIAL PRODUCTION (LBS./AC. DRY WT):					
FAVORABLE YEARS		950			
NORMAL YEARS		800			
UNFAVORABLE YEARS		450			

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

# **EXHIBIT 6**

## **Guide for Using Soil Surveys**

**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**



GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.

## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty



Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.

Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:



<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0

Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low	.00, .02, .05, .10, .15, .17, .20
Moderate	.24, .28, .32, .37
High	.43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.



A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	

Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.



These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.

#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.



Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.

## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.



The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.



Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

## VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:



Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.

## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.



selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other

important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

#### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.



XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.

FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.



## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

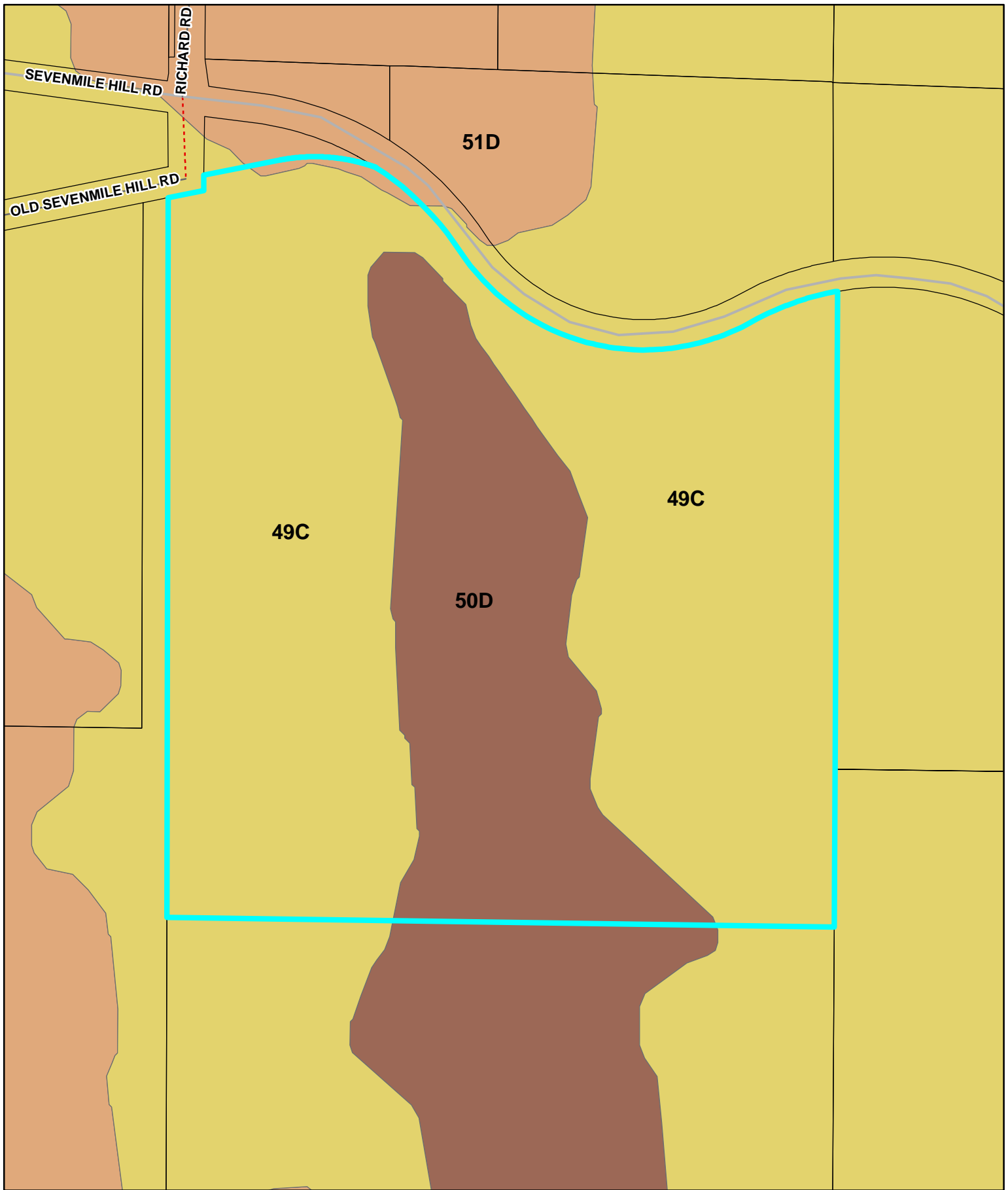
Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982

## **EXHIBIT 7**

### **Soil Map**



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

## Soil Map

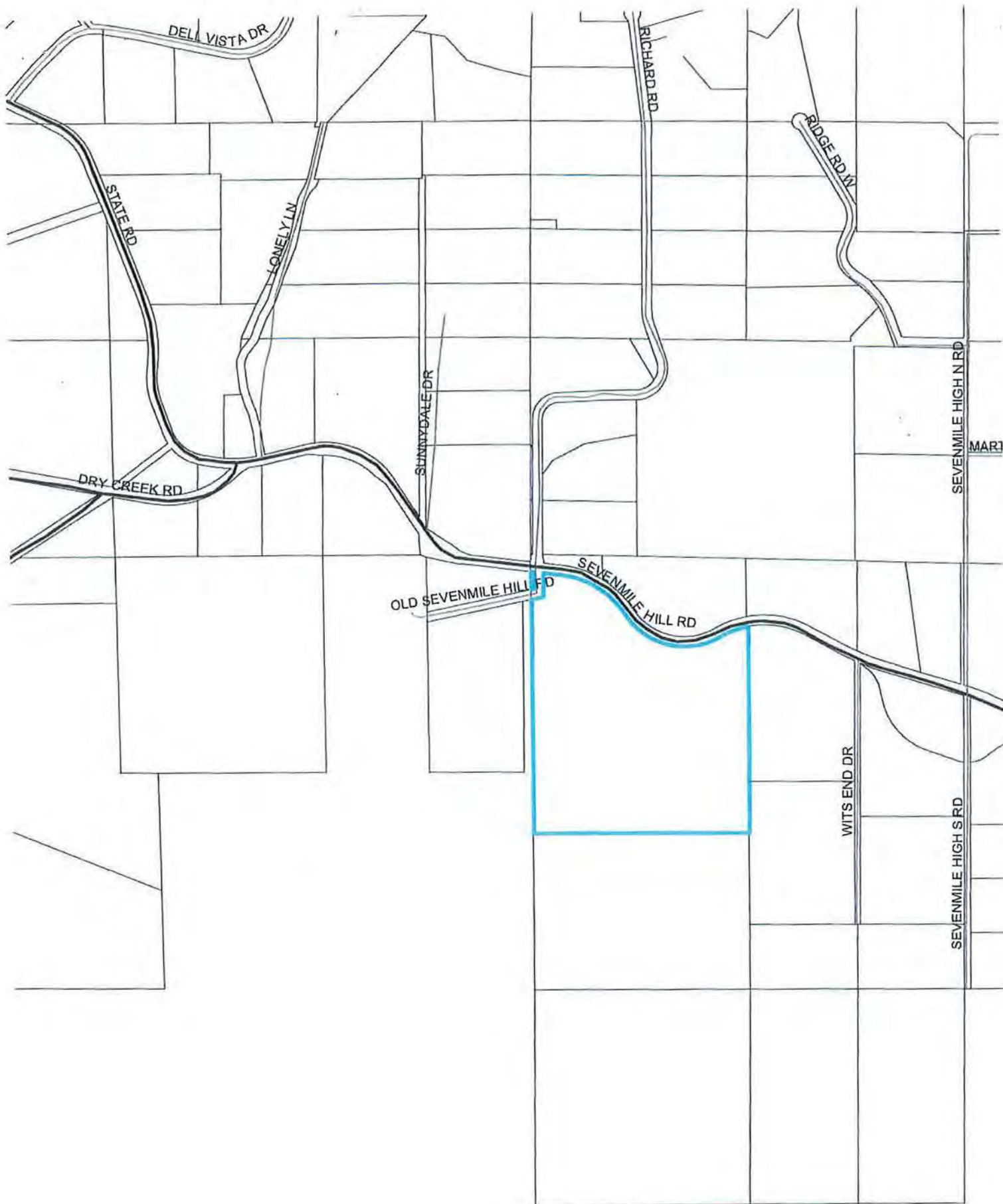
**Feet**  
 0 50 100 200 300 400

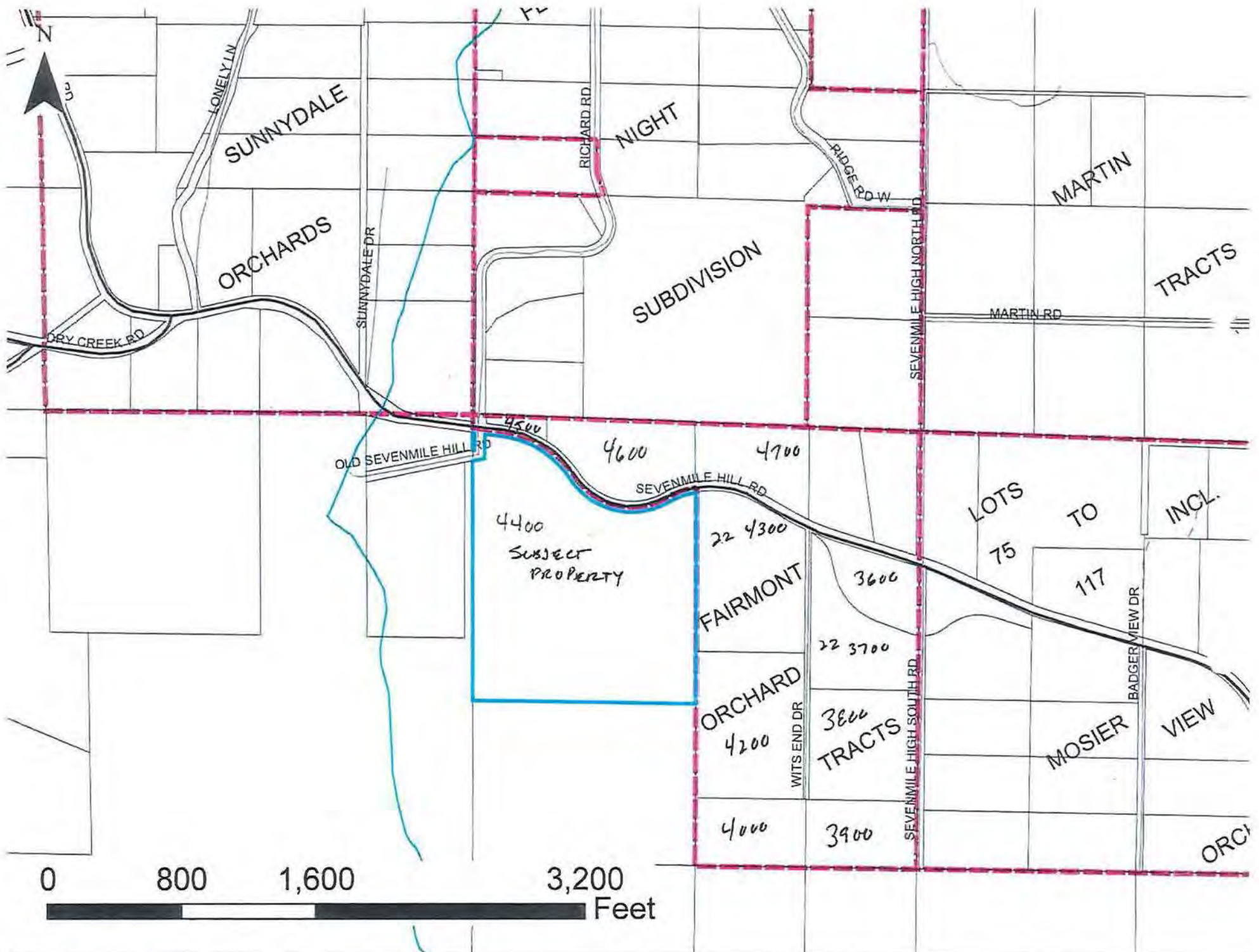
This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and determine whether to ascertain the usability of the information.



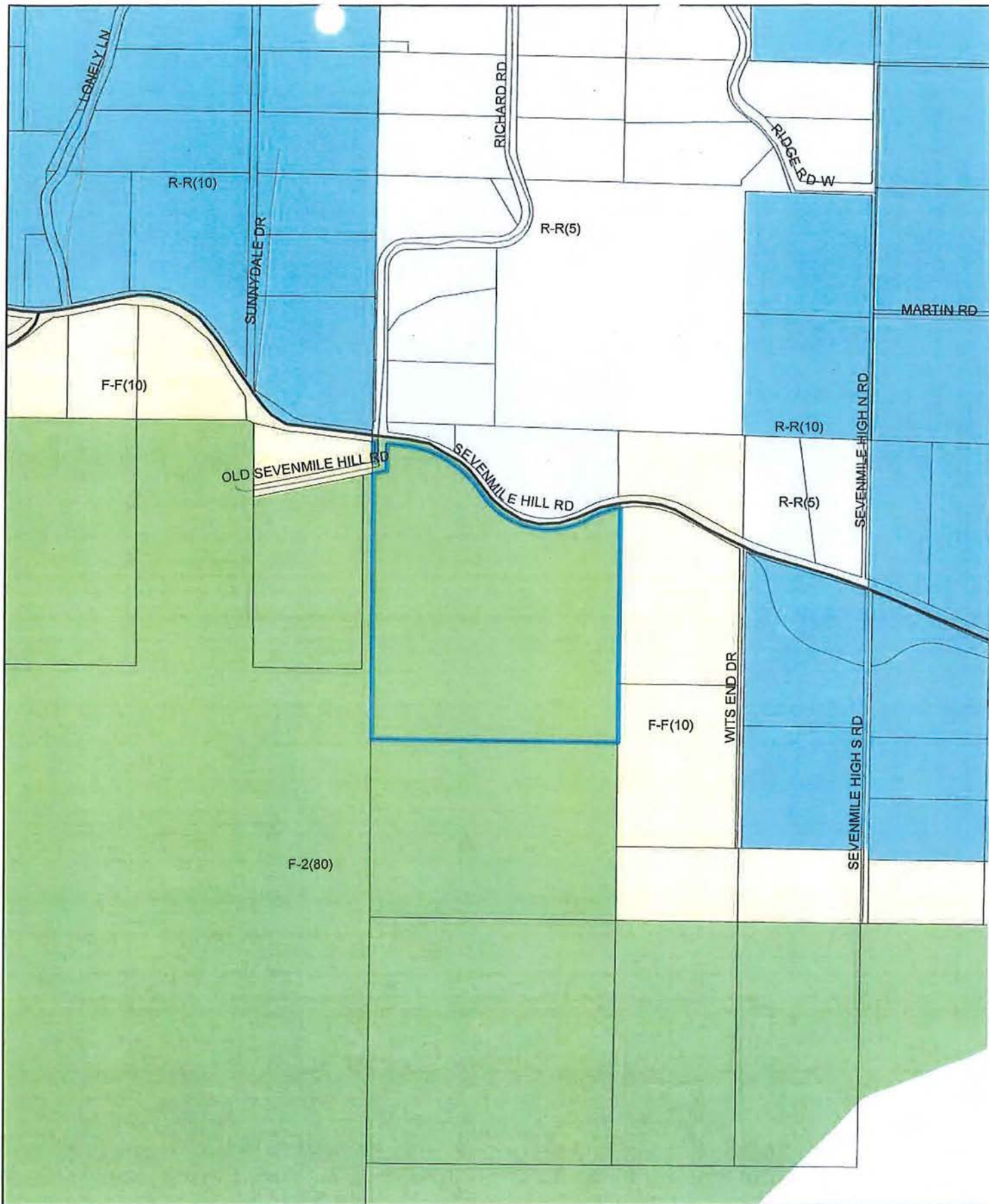
## **EXHIBIT 8**

### **Submitted Maps**



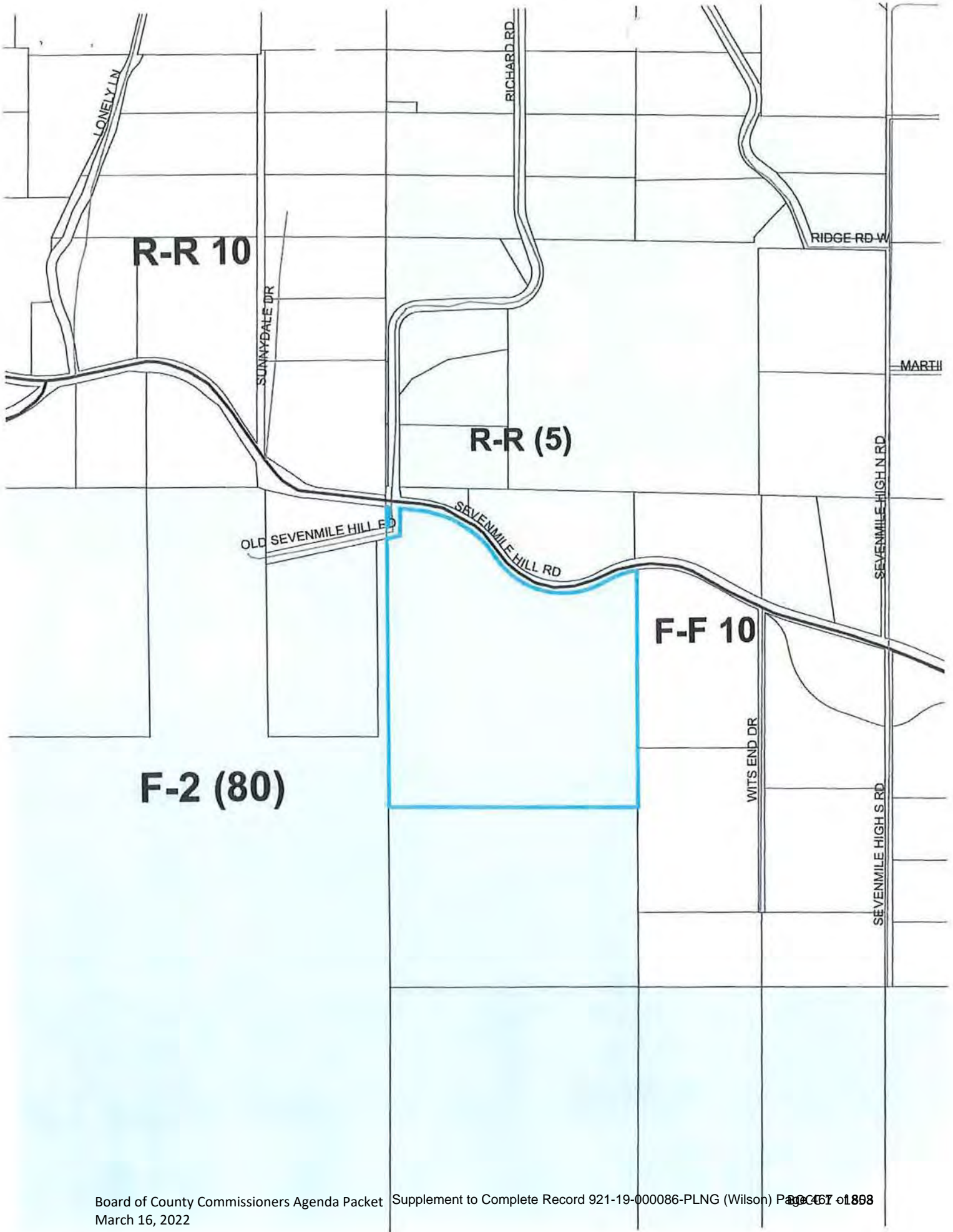






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Disclaimer  
The information on this map was derived from digital databases on Wasco County's GIS. Care was taken in the creation of this map but it is provided "as is". Wasco County cannot accept any responsibility for errors, omissions, or positional accuracy in the digital data or the underlying records. There are no warranties, express or implied, including the merchantability or fitness for a particular purpose, accompanying this map. If you have any questions or concerns, please contact the GIS User Support at 503.432.1800.



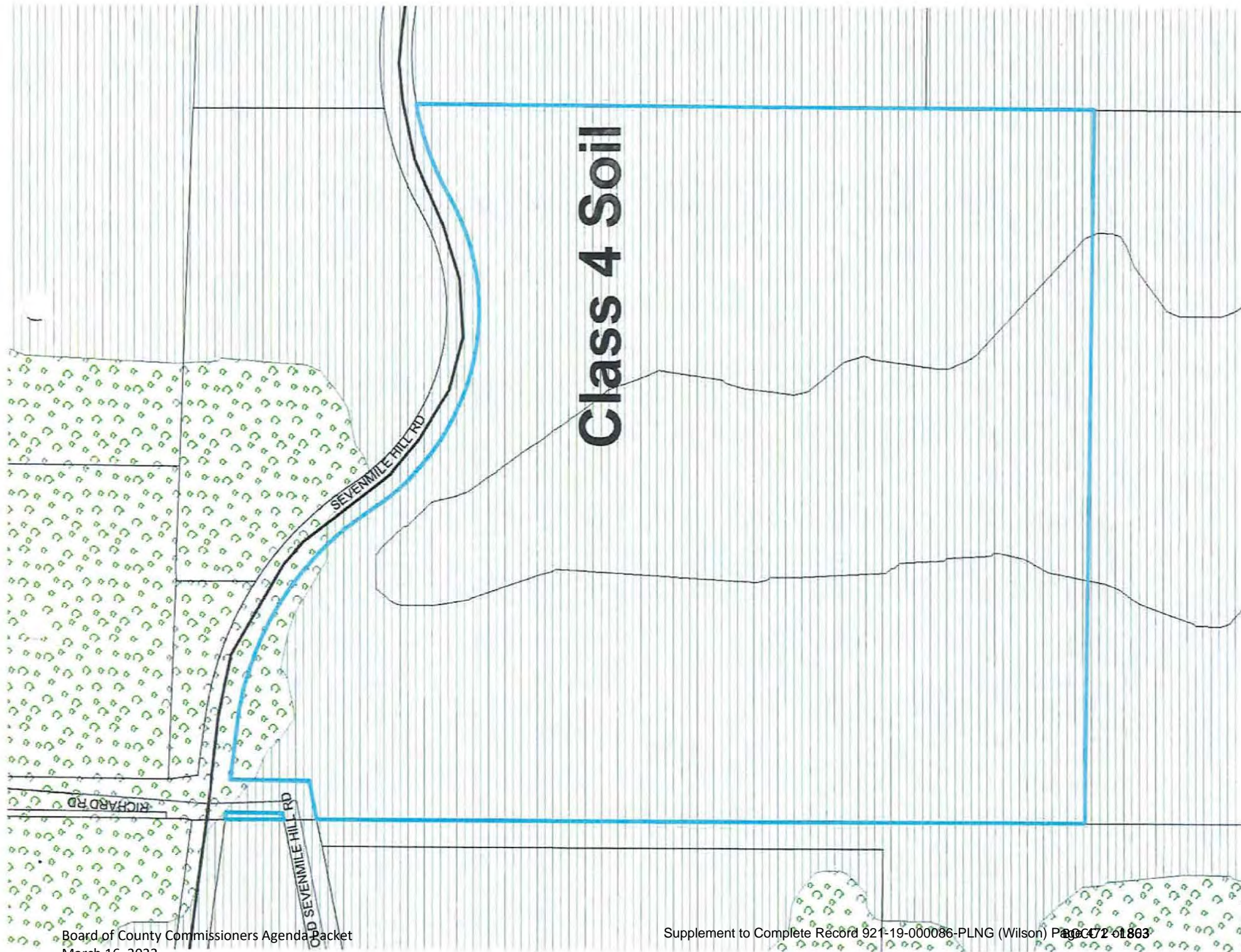




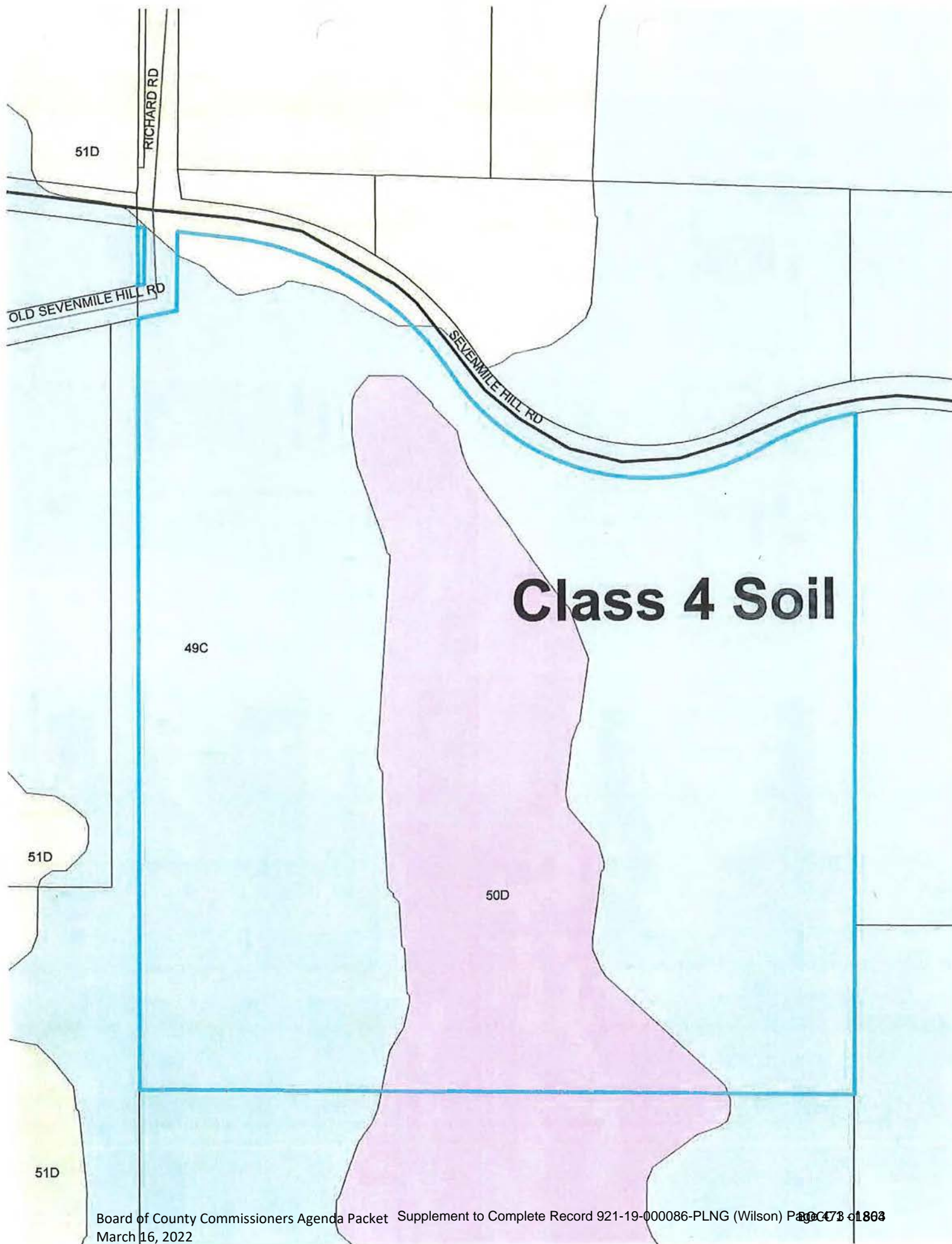


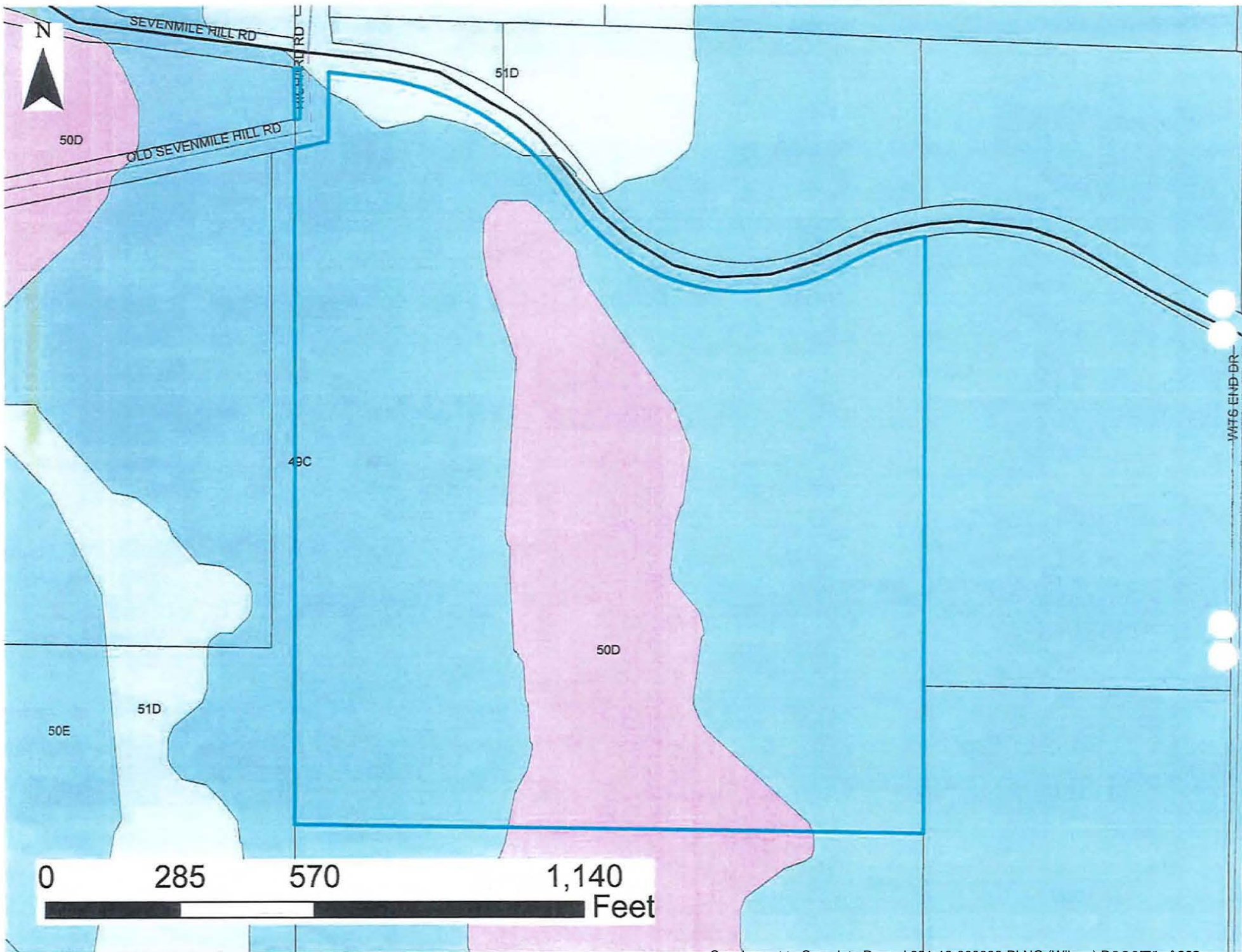


# Class 4 Soil













PLANNING DEPARTMENT

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FILE NUMBER: 921-18-000086-PLNG

FEE: 0 (paid previously)

## LAND USE APPLICATION COVERPAGE

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>APPLICANT INFORMATION</b>		<b>OWNER INFORMATION</b>	
Name:	<u>David W. Wilson</u>	Name:	<u>Same</u>
Address:	<u>7100 Seven Mile Hill Road</u>	Address:	<u></u>
City/State/Zip:	<u>The Dalles, Oregon 97058</u>	City/State/Zip:	<u></u>
Phone:	<u>(541) 490-3730</u>	Phone:	<u></u>
Email:	<u></u>	Email:	<u></u>

### PROPERTY INFORMATION

Township/Range/Section/Tax Lot(s)	Acct #	Acres	Zoning
2N 12E 22 4400	884	40.1	F-2

Property address (or location): 7100 Seven Mile Hill Road

Zoning Designation: F-2 Environmental Protection District: EPD 8

Proposed Use: F-F Permitted Subject to Section:

Water source: Well Sewage disposal method: Septic

Are there wetlands/waterways on your property? ☒ NO ☐ YES (description)

Name of road providing access: Seven Mile Hill Road

Current use of property: Residential Use of surrounding properties: Residential, farm

Do you own neighboring property? ☐ NO ☒ YES (description) Tax lots 4800, 2100

DETAILED PROJECT DESCRIPTION (proposed use, structures, dimensions, etc.):

Zone change from F-2 to F-F

☐ Additional description/maps/pictures attached

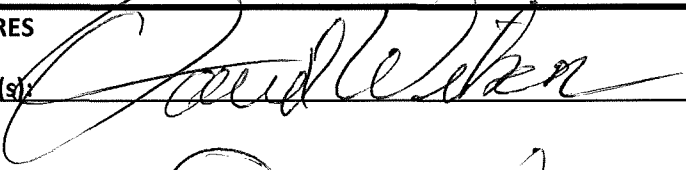
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**LEGAL PARCEL STATUS**

Partition, Subdivision, OR

Most Recent Pre-9/4/1974 Deed #: PLAPAR-17-05-0002 Date Filed: September 8, 2017

Current Deed #: \_\_\_\_\_ Date Filed: \_\_\_\_\_

*The deed and a map showing the property described in the deed(s) must accompany this application.***SIGNATURES**Applicant(s):  Date: 5/4/18Property Owner(s):  Date: 5/4/18

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PLEASE NOTE:** Before this application will be processed, you **must** supply all requested information and forms, and address **all listed or referenced criteria**. Pursuant to ORS 215.428, this office will review the application for completeness and notify Applicant of any deficiencies within 30 days of submission. By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.

**ALL LAND USE APPLICATIONS MUST INCLUDE:**

- ☐ Application Fee – Cash or Check (credit cards now accepted with additional fee)
- ☐ Site Plan
- ☐ Elevation Drawing
- ☐ Fire Safety Self-Certification
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_**APPLICATIONS FOR PROPERTIES IN THE NATIONAL SCENIC AREA MUST ALSO INCLUDE:**

- ☐ Scenic Area Application/Expedited Review
- ☐ Color and Material Samples
- ☐ Landscaping Plan
- ☐ Grading Plan
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_

**SHADED AREA TO BE COMPLETED BY PLANNING DEPARTMENT**

**Legal Parcel**

☐ NO

☐ YES

Deed/Land Use Action: \_\_\_\_\_

Previous Map and Tax Lot: \_\_\_\_\_

Past Land Use Actions: If yes, list file #(s) \_\_\_\_\_

☐ NO

☐ YES

Subject to previous conditions?

☐ NO

☐ YES

Assessor Property Class: \_\_\_\_\_

Zoning: \_\_\_\_\_

**Environmental Protection Districts – List applicable EPDs:**

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

**Water Resources**

Are there bodies of water or wetlands (seasonal or permanent) on property or adjacent properties?

☐ NO

☐ YES

Describe (include setback distances): \_\_\_\_\_

☐ Fish bearing

☐ Non fish bearing

☐ Seasonal Creek

☐ Irrigation ditch

☐ Wetland

☐ Pond/Lake

☐ Not identified

*(Note: Check buffers. Different zones have different setback requirements that may require a more extensive permitting process.)*

**Access:**

County or ODOT approach permit on file? ☐ NO ☐ YES, # \_\_\_\_\_

**Address:**

Address exists and has been verified to be correct?

☐ NO

☐ YES

Address needs to be assigned after approval?

☐ NO

☐ YES

Fire District: \_\_\_\_\_

Fees (List Review Type and Cost): \_\_\_\_\_



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FILE NUMBER: PLAZNC

FEE: \_\_\_\_\_

## ZONE CHANGE APPLICATION

Date Received: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

Date Complete: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

### Current Zoning

Comprehensive Plan Map Designation: FOREST

Zoning Designation: F.2 (80)

### Proposed Zoning

Comprehensive Plan Map Designation: FOREST- FARM

Zoning Designation: F.F (10)

Total Acreage to be Rezoned: 40.10

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. Describe how the original zoning was the product of a mistake; or
3. Establish that:
  - a. The rezoning will conform with the Comprehensive Plan (including but not limited to all applicable goals and policies); and,
    - Goal 1: Citizen Involvement
    - Goal 2: Land Use Planning
    - Goal 3: Agricultural Lands
    - Goal 4: Forest Lands
    - Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources
    - Goal 6: Air, Water and Land Resources Quality
    - Goal 7: Areas Subject to Natural Disasters and Hazards
    - Goal 8: Recreational Needs
    - Goal 9: Economy of the State
    - Goal 10: Housing
    - Goal 11: Public Facilities and Services
    - Goal 12: Transportation
    - Goal 13: Energy Conservation
    - Goal 14: Urbanization



- b. The site is suitable to the proposed zone (taking into consideration among other things slope, access, flooding, traffic, availability of public facilities and services, and impact to adjacent properties); and
  - c. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.
4. What effect would the proposed change have on surrounding properties? Include a description of the existing land uses within 1,000 feet of the proposed zone change.
  5. Is there a public need or demand to support this requested zone change? ☐ No ☐ Yes. If YES, please describe.
  6. Fire Safety. If converting Farm or Forest zoned land to a non-resource zone, include an analysis of how future division and residential development could meet fire safety standards.
  7. Any other information which may add to the viability of the request.

---

### SITE INFORMATION

The following maps shall be required for a complete application:

**Zoning Map:** Show area of proposed re-zoning.

**Soils Map:** If converting Forest or Farm zoned land to a non-resource zone include a soils map. These are available at the Wasco County GIS Department or the Farm Services Agency.

**Site Plan Map for the area to be rezoned and lands within at least 1000' that includes the following:**

- ☐ North Arrow
- ☐ Scale
- ☐ Boundaries or properties proposed to be rezoned (dimensions)
- ☐ All waterways, wetlands, noticeable landforms and drainage of property
- ☐ Structures (including dwelling, accessory buildings, barns, walls and fences) with location and size
- ☐ Utilities (existing)
  - Electric/Communication corridors including poles
  - Septic tanks & drain fields (primary and reserve)/Wells and supply lines
- ☐ All points of ingress and egress (roads and driveways) and whether they are public or private with their length, width and surface type
- ☐ Significant terrain features and land forms including slopes over 20%

---

### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Zone Change will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set. A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

In case of Appeal: Written notice of the appeal must be filed with the Planning Director, within twelve (12) days of the subject decision. Forms are available at the Wasco County Planning Department.



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FILE NUMBER: PLACPA-

FEE: \_\_\_\_\_

## COMPREHENSIVE PLAN AMENDMENT

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>PROPOSED CHANGE</b>			

Indicate specific Comprehensive Plan section(s) or element(s) proposed to be amended or added:

Amend Comprehensive Plan to re-zone tax lot 2N 12E 22 4400 from F-2(80) to F-F(10)

### FINDS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. A landowner or their representative may only initiate a quasi-judicial plan amendment. Describe how the proposal meets the standard of a quasi-judicial amendment and not a legislative amendment.

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership.

3. The amendment will be in compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable and substantial proof that such change shall not be detrimental to the spirit and intent of such goals. These goals include:

Goal 1: Citizen Involvement

Goal 2: Land Use Planning

Goal 3: Agricultural Lands

Goal 4: Forest Lands

Goal 5: Open Spaces, Scenic and Historic Areas  
and Natural Resources

Goal 6: Air, Water and Land Resources Quality

Goal 7: Areas Subject to Natural Disasters and Hazards

Goal 8: Recreational Needs

Goal 9: Economy of the State

Goal 10: Housing

Goal 11: Public Facilities and Services

Goal 12: Transportation

Goal 13: Energy Conservation

Goal 14: Urbanization

4. Demonstrate there was a mistake in the original comprehensive plan or change in the character of the neighborhood.
  5. Address factors which relate to the public need for healthful, safe and aesthetic surrounding and conditions.
  6. Include proof of change in the inventories originally developed.
  7. Amendment shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established. Provide additional studies and established need to justify the amendment.
- A response (findings of fact) to each of the questions above has been submitted? ☐ No ☒ YES

---

#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Comprehensive Plan Amendment will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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PLANNING DEPARTMENT

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FILE NUMBER: PLAEXC

FEE: \_\_\_\_\_

## GOAL EXCEPTION APPLICATION

Date Received: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

Date Complete: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

### PROPOSED EXCEPTION

Indicate the Goal(s) for which the exception is requested:

Goal 4 - Forest Lands

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed goal exception?
2. Is there a public need or demand to support this requested Goal Exception? ☐ No ☐ Yes. If YES, please describe.
3. An exception is a decision to exclude certain land from the requirements of one or more applicable statewide goals. Goal Exceptions fall into three categories: Physically Developed; Irrevocably Committed; and Reasons.

Indicate which type of goal exception is being proposed and include findings for the review criteria listed below and any additional referenced criteria. These are directly from Oregon Administrative Rule and are available at [http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_004.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_004.html). Oregon Revised Statute criteria are available at <http://landru.leg.state.or.us/ors/>

a. Exception Requirements for Land Physically Developed to Other Uses

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.



**b. Exception Requirements for Land Irrevocably Committed to Other Uses**

- (1)** A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a)** A "committed exception" is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b)** For the purposes of this rule, an "exception area" is that area of land for which a "committed exception" is taken;
  - (c)** An "applicable goal," as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.
- (2)** Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:
  - (a)** The characteristics of the exception area;
  - (b)** The characteristics of the adjacent lands;
  - (c)** The relationship between the exception area and the lands adjacent to it; and
  - (d)** The other relevant factors set forth in OAR 660-004-0028(6).
- (3)** Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(1)(b), in Goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is "impossible." For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable:
  - (a)** Farm use as defined in ORS 215.203;
  - (b)** Propagation or harvesting of a forest product as specified in OAR 660-033-0120; and
  - (c)** Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).
- (4)** A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.
- (5)** Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.
- (6)** Findings of fact for a committed exception shall address the following factors:
  - (a)** Existing adjacent uses;
  - (b)** Existing public facilities and services (water and sewer lines, etc.);
  - (c)** Parcel size and ownership patterns of the exception area and adjacent lands:
    - (i)** Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels;

- (ii) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownerships are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.
  - (d) Neighborhood and regional characteristics;
  - (e) Natural or man-made features or other impediments separating the exception area from adjacent resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;
  - (f) Physical development according to OAR 660-004-0025; and
  - (g) Other relevant factors.
- (7) The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.
- (8) The requirement for a map or aerial photograph in section (7) of this rule only applies to the following committed exceptions:
  - (a) Those adopted or amended as required by a Continuance Order dated after the effective date of section (7) of this rule; and
  - (b) Those adopted or amended after the effective date of section (7) of this rule by a jurisdiction with an acknowledged comprehensive plan and land use regulations.
- c. Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)  
 An exception Under Goal 2, Part II(c) can be taken for any use not allowed by the applicable goal(s). The types of reasons that may or may not be used to justify certain types of uses not allowed on resource lands are set forth in the following sections of this rule:
  - (1) For uses not specifically provided for in subsequent sections of this rule or in OAR 660-012-0070 or chapter 660, division 14, the reasons shall justify why the state policy embodied in the applicable goals should not apply. Such reasons include but are not limited to the following:
    - (a) There is a demonstrated need for the proposed use or activity, based on one or more of the requirements of Goals 3 to 19; and either
    - (b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near the resource. An exception based on this subsection must include an analysis of the market area to be served by the proposed use or activity. That analysis must demonstrate that the proposed exception site is the only one within that market area at which the resource depended upon can reasonably be obtained; or
    - (c) The proposed use or activity has special features or qualities that necessitate its location on or near the proposed exception site.
  - (2) Rural Residential Development: For rural residential development the reasons cannot be based on market demand for housing, except as provided for in this section of this rule, assumed continuation of past urban and rural population distributions, or housing types and cost characteristics. A county must show why, based on the economic analysis in the plan, there are reasons for the type and density of housing planned which require this particular location on resource lands. A jurisdiction could justify an exception to allow residential development on resource land outside an urban growth boundary by determining that the rural

location of the proposed residential development is necessary to satisfy the market demand for housing generated by existing or planned rural industrial, commercial, or other economic activity in the area.

- (3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts include, but are not limited to, the following:
- (a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports; or
  - (b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or
  - (c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.
- (4) Expansion of Unincorporated Communities: For the expansion of an Unincorporated Community defined under OAR 660-022-0010(10), appropriate reasons and facts include but are not limited to the following:
- (a) A demonstrated need for additional land in the community to accommodate a specific rural use based on Goals 3-19 and a demonstration that either:
    - (i) The use requires a location near a resource located on rural land; or
    - (ii) The use has special features necessitating its location in an expanded area of an existing unincorporated community, including:
      - (a) For industrial use, it would have a significant comparative advantage due to its location (i.e., near a rural energy facility, or near products available from other activities only in the surrounding area; or it is reliant on an existing work force in an existing unincorporated community);
      - (b) For residential use, the additional land is necessary to satisfy the need for additional housing in the community generated by existing industrial, commercial, or other economic activity in the surrounding area. The plan must include an economic analysis showing why the type and density of planned housing cannot be accommodated in an existing exception area or UGB, and is most appropriate at the particular proposed location. The reasons cannot be based on market demand for housing, nor on a projected continuation of past rural population distributions.
  - (b) Need must be coordinated and consistent with the comprehensive plan for other exception areas, unincorporated communities, and UGBs in the area. Area encompasses those communities, exception areas, and UGBs which may be affected by an expansion of a community boundary, taking into account market, economic, and other relevant factors;
  - (c) Expansion requires demonstrated ability to serve both the expanded area and any remaining infill development potential in the community at time of development with the level of facilities determined to be appropriate for the existing unincorporated community.
- (5) Expansion of Urban Unincorporated Communities: Expansion of an urban unincorporated community defined under OAR 660-022-0010(9) shall comply with OAR 660-022-0040.

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information pursuant to the attached instructions. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Goal Exception will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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Last Updated 7/13/2017



**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40 acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells, and there is a well on the subject property serving the existing residence and associated accessory buildings. The general conclusion of the Groundwater Study is that this area has capacity to support additional residential development. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the

TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

- 1.1.** The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."
- 1.2.** This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."



**1.3.** The following provisions apply and are addressed in the following sections.

**1.4.** Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

**1.5.** Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

**1.6.** The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_)

**1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is "To maintain and improve the quality of the air, water and land resources of the state." The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is "To protect people and property from natural hazards." Goal 7 calls for local governments to adopt measures "to reduce risk to people and property from natural hazards." The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts." If the zoning is changed to F-F(10), "Parks, playgrounds, hunting and fishing preserves and campgrounds" would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is "To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens." The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is "To provide for the housing needs of citizens of the state." The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid- Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the



area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

"1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - "TPR"). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.



## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 Forest Lands.”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 north south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.



## 2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### 2.3.1 OAR 660-004-0028(1) provides:

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### 2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### 2.3.3 (b) “the characteristics of the adjacent lands;”

#### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911;

Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

#### 2.3.4 (c) The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of

these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

- (a) Farm use as defined in ORS 215.203;
- (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;
- (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other



agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice." Webster's New World Dictionary, 2nd College Edition, 1980. Capable means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (unabridged ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of "forest products" can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores."

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared

for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1 (a)** Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2 (b)** Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject

property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas



to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6 (f)** “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7 “(g) Other relevant factors;”**

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3 OAR 660-004-0040(6) and (7) provide:**

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;



(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

"Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);"

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<sup>1</sup> Missing text in published version of Section 9.010.

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  1. The rezoning will conform with the Comprehensive Plan; and,
  2. The site is suitable to the proposed zone;
  3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable

plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

### Goal 12 -Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road



is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property, which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and

increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID PLAS-		LIMIT TICI-			
				(PCT)	4	10	40	200			INDEX		
0-7	IL	HL, CL-ML	A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5			
7-28	IL, SIL	HL, CL-ML	A-4	0	195-100	95-100	90-95	55-75	20-25	NP-5			
28-44	IL, SCL	HL	A-4	0	195-100	95-100	90-95	55-75	30-35	5-10			
44	UWB												
DEPTH	CLAY	MOIST BULK	PERMEA-	AVAILABLE	SOIL	SALINITY	SHRINK-	EROSION	WIND	ORGANIC	CORROSIVITY		
(IN.)	(PCT)	DENSITY	BILITY	WATER CAPACITY	REACTION	(MMHOS/CM)	SWELL	FACTORS	EROD.	MATTER	STEEL	CONCRETE	
		(G/CM3)	(IN/HR)	(IN/IN)	(PH)		POTENTIAL	K	T	GROUP	(PCI)		
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	16-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SURSIDENCE		HYDRO-POTENTIAL	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE
SANITARY FACILITIES						CONSTRUCTION MATERIAL							
SEPTIC TANK	SEVERE-PERCS SLOWLY					ROADFILL		FAIR-AREA RECLAIM, THIN LAYER					
ABSORPTION FIELDS													
SEWAGE LAGOON AREAS	SEVERE-SLOPE					SAND		IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK					GRAVEL		IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE					TOPSOIL		FAIR-SLOPE					
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER					POND RESERVOIR AREA		SEVERE-SLOPE					
BUILDING SITE DEVELOPMENT						WATER MANAGEMENT							
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE					EMBANKMENTS DIKES AND LEVEES		SEVERE-PIPING					
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE					EXCAVATED PONDS AQUIFER FEO		SEVERE-NO WATER					
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE					DRAINAGE		DEEP TO WATER					
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE					IRRIGATION		SLOPE, ERODES EASILY					
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION					TERRACES AND DIVERSIONS		SLOPE, ERODES EASILY					
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE					GRASSED WATERWAYS		SLOPE, ERODES EASILY					

RECREATIONAL DEVELOPMENT														
CAMP AREAS	MODERATE-SLOPE, DUSTY						PLAYGROUNDS		SEVERE-SLOPE					
PICNIC AREAS	MODERATE-SLOPE, DUSTY						PATHS AND TRAILS		SEVERE-ERODES EASILY					
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)														
CAPABILITY		WHEAT		GRASS HAY										
(BU)		(TONS)												
4E	35	1.5												
<i>Severe limitations ie) erosion</i>														
WOODLAND SUITABILITY														
ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY		COMMON TREES		SITE INDEX		TREES TO PLANT		
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK		70		PONDEROSA PINE				
<i>4 out of 5 / 100% / 57.2 / 43/100</i>														
WINDBREAKS														
SPECIES		IHT		SPECIES		IHT		SPECIES		IHT		SPECIES		
NONE														
WILDLIFE HABITAT SUITABILITY														
POTENTIAL FOR HABITAT ELEMENTS														
GRAIN & GRASS		WILD HERB.		HARDWOOD TREES		CONIFER PLANTS		SHRUBS		WETLAND PLANTS		WETLAND WILDLIFE		
FAIR		GOOD		FAIR		FAIR		FAIR		POOR		POOR		
POTENTIAL AS HABITAT FOR:														
WETLAND		WETLAND		WETLAND		WETLAND		WETLAND		WETLAND		WETLAND		
FAIR		FAIR		FAIR		FAIR		FAIR		FAIR		FAIR		
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)														
COMMON PLANT NAME		PLANT SYMBOL (NLSPN)		PERCENTAGE COMPOSITION (DRY WEIGHT)										
IDAHO FESCUE		FE10		45										
BLUEBUNCH WHEATGRASS		AGSP		10										
SANDBERG BLUEGRASS		POSE		5										
ARROWLEAF BALSAMROOT		BASA3		2										
ANTELOPE BITTERBRUSH		PUTR2		10										
OREGON WHITE OAK		QUGA4		5										
PONDEROSA PINE		PIPO		5										
POTENTIAL PRODUCTION (LBS./AC. DRY WT):														
FAVORABLE YEARS				950										
NORMAL YEARS				800										
UNFAVORABLE YEARS				450										
FOOTNOTES														

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

## ESTIMATED SOIL PROPERTIES

DEPTH: (IN.)				USDA TEXTURE	UNIFIED	AASHTO	FRACT:PERCENT OF MATERIAL LESS 3 IN. THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY				
							(PCT)	4	10	40	200		INDEX			
0-7				IL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28				IL, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44				IL, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44				UWB												
DEPTH:CLAY				MOIST BULK	PERMEA-	AVAILABLE	SOIL	SALINITY	SHRINK-	EROSION	WIND	ORGANIC	CORROSIVITY			
(IN.)				(PCT)	DENSITY	BILITY	WATER CAPACITY	REACTION	(MMHOS/CM)	SWELL	FACTORS	EROD.	MATTER			
				(G/CM3)	(IN/HR)	(IN/IN)	(PH)		POTENTIAL	K	I	GROUP	(PCI)	STEEL	CONCRETE	
0-7				15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28				18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44				20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44																
FLOODING				HIGH WATER TABLE				CEMENTED PAN		BEDROCK		SUBSIDENCE		HYD: POTENT		L
				DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP	FROST		
FREQUENCY				DURATION	MONTHS	(FT)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	ACTION		
NONE						>6.0		-		140-60	HARD	-		1	MODERATE	

## SANITARY FACILITIES

## CONSTRUCTION MATERIAL

SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY, SLOPE	ROADFILL	FAIR-AREA RECLAIM, THIN LAYER, SLOPE
SEWAGE LAGOON AREAS	SEVERE-SLOPE	SAND	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE	GRAVEL	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-SLOPE	TOPSOIL	POOR-SLOPE
DAILY COVER FOR LANDFILL	POOR-SLOPE	POND RESERVOIR AREA	SEVERE-SLOPE
BUILDING SITE DEVELOPMENT		WATER MANAGEMENT	
SHALLOW EXCAVATIONS	SEVERE-SLOPE	EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE	EXCAVATED PONDS AQUIFER FED	SEVERE-NO WATER
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE	DRAINAGE	DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE	IRRIGATION	SLOPE, ERODES EASILY
LOCAL ROADS AND STREETS	SEVERE-SLOPE	TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE	GRASSED WATERWAYS	SLOPE, ERODES EASILY

RECREATIONAL DEVELOPMENT

CAMP AREAS	SEVERE-SLOPE	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

[illegible]

## WOODLAND SUITABILITY

[illegible]

# WINDBREAKS

[illegible]

## WILDLIFE HABITAT SUITABILITY

[illegible]

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

POTENTIAL NATIVE PLANT SPECIES	PLANT SYMBOL	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	SYMBOL	
IDAHO FESCUE	FEID	45
SANDBERG BLUEGRASS	POSE	5
BLUEBUNCH WHEATGRASS	AGSP	10
NARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	GUGA4	5
PONDEROSA PINE	PIPO	5

POTENTIAL PRODUCTION (LBS./AC. DRY WT):					
FAVORABLE YEARS	950				
NORMAL YEARS	800				
UNFAVORABLE YEARS	450				

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

RECEIVED 9-25-92  
FROM ODF

Ponderosa Pine Site Classes and Site Index Table  
Compared with Cubic Foot Site Classes

	Site Index												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Site Index →													
Potential Yield Cubic Feet Per Acre Gross Cubic Foot	20	20-49			50-84		85-119		120-164		165-224		225+
Cubic Foot Site Class	7	6			5		4		3		2		1

Red Fir - Noble Fir - Pacific Silver Fir Site Index and  
Cubic Foot Site Class Table (Forest Survey)

	Site Index				
	20	30	40	50	60
Potential Yield Cubic Feet/Acre	50-84	85-119	120-164	165-224	
Cubic Foot Site Class	5	4	3	2	

Sitka Spruce Site Index and Cubic Foot  
Site Class Table (Forest Survey)

	Site Index														
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
Potential Yield Cubic Feet/Acre	20-49	50-84		85-119		120-164		165-224			225+				
Cubic Foot Site Class	6	5		4		3		2			1				





**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated “L/H,” meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

1.1. The Comprehensive Plan's “Definitions-Existing Land Use Map” identify the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.”

1.2. This request is to change the classification of the subject property on the planning map to “Forest-Farm:” “Purpose: To provide for the continuation of forest and farm



uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

**1.3.** The following provisions apply and are addressed in the following sections.

**1.4.** Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

**1.5.** Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

**1.6.** The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_\_\_\_)

**1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.

6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception

is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built

and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.



Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most

appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

“1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - “TPR”). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).



## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.”

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197 .932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 'Forest Lands.’”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 feet north/south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.



The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other commercial agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot

sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## **2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.**

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### **2.3.1 OAR 660-004-0028(1) provides:**

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### **2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:**

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### **2.3.3 (b) “the characteristics of the adjacent lands;”**

### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the

parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911; Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnysdale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the



area. The subject property has never produced merchantable timber or been logged commercially.

**2.3.4 (c)** The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice.” Webster’s New World Dictionary, 2nd College Edition, 1980. Capable means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (unabridged ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject

parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of “forest products” can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.”

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

**2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons

explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

- 2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

- (A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be



irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current

designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

**2.3.9.5** “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6** (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7** “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3** OAR 660-004-0040(6) and (7) provide:

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.



**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

“Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);”

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process

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<sup>1</sup> Missing text in published version of Section 9.010.

there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject



property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

#### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

#### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

#### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

#### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

#### Goal 12-Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

#### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

#### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property,

which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## CONCLUSION

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.



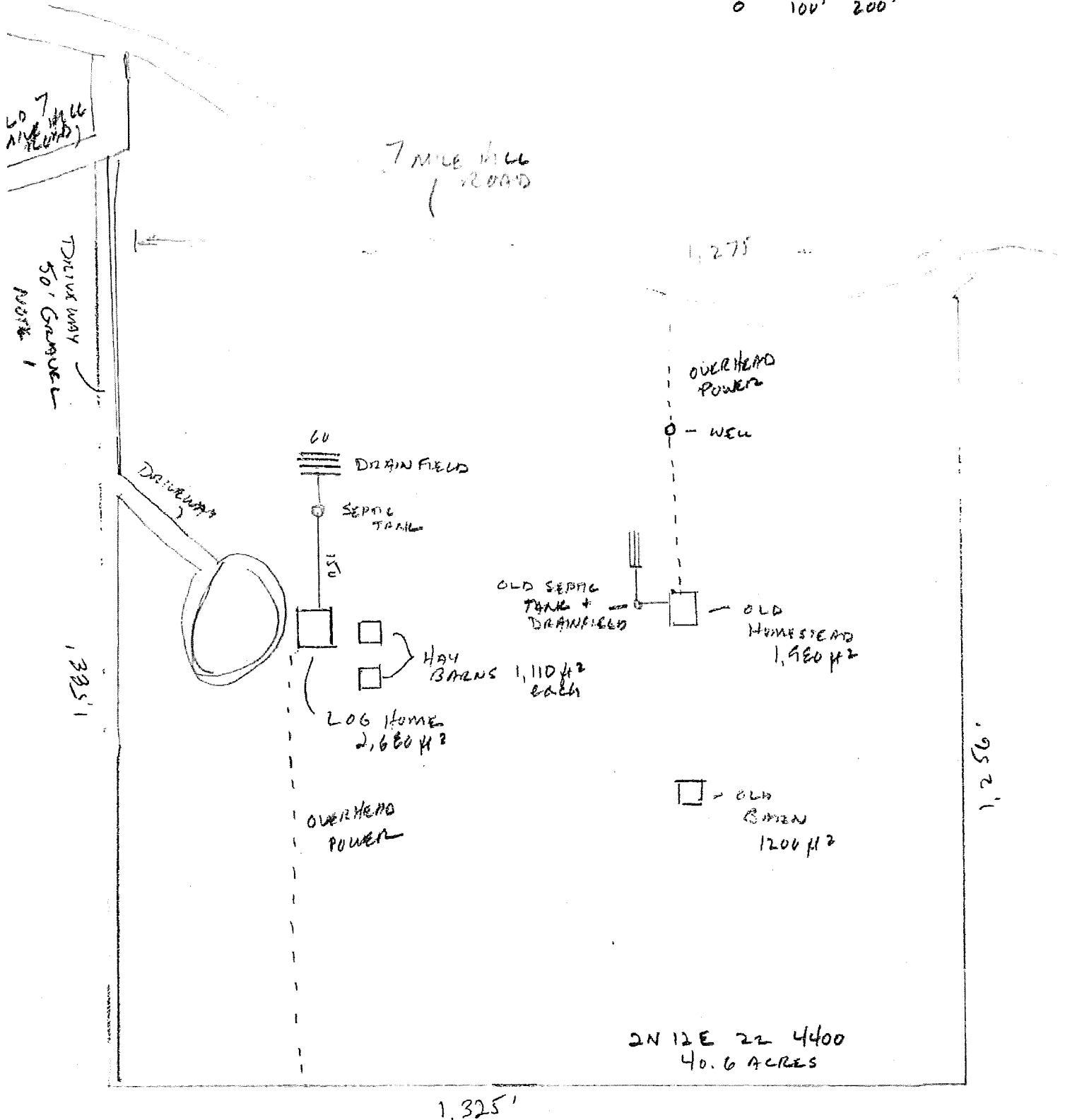


# WILSON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'



2N/12E/22CC

(START CARD) # 21248

**(1) OWNER:**

Name James Hubbard Phone Number             
Address 7100 Seven Mile Rd  
City The Dalles State Ore Zip 97058

**(2) TYPE OF WORK:**

☒ New Well      ☐ Deepen      ☐ Recondition      ☐ Abandon

### (3) DRILL METHOD

☒ Rotary Air      ☐ Rotary Mud      ☐ Cable  
☐ Other \_\_\_\_\_

**(4) PROPOSED USE:**

☒ Domestic    ☐ Community    ☐ Industrial    ☐ Irrigation  
☐ Thermal    ☐ Injection    ☐ Other \_\_\_\_\_

**(5) BORE HOLE CONSTRUCTION:**

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 308 ft.

Explosives used Yes ☐ No ☒ Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	19	Bentonite	0	19	7
6	19	308				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other Rodded

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

**(6) CASING/LINER:**

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

**(7) PERFORATIONS/SCREENS:**

☐ Perforations Method \_\_\_\_\_

☐ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

[illegible]

**(8) WELL TESTS:** Minimum testing time is 1 hour

<input type="checkbox"/> Pump	<input type="checkbox"/> Bailor	<input checked="" type="checkbox"/> Air	<input type="checkbox"/> Flowing Artesian
Yield gal/min	Drawdown	Drill stem at	Time
35	100%	308	1 hr.

Temperature of water 58 Depth Artesian Flow Found \_\_\_\_\_  
 Was a water analysis done? ☐ Yes By whom \_\_\_\_\_  
 Did any strata contain water not suitable for intended use? ☐ Too little  
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_  
 Depth of strata: \_\_\_\_\_

**(9) LOCATION OF WELL by legal description:**

County Wasco Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N N or S, Range 12E E or W, WM.  
Section 22 SW  $\frac{1}{4}$  SW  $\frac{1}{4}$   
Tax Lot 901 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) \_\_\_\_\_  
7100 Seven Mile Rd

**(10) STATIC WATER LEVEL:**

187 ft. below land surface. Date 29 April  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

**(11) WATER BEARING ZONES:**

Depth at which water was first found 274

From	To	Estimated Flow Rate	SWL
274	295	35	187

**(12) WELL LOG:**

Ground elevation 1600

[illegible]

Date started 27 April Completed 29 April 1991

**(unbonded) Water Well Constructor Certification:**

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed \_\_\_\_\_ WWC Number \_\_\_\_\_  
Date \_\_\_\_\_

**(bonded) Water Well Constructor Certification:**

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed Richard J. Murray Date 27 May 1991 WWC Number 606

24/2E-22cb

APR 20 1987

County Wasco Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N N or S, Range 12 E E or W, WM.  
Section 22 NW  $\frac{1}{4}$  SW  $\frac{1}{4}$   
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Seven Mile Rd

March 16, 2022

(Do not write above this line)

State Permit No.

003111

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

New Well ☐ Deepening ☐ Reconditioning ☒ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

Rotary	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Jetted	<input type="checkbox"/>
Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

8) CASING INSTALLED: Threaded ☐ Welded ☒

8" Diam. from 0 ft. to 43 ft. Gage .250

6" Diam. from 0 ft. to 110 ft. Gage .250

" Diam. from ft. to ft. Gage

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name .....

Type ..... Model No. ....

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller  
Yield: 60 gal./min. with 100 ft. drawdown after 2 hrs.

Yield: 60	gal./min. with 100	ft. drawdown after 2	hrs.
"	"	"	"
"	"	"	"

Bailer test	gal./min. with	ft. drawdown after	hrs.
-------------	----------------	--------------------	------

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ..... ft.

Bentonite - Cement

Well seal—Material used \_\_\_\_\_

Well sealed from land surface to \_\_\_\_\_ 42 \_\_\_\_\_ ft.

Diameter of well bore to bottom of seal \_\_\_\_\_ 12 in.

Diameter of well bore below seal \_\_\_\_\_ 6 \_\_\_\_\_ in.

Number of sacks of cement used in well seal \_\_\_\_\_ 4 \_\_\_\_\_ sacks

Number of sacks of bentonite used in well seal \_\_\_\_\_ 2 \_\_\_\_\_ sacks

Brand name of bentonite \_\_\_\_\_ Yellowstone \_\_\_\_\_

Number of pounds of bentonite per 100 gallons  
of water \_\_\_\_\_ 65 \_\_\_\_\_ lbs./100 gals.

Was a drive shoe used? ☒ Yes ☐ No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

Was well gravel packed? ☐ Yes ☒ No Size of gravel: \_\_\_\_\_

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

County	Wasco	Driller's well number
NW ¼ SW ¼ Section	22 T. 2N R. 12 E.	E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road

Depth at which water was first found 25 ft.  
 Static level 33 ft. below land surface. Date 7-23-74  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

Cleaned out \_\_\_\_\_ Diameter of well below casing \_\_\_\_\_  
Depth drilled \_\_\_\_\_ ft. Depth of completed well 320 ft.

Depth drilled ft. Depth of completed well 320 ft.

**Formation:** Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

[illegible]

Work started 7-16 1974 Completed 7-22 1974

Date well drilling machine moved off of well 7-23 19 74

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] *Silvestre Chappan* Date Oct. 30 1975  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt 1, Box 61-A, The Dalles, Ore.

[Signed] Gilbert E. Kayson

Contractor's License No. 569 Date Oct. 30 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

SP\*45656-119



## NOTICE TO WATER WELL CONTRACTOR

The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WASCO

## WATER WELL REPORT

STATE OF OREGON

003131

(Please type or print)

STATE ENGINEER

(Do not write above this line) SALEM, OREGON

RECEIVED

MAY 28 1974

State Well No.

State Permit No.

2N/12E-22

## (1) OWNER:

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

## (2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

## (3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dug ☐ Bored ☐

## (4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

## (5) CASING INSTALLED:

Threaded ☐ Welded ☒  
6" Diam. from 0 ft. to 41 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

## (6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

## (7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

## (8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Air  
Bailer test 50 gal./min. with 100 ft. drawdown after 9 hrs.

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ft.

## (9) CONSTRUCTION:

Well seal—Material used Bentonite - cement

Well sealed from land surface to 40 ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 4 sacks

Number of sacks of bentonite used in well seal 2 sacks

Brand name of bentonite Yellowstone

Number of pounds of bentonite per 100 gallons

of water 65 lbs./100 gals.

Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☐ Yes ☒ No Size of gravel:

Gravel placed from ft. to ft.

## (10) LOCATION OF WELL:

County Wasco Driller's well number

NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

## (11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.

Static level 33 ft. below land surface. Date 5-14-74

Artesian pressure lbs. per square inch. Date

## (12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

## Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

## Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt 1, Box 61-A, The Dalles, Oregon

[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

(USE ADDITIONAL SHEETS IF NECESSARY)



*Pioneering pathways  
to prosperity.*

**WASCO COUNTY PLANNING COMMISSION HEARING**

April 2, 2019

3:00 p.m.

The Columbia Gorge Discovery Center

5000 Discovery Drive

The Dalles, OR 97058

**CALL TO ORDER**

**ROLL CALL:**

Members Present: Chair Mike Davis; Vice-Chair Chris Schanno (arrived at 3:13); Vicki Ashley; Lynne MacIntyre; Russell Hargrave; Kate Willis; Alternate LeRoy Booth

Absent Members: Brad DeHart

Staff Present: Planning Director Angie Brewer, Senior Planner Will Smith, Planning Coordinators Brenda Coleman and Jensi Smith

**Chair Davis** opened the hearing at 3:04 p.m.

**Chair Davis** asked for roll call.

**PUBLIC COMMENT:**

**Chair Davis** asked for comments on non-agenda items. There were none.

**APPROVAL OF PAST MINUTES:**

**Chair Davis** called for comments on the Minutes from March 5, 2019.

**Commissioner MacIntyre** motioned to approve the Minutes from March 5, 2019. **Commissioner Ashley** seconded. No other discussion.

**Chair Davis** called for the vote.

**The motion was unanimously approved 6 to 0, 2 absent (Commissioner DeHart; Commissioner Schanno)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis – yes

Alternate Booth – yes

**Chair Davis** asked for comment on the Minutes from March 12, 2019.

Commissioner Ashley moved to accept as submitted Minutes from March 12, 2019. Commissioner MacIntyre seconded. No other discussion.

Chair Davis called for the vote.

The motion was unanimously approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Schanno)

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**REVIEW OF FILE #921-18-000086-PLNG, A REQUEST BY DAVID WILSON FOR A COMPREHENSIVE PLAN AMENDMENT, ZONE CHANGE FROM FOREST, F-2 (80) TO FOREST-FARM F-F (10) AND EXCEPTION TO STATEWIDE PLANNING GOAL 4**

Chair Davis opened the Hearing in the following manner:

**Opening the Hearing**

We will now open the Planning Commission Quasi-Judicial Hearing on agenda item 921-18-000086-PLNG, a request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10).

The property involved is described as Tax Lot 2N 12E 22 4400; account number 884.

The criteria for approval of the land use decisions includes: Chapter 2 (Development Approval Procedures); Review Criteria: Oregon Administrative Rules (OAR) Division 4, Interpretation of Goal 2 Exception Process and Division 6, Goal 4 Forest Lands; Oregon Revised Statute (ORS) 197.732, Goal Exceptions; Wasco County Comprehensive Plan Chapter 11 – Revision Process, Sections A, B, C, E, H, I, and J; and Wasco County Land Use & Development Ordinance (LUDO) Chapter 9 – Ordinance Amendments, Sections 9.010, 9.020, 9.030, 9.0404, 9.050, 9.070, and 9.080.

The proposal must comply with applicable provisions contained in the Wasco County Comprehensive Plan, and State Law. Generally, unless otherwise noted, if a request is found to be consistent with the LUDO it is considered consistent with the Comprehensive Plan.

The procedure I would like to follow is:

- a. Disclosure of Interest, Ex Parte Contact or Potential Conflicts
- b. Reading of the Rules of Evidence
- c. Planning department will present their report
- d. Those who wish to speak in favor of the proposal
- e. Those who wish to speak in opposition of the proposal
- f. Rebuttal
- g. Questions by Planning Commission of staff, proponent, or opponent
- h. Close the hearing and record and begin deliberation (only Planning Commission can talk during this time)

---

Planning Commission Hearing

Minutes

04/02/19

Page 2

**Disclosure of Interest, Ex Parte Contact or Potential Conflicts:**

- a. Does any planning commissioner wish to disqualify themselves for any personal or financial interest in this matter? There were none. Does any Planning Commissioner wish to report any significant ex parte or pre-hearing contacts? (Staff contact is not ex parte and does not need to be disclosed.) There were none.
- b. Does any member of the audience wish to challenge the right of any planning commissioner to hear this matter? There were none.
- c. Is there any member of the audience who wishes to question the jurisdiction of this body to act on behalf of Wasco County in this matter? There were none.

**Planning Commissioner Disclosure of Site Visit**

For the record, have any Planning Commissioners conducted a site visit to the subject property? There were none.

**Party Recognition**

Anyone can speak for or against the proposal today. However, only those who have "party" status will be able to appeal a decision reached by this commission.

**A party is defined in Section 1.090 as:**

- a. *The applicant and all owners or contract purchasers of record, as shown in the files of the Wasco County Assessor's Office, of the property which is the subject of the application.*
- b. *All property owners of record, as provided in (a) above, within the notification area, as described in section 2.080 A.2., of the property which is the subject of the application.*
- c. *A Citizen Advisory Group pursuant to the Citizen Involvement Program approved pursuant to O.R.S. 197.160.*
- d. *Any affected unit of local government or public district or state or federal agency.*
- e. *Any other person, or his representative, who is specifically, personally or adversely affected in the subject matter, as determined by the Approving Authority.*

If you want party status, please say so at the beginning of your testimony. At the end of the public testimony, the planning commission will deliberate about granting party status to each person who requested it.

**The Rules of Evidence are as follows:**

- a. No person shall present irrelevant, immaterial, or unduly repetitious testimony or evidence.
- b. Evidence received shall be of a quality that reasonable persons rely upon in the conduct of their daily affairs.
- c. Testimony and evidence must be directed toward the criteria applicable to the subject hearing or to criteria that the party believes apply to the decision.
- d. Failure to raise an issue with sufficient specificity may preclude raising it before the Land Use Board of Appeals.
- e. Failure to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow Wasco County to respond to the issue precludes an action for damages in circuit court.

Any party of record may request that the record remain open for at least seven (7) days prior to the conclusion of the initial evidentiary hearing.

Failure of persons to participate in the public hearing, either orally or in writing precludes that person's right of appeal to the Board of Commissioners. Written testimony submitted prior to the hearing constitutes participation in the hearing.

Chair Davis stated Senior Planner Smith would present.

Senior Planner Smith shared his presentation (See Attachments A & B)



During his presentation, **Senior Planner Smith** shared a Findings Checklist and sections of the Staff Report to help Commissioners analyze each part of the proposal. (See Attachment C)

During the presentation, **Senior Planner Smith** noted an error on Wasco County LUDO section - 9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. Planning Commission should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed in above sections.

**Senior Planner Smith** summarized: (41:40)

- There is apprehension on one side but there are advantages on the other
- Conducting forestry operations are currently not impractical. Trees could be planted and harvested (Ponderosa Pine).
- More residences would result in the loss of wildlife habitat, but a small impact.
- With increase in residences, it increases the wildlife/urban interface.
- More residences could impact water supply.
- The advantage would be in increase dwellings, as adequate housing is an issue in the County.
- Not in the current recent history has the property been used to harvest forest products so it would not be taking away commercial forest use. It would take the potential away.
- There are economic impacts on housing.

**Senior Planner Smith** asked for questions.

It was asked if this was in the Big Game Overlay. It was established it is in EPD 8, Low Impact area, which is exempt from requirements.

It was noted during the discussion that this property had been involved in a previous request to change zoning, with a settlement of an appeal (in a Legislative action) to have the County look at rezoning in this area. That did not happen for a number of years, and then in 2012 there was a request for 29 new houses on 280 acres. The Staff Report during that time did not have a recommendation. The Planning Commission voted to approve the zone change, but the Board of County Commissioners voted to deny it. There have not been any comments on the current application but it was noted there had been comments on the previous request regarding concerns over fire and water. It was not appealed further and it was resolved with the County's good faith effort to look at it.

It was stated there is currently one residence on this property, but if request is granted, there could be up to four. It was also discussed that it is hard to quantify how much water is available in the area and noted the Water Master has said there was a general concern, with levels dropping every year. It was also discussed that Mosier or Mid-Columbia Fire District would be the ones to respond to a fire, with a substation close to the property.

**Chair Davis** asked for testimony from the applicant or their representative. (54:41)

**Bill Summerfield**, Attorney for the applicant spoke. He shared a visual aid to present and hard copy hand out. (See Attachments D & E) He spoke regarding the water issue. In the findings and conclusions, there is a statement showing there are two wells on the subject property. One produces 50 gallons per minute, one at 60 gallons per minute. The home where the applicant lives has its own well that produces 35 gallons per minute. He feels that the wells that are on the proposed rezone property will be sufficient to support development, without any new ones added to the aquifers. He references four reports – noting one for when the well was drilled, one for when it was serviced and another is for a second well on the property. He stated that the 50 gallon per minute well is servicing the house located there and the other one is not doing much currently, but is available. He said they would probably do a shared well agreement or some other form of sharing water for the property at such time that development was implemented. A lot of that will be developmental criteria at the time the property would be subdivided.

**Mr. Summerfield** said they are trying to change that one green spot to a purple spot (referencing the map in Attachment B, slide 3). Everything along Sevenmile Hill Road is residential. There is no Resource land that touches Sevenmile Hill Road. He stated they are asking for common sense on this. This is the one parcel that is zoned differently. Having done some research, they haven't found a rhyme or reason to that. The Transitional Lands Study Area (TLSA) didn't touch that property, with no explanation as to why. **Mr. Summerfield** said it makes sense to rezone to keep it with the properties around it, in keeping with the neighborhood. There was a question about water in the TLSA. There is a map in the agenda packet, (PC-125) that show ground water levels in the area. The shared well reports are consistent with the TLSA map showing adequate ground water.

**Mr. Summerfield** said he isn't sure that the prior history of zoning has any relevance. This application stands on its own. The property stands on its own. The applicant was not part of the prior zoning request. They are not trying to implement anything that went on before or be part of any settlement. This is a new and unique application, pertaining to just this one 40 acre parcel.

**Mr. Summerfield** spoke regarding the Criterion. The physically developed and irrevocably committed seem to be very closely related to one another. Regarding the physically developed, he doesn't believe you just inventory what is on the property. You need to take a more holistic view of what is on the property. What does it look like, feel like, how is it being used. There is a log home, possibly a historic home from around the early 1900s. To build (this) home, the log home had to be de-commissioned. It is currently being used as an AG building. **Mr. Summerfield** stated **Mr. Wilson** hopes that someday the log home would be rehabilitated. The house in the meadow area seems to indicate that this area has never been used as forest land. **Mr. Summerfield** stated that **Mr. Wilson** has indicated he has been nurturing some trees for around 20 years and they have not grown very quickly. **Mr. Summerfield** indicated on the map a draw that runs through Ken Thomas's property. He showed a section of the map the **Mr. Wilson** has referenced as to where Eastern Oregon begins. **Mr. Summerfield** indicated on the map where a section is green and does well and another area that seems to be more scrubby. **Mr. Summerfield** showed south of that on the property where **Mr. Wilson** lives is scrubby as well. You don't see the canopy firs and others that you see on the other section.

**Mr. Summerfield** stated that when you look at the physically developed and irrevocably committed, there is the old pioneer house, barn, shed, and other structures. How would you develop that as a wood lot? What would it mean to the other people who live nearby? What would it mean for the other structures? You don't just measure the square footage of the structures; you look at the property as a whole. Doesn't look or feel like a commercial forest property.

**Mr. Summerfield** said he feels the same with the irrevocably committed. If you zoom out and look at the neighborhood. What would a commercial forest operation on Sevenmile look like, in the middle of this residential area? Each dot on the map is a home. It is pretty heavily developed. Those are factors in determining whether something is irrevocably committed. Is it compatible with its neighborhood? There is a sense when you drive down there that it is a rural residential neighborhood. It's not forest land. One of the questions is whether a mistake was made in the Comp Plan. **Mr. Summerfield** said it is hard to say that a mistake was made when you look at that map with one little green parcel that touches Sevenmile. You wonder what that's doing there. Without a stated reason for why it's there, it seems obvious it was either overlooked or ignored or a mistake was made there. **Mr. Summerfield** said that was 20 years ago and it's possible the surrounding neighborhood looked different than it does today. The subject property stands out as an anomaly.

**Mr. Summerfield** said there is a lot of talk in the Staff Report about the need to buffer resource zones from other uses around it. He said the buffer he sees is FF-10. That is what we are asking to do. This would help with the buffer and help resource zones themselves. He stated agreement with most of the green findings in the Staff Report (SR). He feels they are supported with the record in front of them.

**Mr. Summerfield** addressed the fire issue. He said the SR stated that most of the development has been north of Sevenmile, but if you look further out, there is residential development to the south, a lot of subdivisions. He



stated he doesn't feel that is a hugely valid concern. There is a natural fire break with the BPA powerline that runs through there. He doesn't see changing the zone on this property would be a public health, safety or welfare concern.

**Mr. Summerfield** also talked about big game. He feels that has been fixed. He said they looked at it and thought it was a non-issue. He would like to leave the record open to address, if it is an issue. He said other things like transportation, meeting or not meeting other goals are non-issues. If we are not addressing it, there is no conflict. We are hopeful to get a recommendation for a zone change.

**Chair Davis** called for questions. (1:11:00)

During questioning, it was established that **Mr. Wilson** lives on the property behind the subject property. Questions regarding the casing of the wells were brought up, noting if they are not cased they need to be. It was stated they go through multiple aquifers.

The applicant, **Mr. David Wilson** testified. (1:13:12) He stated he was not sure if the wells were cased, as it was before his time on the property. He stated he went to the well master and got copies of what was done there. He stated one is in the ravine by the old log home that provides water to log home and the historic house. **Mr. Wilson** stated the property used to look like a wrecking yard. He stated the motor had been knocked off the well head, the casing and everything went down into the well. This happened since he lived there. They had to pull the casing out, pull the pump out and did a bunch of casing work on the thing. On the well logs, the later dated one shows that they did improvements. He is not sure how far they are cased. **Mr. Wilson** was asked when the last time the wells were tested, where the head is. **Mr. Wilson** state he found out that if work is done on a well now, they have to put in separate PVC in so they can gage it. He said none of his wells have had that, they do not have separate PVC. He stated he is not in the survey. **Mr. Wilson** was asked if he has spoken to the Water Master to assure it is rated for domestic use. **Mr. Wilson** state two houses on one well are allowed. Otherwise a water district must be created. **Mr. Wilson** was asked if he irrigates pasture land. He replied no. He said the lower property well had a 300 horse pump on it at one time. Since then it has been switched out to a regular domestic pump. He found records that date back to the historic house, stating it is very old. He said he had worked to keep it (historic house) from falling in by jacking it up but found he couldn't do anything with it without getting it on its own parcel. He has to subdivide the property to do anything with the historic house.

There were no other questions for the applicant.

**Chair Davis** asked if anyone else wanted to speak in favor. There were none.

**Chair Davis** asked if anyone wished to speak in opposition. (1:17:42)

**Sheila Dooley** introduced herself and said she wanted to address the four concerns stated in the Staff Report. These included conducting forest operations are not currently impractical. She stated she had been involved in the TLSA study. This was not rezoned due to the value as forest land, the property is still capable to use for commercial use. This zoning is not a mistake. Across the road trees have been replanted and are growing. Just because this property has not been replanted for forest use does not make it less valuable as forest land. Looking at the map, there is forest land all around it. Conversion of this property will result in further encroachment of residential use onto Resource zones. Approving this is setting a precedent. The applicant owns an addition 69 acres of forest land. She feels the same arguments on this could be used to rezone that property. When Ken Thomas had applied for rezoning, the Land Conservation and Development Commission (LCDC) had objected because it is good forest land. In the application, the development pattern references the old farm house. The owner decided to build a second house instead of using the farm house. She stated an increase in residences will decrease the amount of wildlife habitat and would increase the wildland/urban interface fire risk. If a fire starts here, it will spread to the adjoining forest lands. She noted it takes 60-80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Department of Forestry. Response time is low due to the terrain and

distance. Fire risk and intensity have increased over the years. The residences increase the fire risk which is related to public safety and welfare in this area. Sevenmile hill was intended as a buffer, with development on one side and forestry on the other. Three new Single Family Dwellings (SFD) would impact available water supply. Water issues are increasing. Ms. Dooley stated a residence just up the road had their well go dry. She referenced information in the SR that the Water Master said the water table has been dropping two feet a year. If it only takes one criteria not being met to deny, she feels the request should be denied. These could be second homes that do nothing for housing shortage. She feels the housing issue should be addressed in incorporated areas with higher density. The fact that it is not currently used for forest land is not relevant.

The Commission did not have any questions for Ms. Dooley.

Jill Barker spoke in opposition to the request. She stated she had many of the same concerns as Ms. Dooley. She stated the property just down the street from the subject property had their well drop 50 feet during the winter. There is a lower water supply in this area. She was involved with the Ken Thomas proposal and there was overwhelming opposition to that from the Forestry Department, Fish & Wildlife, and LCDC. It is common knowledge that area has a dwindling water supply. North of Sevenmile is all small parcels and that is a huge demand on the aquifer. She understood that the subject parcel was part of the earlier Ken Thomas proposal which was denied, with good reason. Big game winter range is included there. The site is not suitable for the proposed reason. Ms. Barker said she believes if there is a fire, the power line isn't going to do anything to be a fire break.

Ms. Barker said it has been noted the soils (4s and 5s) are adequate for commercial forest use. In regards to the old historic farm house, it was being lived in in the 1970s. It wasn't that long ago that was a home. She feels the fire danger isn't if, it is when. She feels there is too much development and too much demand on the water. It is very dry and we are getting less water each year. There is already one house on that property already where it is 80 acre minimum, this one is on 40 acres. Ms. Barker stated that one of the reasons there is development south of Sevenmile is that many of those lots were pre-existing, during the TLSA study. Just left of this property, got a special conditional use to develop it and there was controversy for years. The other properties by Dry Creek Road have been there for years. She stated she was not sure about new development, not sure when they were approved. She feels it is a bad idea, a dangerous idea. The one home is adequate for that property.

There were no questions from the Commission for Ms. Barker.

There were no others to speak in opposition.

Chair Davis asked if the Applicant wish to refute any of the testimony.

Mr. Summerfield spoke regarding the comments related to the Ken Thomas proposal. We haven't had that with this. He feels you could draw inference from that. As to the fire danger, that would be addressed with buffers and such at the Building Permit stage, and adequately addressed elsewhere. The driveway is Dave's and any new development would be served by that driveway. It is very wide, any development would be served off that.

Chair Davis called for questions.

During the question and answer segment it was established the drainage from the homestead goes north. It was stated there may be a spring. It was also established that grass is grown there, with it being baled sometimes. There is no tax exemption; it is believed it is residential.

There was a question regarding the comment that the zoning was not a mistake. Ms. Dooley was asked if she had evidence of that. Ms. Dooley responded that the TLSA study was based on the soil types, the slopes. It looked at a lot of different factors. For clarification, Ms. Dooley was asked if the subject property was unique. Ms. Dooley responded no, it was not rezoned, they could have chosen to rezone it but they didn't.



**Chair Davis** called for further questions. There were none.

**Chair Davis** closed the Hearing at 4:41 pm. (1:37:12)

Deliberation:

**Chair Davis** noted the handouts that staff had given. He stated he would like to use that during the conversation, starting with a straw poll, focusing on critical area. He noted that if one thing is denied, the whole thing must be denied.

Straw poll:

- Commissioner Ashley – opposition to 1, 2 and 17
- Commissioner Willis – Concern with 17
- Alternate Booth – No issues
- Commissioner MacIntyre – No issues
- Commissioner Schanno – No issues
- Chair Davis – No issues
- Commissioner Hargrave had left the meeting

Discussion:

It was noted that for F2 the zoning is one home for 240 acres. This parcel is already smaller than that. There are residential areas with relatively small lots all around when heading up the hill towards this property. If you look around, how does this sit relative to the neighborhood? There are a lot of residences.

It was noted that the error that **Senior Planner Smith** indicated on Wasco County LUDO section - 9.020.A would be resolved during the discussion, deciding if there had been a mistake or not and findings written as such in the recommendation.

The soils classification was discussed with note there had not been any evidence presented that timber could not been grown on this property. It was also stated that just because it could support commercial forestry, does that mean that it should, considering the location and development pattern. The discussion also mentioned that forest practices would have timber harvest equipment and travel on a residential road. Commercial timber harvesting would also increase the fire risk, with the high wind zone. Even with a large fire break but in a high wind area, the fire will jump, crowning from tree to tree. It was noted there would be serious concern if it were a timbered area. There would also be the potential to have noise complaints from residents in the area. In the conversation, it was noted that if the request were granted to FF, trees could still be harvested.

It was stated that if it is approved, the issue of the water would need to be addressed and the wells should be cased. The water table and reduced water availability were noted as concerns.

The aquafer for the area was discussed. **Senior Planner Smith** stated he did not have an Aquafer map so he did not know if the residents there were all on the same aquafer. It was noted that the TLSA map had indicated there were two aquafer, of different types, in the area. The Water Master is quoted in the Staff Report. The amount of water per minute is not something the Planning Department regulates typically. The capacity is not just for household use, but also for irrigation and fire suppression. **Director Brewer** stated the Fire Safety Standards Ordinance does have standards for residential fire suppression and that would be applied at the time of future development. It was also stated that the wells would have to be tested to utilize the water and cased appropriately. It was questioned if the Water Master had expressed concern, is that enough to deny the request. It was stated the Water Master would be the one to determine if another well would be allowed there or if existing wells could be shared. The properties would need to pass a perk test, and if not, it would not be approved for development.

There was discussion about the TLSA report and if it missed or didn't miss this property. The comment was made that all along that line is FF and some of these issues would be addressed when the request is taken to the next level. **Director Brewer** stated the Oregon State Land Use protects Resource Lands over residential uses, so if the

outcome is there would be a negative impact to the residential area, you are actually saying in that context is this area is irrevocably committed to a rural residential use. Therefore it is more appropriate for this part of the county to have more residential use and not commercial. She stated that if that was the consensus, it would help with concerns noted about items #1 & #2.

**Chair Davis** called for a motion.

**Commissioner Schanno** moved to recommend approving the change in zone. **Alternate Booth** seconded.

**Chair Davis** opened for further discussion. (2:01:10)

The discussion included what the criterion is for this property to be irrevocably committed and if it is considered physically developed. This included looking at the use of the parcels by the subject property and what was physically located on the subject property, including the house, structures, and roads to determine if it is physically developed. Soil types were also discussed. **Senior Planner Smith** informed the Commission if there was consensus to affirm these, they could choose physically developed, irrevocably committed or both. It was stated that language could be added to clarify the findings.

There was discussion on what could happen by taking Resource land out and it was noted we are trying to protect Resource land in Wasco County. Once you lose it, it's gone. It was stated the land had been left in that zone for that purpose. It was also noted that the subject property is not isolated.

**Director Brewer** noted that the language for the findings has to stand on its own for this property. The same criteria would have to be used for other future proposals on other property.

**Chair Davis** called for a break. (2:26:44)

**\*\*Break\*\***

**Chair Davis** resumed the Hearing at 5:42pm.

**Chair Davis** stated there is still a motion on the table.

**Commissioner Willis** moved to approve and amend the motion on the table. She moved to change the motion on the table and amend it, on page 13, PC 18 for the commission, in relation to OAR 660 004-0028(2) b and c to clarify the uniqueness of this property because it is surrounded on three sides by residential or potential residential development and its uniqueness in relationship to the surrounding area by being the only F-2 zoning on the Sevenmile Road. A change to the proposed F-F would complete the residential buffer to the resource area.

**Alternate Booth** seconded.

**Chair Davis** noted the motion on the table was to approve the whole thing and there has been an amendment to that motion to make that property very unique.

There was more discussion regarding the language of the amendment noting it was added to make a very tight buffer with this property to prevent creeping of the buffer. The language would just help identify this property as unique. It was also noted that anyone could come in and request a zone change, but they would have to go through the same process. It was stated that this language is to illustrate intent, to show confinement.

**Chair Davis** called for a vote on the amendment to the original motion, noting the language had been written and projected on the screen for everyone to read. **Commissioner Schanno** asked for clarification. **Senior Planner Smith** read out loud to explain the sections. It was stated the language is adding to the findings for B & C.

**The motion was approved 5 to 0; 1 abstention; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

Commissioner DeHart – absent

Commissioner Ashley – abstained

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**Commissioner MacIntyre** stated she thought we were changing the findings. **Commissioner Ashley** stated that she believed that also. **Commissioner Schanno** stated we are adding to the findings.

**Chair Davis** stated the modification to the original motion had been approved. He called for discussion of the motion with the modifications.

**Commissioner Willis** stated the modification was to provide rationale for the findings. It was clarified that it was not taking out the finding that it was developed, but added to it. **Director Brewer** stated there was general consensus.

There was a discussion about what had been identified in the findings regarding 'development'. **Commissioner Ashley** stated she feels it is physically developed more than was indicated, demonstrated by things like the wells, outbuildings, etc.

**Commissioner Ashley** moved that we add additional findings to the approval finding to indicate the further development of the parcel, which includes wells and additional buildings for the physically developed exception finding [OAR 660 004 0025 (2)]. **Commissioner Willis** seconded.

**Commissioner Schanno** noted that most of this is in the Staff Report. **Director Brewer** stated the highlighted areas are conclusions of the larger findings above them. **Senior Planner Smith** stated he did not reference the wells in his findings. **Director Brewer** said the Staff Report consists of the rules that apply, information from the application, staff's findings of facts, and conclusions of law. She stated the requested changes can be made if that is part of the amended motion.

**Commissioner Willis** stated she feels the conclusion should include more of the laundry list of stuff. **Senior Planner Smith** said that could be added.

**Chair Davis** asked for any further discussion on this amendment to the motions. There was none.

**Chair Davis** called for a vote on the amendment to the motion.

**The motion was approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

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Planning Commission Hearing

Minutes

04/02/19

Page 10



Commissioner DeHart – absent  
Commissioner Ashley – yes  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated there has been a motion to approve with two amendments. He called for discussion on the last amendment.

There was a question on where in the process a discussion on item #17 would take place. **Chair Davis** stated this is the time to discuss it and can make a further amendment to the original motion, if desired.

**Commissioner Ashley** stated she wasn't sure that the public safety issues have been addressed. By changing the zoning, have we opened a can a worm for people living in or near forest zones? The number of structures and people involved with that were discussed. The transportation issues, the number of vehicles and response time for emergency services were part of the discussion. It was stated there isn't anything the Commission can do if people go beyond the design parameters. It was also stated there is another process to deal with any proposed dwellings, where there are safeguards in place.

**Chair Davis** called for further discussion. There were none.

**Chair Davis** stated there is a motion with two amendments and called for the vote.

**Chair Davis** called for the vote.

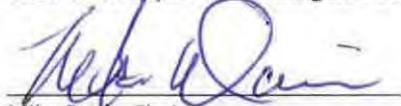
**The motion was approved 5 to 1; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes  
Vice Chair Schanno – yes  
Commissioner Hargrave – absent  
Commissioner DeHart – absent  
Commissioner Ashley – no  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated the vote is to recommend approval with the amended language.

**Chair Davis** adjourned hearing at 6:06 p.m.



Mike Davis, Chair  
Wasco County Planning Commission



Angie Brewer, Director  
Wasco County Planning & Development



Wilson notes

Criteria and Summary

Public Facilities and Services: General overview

Land Use History: TLSA, Ken Thomas Settlement

STATE LAW

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.732: Exceptions allowed IF Physically Developed, or Irrevocably Committed. Describes process, what to look for. Actual factors addressed in OAR section

\*(1.) OAR 660-004-0025: Exception Requirements for Land Physically Developed to Other Uses: requires describing extent of development on a map, is it "Physically developed to the extent that it is no longer available for uses allowed by the applicable goal"?

- Describe management of small woodlands, soils (49C and 50D), slope, southern parcel of tract assessor information (is successfully managing to meet annual income requirements)

\*(2.) OAR 660-004-0028 (1)-(2): Irrevocably Committed: is it committed? Are existing adjacent uses making uses allowed by the applicable goal impracticable? Discuss FF and RR zones all around, use of land (development %), and relationship to southern parcel.

\*(3.) OAR 660-004-0028(3): Uses allowed by applicable goal are impracticable, specifically Goal 4 uses like forest operations, harvesting of forest products, etc. Describe how adjacent lands in residential use make it unlikely, but adjacent forest lands make it potentially possible. "just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use." Not necessary, but how would it be affected?

\*(4.) OAR 660-004-0028(4): Does the conclusion address all factors of section 6 and sufficiently explain why the facts support the impracticability?

\*(5.) OAR 660-004-0028(5): Do findings and facts discuss irrevocably committed throughout the report?

\*(6.) OAR 660-004-0028(6): Addressing the following factors: existing adjacent uses, existing public facilities and services, parcel size and ownership patterns of the area and adjacent lands, neighborhood

and regional characteristics, natural/man made features, physical development (this one has approval/denial findings)

OAR 660-004-0028(7): Does the submittal include required info? Yes

OAR 660-004-0040: Not applicable, not related to Goal 14 urbanization, not looking to allow parcels smaller than allowed by proposed new zone, any future proposals will have to comply with F-F requirements

OAR 660-004-0118: Planning and Zoning for Exception Areas, Describing area, are uses compatible with nearby resource areas, (NOTE: one semi-denial finding here – may decide to leave this in if relevant), how it relates to nearby urban areas (none) or industrial uses (none)

#### COMPREHENSIVE PLAN

Findings describe who may apply (QJR = landowner),

(factors for consideration, not specific criteria. Denials here are generally related to denials elsewhere. Are they generally satisfied? If not, could be a denial)

H 1,2: Review Goals, does this comply, and does it demonstrate substantial proof that such a change “shall not be detrimental to the spirit and intent of such goals”. \*(8.)

1. Citizen Involvement
2. Land Use Planning
3. Agricultural Lands
4. \*(9.)Forest Lands
5. Open Spaces, Scenic and Historic Areas, and Natural Resources
6. Air, Water, and Land Resources Quality
7. Areas subject to Natural Disasters and Hazards
8. Recreational Needs
9. \*(10.)Economic Development
10. Housing
11. Public Facilities and Services
12. Transportation
13. Energy Conservation
14. Urbanization

\*(11.) H 3: Mistake in original Comp plan can be demonstrated. Did TLSA resolve the mistake, or did it miss this property?

\*(12.) H 4: Factors relating to need for healthy, safe, aesthetic surrounding and conditions. Fire risk increase? Is it significant enough to matter? Does the proposal match the aesthetic of the area?

\*(13.) H 5: Proof of change in the inventories originally developed. Original inventory included this as forest, has since changed (TLSA), but not here. Stop encroachment?

\*(14.) H 6: Revisions based on special studies or other info. Has enough info been provided to justify the stated need for low density housing, for which F-F could be used?

I. Transportation Compliance. Not significant enough to trigger a Traffic Impact Analysis. 29 new ADT would not change functional class of road.

#### J. Procedures

Application, notification, hearings. Complied.

#### WC LUDO

9.010 Application presented on forms used as issued by the office.

9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. PC should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed above in sections XYZ?

\*(15.) 9.020.B.1. the rezoning will comply with Comp Plan (related to earlier discussion – it will or it won't depending on what has been decided above)

\*(16.) B.2. site is suitable to proposed zone. LUDO states purpose of F-F: "The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses." But Comp Plan says: "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." These are Class 4. Does it make sense as a residential area considering residential uses nearby?

\*(17.)B.3 consideration of public health, safety, welfare. Fire risk? Water impacts?

9.030 Transportation Planning Rule Compliance: insignificant impact

Rest of Chapter 9 = any additional conditions, recommendations, notice requirements, actions

May 28, 2019

Dear Wasco County Board of Commissioners,

RE: File # 921-18-000086-PLNG: Application for a Comprehensive Plan Amendment, Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I agree with the concerns contained in the Staff Report presented to the Planning Commission on April 2nd and the reasons for denial of the application for a rezone from Forest F-2 (80) to Forest Farm F-F (10). As the Staff Report presented to them differs from the Staff Report presented to you, I will be quoting from the earlier report.

The page numbers below correspond to Attachment C - Staff Report presented at the Planning Commission meeting (which differs from Attachment C – Staff Report to the Board of Commissioners on June 5<sup>th</sup>).

Attachment A – Staff Recommendation and Planning Commission Options contained the 4 concerns discussed below. The staff took a neutral position.

**Staff concern 1. Conducting forestry operations are not currently impracticable (Goal 4)**

**Staff report p. 37 I was involved in the Transitional Lands Study Area (TLSA) Study which is referred to in the report. It was an extensive long term study (1993-1997) that studied development concerns in northern Wasco County including water availability, fire hazards, conflicts with wildlife, etc. It did not recommend further development of Seven Mile beyond the existing zoning. The only rezoning on Seven Mile that resulted was described as “housekeeping” by the Planning Director at the time and included 8 parcels north of Seven Mile Hill Rd. being rezoned as RR-10 from FF-10 to avoid the conditional use review requirement. Page 17 of TLSA Study, Exhibit 1, summarizes the recommendation.**

**Forest land including this one was not rezoned due to its value as forest land. The TLSA Study recommendations integrated future development with resource protection.**

**The soils, slope and other information indicate this property is capable of being used for commercial forest uses. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.**

**“DENIAL FINDING: The soils, data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time.” “A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.”**

**p.42 The Comprehensive Plan definition of the purpose of the Farm Forest designation is that it is limited to Class 6 or 7 soils, which are not on this parcel at all.**



**P. 42 The soil types (Class 4) on this property support commercial timber. At 57.2 cubic feet per acre/per year it significantly exceeds the requirement for forestry use lands to exceed 20 cubic feet per acre per year.**

“DENIAL FINDING: The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used a part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses... For the two soil types on the subject property, both are listed at “4A”, where 4 is the number of cubic meters/hectare/year, and A is “slight or no limitation”. Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per are per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.”

**The surrounding properties are tree covered. The fact that the current owner is not using most of this property for forest purpose and hasn’t replanted the open field (or let it grow back naturally) doesn’t make it less valuable as forest land.**

**The conversion of this property would result in further encroachment of residential use into resource zones. The next property owner will want to do the same thing and how do you deny that? You could be setting a precedent. Could the same applicant use this rezone as a reason to rezone his other 69 acres?**

**Adding more residences increases conflicts with accepted forest practices which are protected by Oregon law under the Farm and Forest Practices Act.**

**Proximity to existing rural residential areas is not a valid reason to say that the property is irrevocably committed.**

**In 2013 there was an application by Ken Thomas and others to rezone this property and several adjacent parcels (totaling 287 acres and the creation of 22 potential lots). p. 6 It was denied by the County Commission after they received a letter from Department of Land Conservation and Development (DLCD) in strong opposition to this rezone due to its value as forest land. DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained. At the County Commission meeting there were also concerns regarding fire safety and water supply.**

**p. 12 The applicant owns 69 adjoining acres of forest land for a total of 109 acres. He could use the exact same arguments to rezone that if you allow this. How could you deny it if you allow this?**

**The area is not irrevocably committed to residential use. At the April 2<sup>nd</sup> meeting of the Planning Commission it was stated that this is the only surrounding F-2 property on the road and is surrounded on 3 sides by residential or potentially residential development. This is a misleading statement as the most of the west side and all of the south side are zoned F-2. There is a 16 acre lot to the west that**

**has split zoning with the upper north part FF-10 and the rest F-2. To the west of that lot is commercial forest land that stretches almost a mile west. To the south of the Wilson property is a 1,100 acre tract of timberland under one ownership with more forest land beyond that.**

**p.13** “A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulations, dating back to the early 1900s. The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F (10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small-scale agricultural uses (on the 69 acre lot owned by the applicant). Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See map for a visual representation of the area.” (Note: The R-R (5) is located to the north across the road and the FF-10 is to the east with the RR-10 beyond it.)

**p. 11** **Refers to the old farmhouse as unusable in its current condition. It is dilapidated and missing part of an exterior wall and some windows, and has no foundation. Using this as a dwelling is not an allowed use since he has a replacement dwelling. It was abandoned when the replacement dwelling was built but was never torn down although it should have been. There is another old outbuilding which is also unusable but has also never been torn down. This outbuilding is missing its roof and appears to be falling down. There is very little physical development on the property.**

**Both buildings are visible from the road when you drive by the property.**

**According to the staff report, p. 12 The land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.**

“DENIAL FINDING: The clustering of the existing house on the western edge, with the 1000’ driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640’ driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.”

**The staff report, p. 23 also does not support a physically developed exception:**

“DENIAL FINDING: The current home and driveway are clustered against the western property line. There are abandoned structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.”

**p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.**

“DENIAL FINDING: The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal #4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.”

**Staff concern 2. More residences would result in the loss of more wildlife habitat (Goal 5)**

**There would be the loss of pine oak habitat. This is sensitive wildlife habitat and low elevation big game winter range.**

**Staff concern 3. The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7)**

**If a fire starts in this area, it will spread to the adjoining forest lands. It takes 60 to 80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Dept. of Forestry. Response time is slow due to terrain and distance. Fire risk and intensity have increased.**

**If a fire from this property headed towards our property (which is not in a fire district) it would be potentially unstoppable due to the terrain and lack of road access. The last time there was a fire near us it took an hour for the Department of Forestry to arrive (without water). We and the neighbors put out the fire with shovels and the help of a couple of Mosier fire volunteers. It was a human caused fire.**

Staff Report P. 20 “DENIAL FINDING: One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation.”

**p. 37 and 43 Due to concerns related to public safety and welfare in this area, the request should be denied. New residences increase fire risk and Seven Mile Hill Rd. serves as a buffer.**

“DENIAL FINDING: An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.”

“DENIAL FINDING: However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.”

**Staff concern 4. The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11)**

**Refer to previous Denial Findings. Water issues are increasing in the area. The neighbors (Morgans) just up the road (about 780 feet away) had their well drop 50 feet between January and March and go dry.**

**p. 42 There is a concern with lowering water supply and general fire risk.**

**p.43 There has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years (2 foot per year decline, p.30) according to Robert Wood, Watermaster.**

**As it only takes one criterion not being met to recommend denial of the request, this request should be denied.**

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040





## AGENDA ITEM

### FEMA Grant Application

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[STAFF SUMMARY](#)

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[RESOLUTION 19-005 AUTHORIZING STAFF](#)

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[MOTION LANGUAGE](#)

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## Hazard Mitigation Grant Program Summary

The Hazard Mitigation Grant Program (HMGP) was created in November 1988, by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP assists States, Tribes, and local communities in implementing long-term hazard mitigation measures following a major disaster declaration. This funding source for HMGP is a special Post-Fire appropriation as part of the Bipartisan Budget Act of 2018. The Act contains a provision that authorizes FEMA to provide HMGP assistance as a result of a Fire Management Assistance declaration for events from October 1, 2016, through September 30, 2018.

During the recovery phase of a disaster, local jurisdictions select projects that could reduce property damage from future disasters, and submit grant applications to the State. Indian Tribes and certain nonprofit organizations may also apply; and local governments may apply for assistance to benefit individual property owners and businesses.

The States administer the HMGP by establishing their mitigation priorities, facilitating the development of applications, and submitting applications to FEMA based on State criteria and available funding. The State also manages the project, monitors progress, and evaluates the effectiveness of projects implemented.

FEMA conducts a final eligibility review to ensure compliance with Federal regulations. HMGP projects must comply with Federal environmental laws and regulations, be cost-effective, and be technically feasible.

Federal law requires States and local jurisdictions to have a mitigation plan prior to receipt of HMGP funds. The plan identifies hazards, assesses community needs, and describes a communitywide strategy for reducing risks associated with natural disasters.



IN THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF SUBMITTING A GRANT APPLICATION TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FOR THE COMMUNITY WILDFIRE PROTECTION PLAN (CWPP) UPDATE PROJECT

**RESOLUTION #19-004**

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Board of Commissioners being present; and

IT APPEARING TO THE BOARD that it is imperative that local government develop and maintain a Community Wildfire Protection Plan; and

IT FURTHER APPEARING TO THE BOARD that funding is available to support the updating of our current Community Wildfire Protection Plan.

NOW, THEREFORE BE IT RESOLVED that the County of Wasco formally approves the grant application for the above stated project; and

BE IT FURTHER RESOLVED that the Board of Commissioners hereby authorizes the Wasco County Planning Department to submit an electronic grant application for a Hazard Mitigation Grant (HMGP-FM-5195-Oregon: 2017 and 2018 Fire Seasons) to the Federal Emergency Management Agency. This grant would be for a maximum of \$39,000 and will require a 25% match from the County and Partners (up to \$13,000, payable in kind, such as staff time, or with cash).

DATED this 5<sup>th</sup> day of June, 2019.

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Brad Timmons, County Counsel

**WASCO COUNTY BOARD OF COMMISSIONERS**

\_\_\_\_\_  
Steven D. Kramer, Commission Chair

\_\_\_\_\_  
Scott C. Hege, Vice-Chair

\_\_\_\_\_  
Kathleen B. Schwartz, County Commissioner



## MOTION

**SUBJECT: FEMA Grant Application Resolution**

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I move to approve Resolution 19-004 in the matter of submitting a grant application to the Federal Emergency Management Agency for the Community Wildfire Protection Plan Update Project.





## AGENDA ITEM

### Forest Classification IGA

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[INTRODUCTORY EMAIL](#)

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[JOINT CLASSIFICATION IGA](#)

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[MOTION LANGUAGE](#)

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I believe you have my scheduled to attend the meeting on the 5<sup>th</sup> to discuss this and move forward with decisions that need to be made.

What I am looking to cover at that meeting is:

- Support from the County to move forward with the Forestland Classification process
- Support from the County to convene a joint committee with Hood River County
- Discussion/decision on the Wasco County 'at-large' committee member participation
- Support of the Interagency Agreement between ODF, Wasco County and Hood River County (if it has been reviewed by legal by this date).

Let me know how this sounds and if you have any follow up questions process wise on how this needs to move forward on the agenda and at the meeting.

Thank you Kathy!

---

Kristin Dodd

Unit Forester

The Dalles Unit – Central Oregon District

Oregon Department of Forestry

Office: 541-296-4626

Cell: 541-233-3285

**COOPERATIVE AGREEMENT  
BETWEEN  
WASCO COUNTY BOARD OF COMMISSIONERS  
AND  
HOOD RIVER COUNTY BOARD OF COMMISSIONERS  
AND  
OREGON DEPARTMENT OF FORESTRY, STATE FORESTER**

This agreement reconvenes the joint Wasco/Hood River Forestland Classification Committee, and identifies the functions to be performed and the expenses to be incurred by the Hood River County Board of Commissioners, by the Wasco County Court, and by the Oregon Department of Forestry, in supporting the proper performance of the committee's functions.

**WHEREAS**, Pursuant to ORS 526.320, there is a need to periodically investigate and study all land in Hood River County and in Wasco County and determine which of the land is forestland.; and

**WHEREAS**, Pursuant to ORS 526.324, there is a need to assign a classification to all forestland in Hood River County and in Wasco County; and

**WHEREAS**, Pursuant to ORS 526.310, as amended by Section 4, Chapter 69, Oregon Laws 2009, the governing bodies of two or more counties may establish a joint forestland classification committee to periodically investigate and study forestland and to assign a classification to all such forestland.

**WHEREAS**, Pursuant to ORS 526.310, the parties to this Cooperative Agreement may provide accommodations, funds, and supplies which are necessary for the proper performance of a forestland classification committee's functions.

**WHEREAS**, Pursuant to ORS 190.110, the parties to this Cooperative Agreement are authorized to cooperate by agreement for the establishment of a joint forestland classification committee and for the committee's proper performance of its functions.

**NOW, THEREFORE**, the parties to this Cooperative Agreement, in consideration of the covenants and the conditions hereinafter set forth, do agree as follows.

**ARTICLE 1  
WASCO/HOOD RIVER FORESTLAND CLASSIFICATION COMMITTEE**

1.1 The Wasco/Hood River Forestland Classification Committee is hereby reconvened.

**ARTICLE 2  
RESPONSIBILITIES OF THE HOOD RIVER COUNTY BOARD OF COMMISSIONERS**

2.1 Contingent on its ability to do so, including the availability of appropriate funding, the Hood River County Board of Commissioners agrees to:

2.1.1 Appoint two members to serve on the Wasco/Hood River Forestland Classification Committee. At least one of the appointed members shall be an owner of “forestland,” as that term is defined in ORS 526.005.

2.1.2 Provide, at no charge, facilities for meetings of the Wasco/Hood River Forestland Classification Committee.

2.1.3 Provide, at no charge, facilities for public hearings the Wasco/Hood River Forestland Classification Committee is required by law to conduct.

2.1.4 Post, at no charge, public notices the Wasco/Hood River Forestland Classification Committee is required by law to display.

2.1.5 Provide, at no charge, incidental reproduction services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

2.1.6 Provide, at no charge, assessor’s tax lot information, the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

2.2 Contingent on its ability to do so, including the availability of appropriate funding, the Hood River Board of Commissioners may:

2.2.1 Provide GIS and mapping services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

2.2.2 Provide, accommodations, supplies, and county funds not otherwise appropriated as the Hood River County Board of Commissioners determines are necessary for the Wasco/Hood River Forestland Classification Committee to properly perform its functions.

2.2.3 Reimburse members of the Wasco/Hood River Forestland Classification Committee members for their actual and necessary travel and other expenses incurred in the performance of their duties.

### **ARTICLE 3 RESPONSIBILITIES OF THE WASCO COUNTY BOARD OF COMMISSIONERS**

3.1 Contingent on its ability to do so, including the availability of appropriate funding, the Wasco County Board of Commissioners agrees to:

3.1.1 Appoint two members to serve on the Wasco/Hood River Forestland Classification Committee. At least one of the appointed members shall be an owner of “forestland,” as that term is defined in ORS 526.005.

3.1.2 Provide, at no charge, facilities for meetings of the Wasco/Hood River Forestland Classification Committee.

3.1.3 Provide, at no charge, facilities for public hearings the Wasco/Hood River Forestland Classification Committee is required by law to conduct.

3.1.4 Post, at no charge, public notices the Wasco/Hood River Forestland Classification Committee is required by law to display.



3.1.5 Provide, at no charge, incidental reproduction services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

3.1.6 Provide, at no charge, assessor's tax lot information, the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

3.2 Contingent on its ability to do so, including the availability of appropriate funding, the Wasco County Court may:

3.2.1 Provide GIS and mapping services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

3.2.2 Provide, accommodations, supplies, and county funds not otherwise appropriated as the Wasco County Court determines are necessary for the Wasco/Hood River Forestland Classification Committee to properly perform its functions.

3.2.3 Reimburse members of the Wasco/Hood River Forestland Classification Committee members for their actual and necessary travel and other expenses incurred in the performance of their duties.

#### **ARTICLE 4 RESPONSIBILITIES OF THE OREGON DEPARTMENT OF FORESTRY**

4.1 Contingent on its ability to do so, including the availability of appropriate funding, the Oregon Department of Forestry agrees to:

4.1.1 Appoint one member to serve on the Wasco/Hood River Forestland Classification Committee.

4.1.2 Request that the Director of the Oregon State University Extension Service appoint one member to serve on the Wasco/Hood River Forestland Classification Committee.

4.1.3 Request that the State Fire Marshal appoint one member to serve on the Wasco/Hood River Forestland Classification Committee.

4.1.4 Provide, at no charge, facilities for meetings of the Wasco/Hood River Forestland Classification Committee.

4.1.5 Provide, at no charge, facilities for public hearings the Wasco/Hood River Forestland Classification Committee is required by law to conduct.

4.1.6 Post, at no charge, public notices the Wasco/Hood River Forestland Classification Committee is required by law to display.

4.1.7 Provide, at no charge, incidental reproduction services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

4.1.8 Provide, at no charge, forestland condition information, the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

4.1.9 Provide, at no charge, wildfire incidence information, the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

4.2 Contingent on its ability to do so, including the availability of appropriate funding, the Oregon Department of Forestry may:

4.2.1 Provide GIS and mapping services the Wasco/Hood River Forestland Classification Committee determines it needs to properly perform its functions.

4.2.2 Provide, accommodations, supplies, and county funds not otherwise appropriated as the Oregon Department of Forestry determines are necessary for the Wasco/Hood River Forestland Classification Committee to properly perform its functions.

4.2.3 Reimburse members of the Wasco/Hood River Forestland Classification Committee members for their actual and necessary travel and other expenses incurred in the performance of their duties.

## **ARTICLE 5 MODIFICATION**

5.1 This Cooperative Agreement may be modified by mutual consent of all parties to this Cooperative Agreement.

5.2 Modifications to this Cooperative Agreement shall be documented on a separate piece of paper and shall be attached to all copies of this Cooperative Agreement.

## **ARTICLE 6 EFFECTIVE DATE & TERMINATION**

6.1 This Cooperative Agreement shall become effective upon the date subscribed by the last signatory party or on July 1, 2019, whichever date occurs latest.

6.2 Any party to this Cooperative Agreement may terminate this Cooperative Agreement, upon providing not less than thirty days written notice to all other parties.

6.4 Unless otherwise terminated sooner, as provided in Article 6.2, this Cooperative Agreement shall automatically terminate ten years after it becomes effective.

## **ARTICLE 7 AUTHORIZED COORDINATORS**

7.1 For the Hood River Board of Commissioners, the authorized coordinator of this Cooperative Agreement is:

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

7.2 For the Wasco County Board of Commissioners, the authorized coordinator of this Cooperative Agreement is:

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

7.2 For the Oregon Department of Forestry, the authorized coordinator of this Cooperative Agreement is:

Name: Kristin Dodd, Unit Forester

Mailing Address: 3701 West 13<sup>th</sup> Street

The Dalles, OR. 97058

7.4 Changes in either the name or the mailing address of an authorized coordinator of this Cooperative Agreement shall be documented on a separate piece of paper and shall be attached to all copies of this Cooperative Agreement.

## **ARTICLE 8 OTHER CONSIDERATIONS**

8.1 This Cooperative Agreement may not be assigned, in whole or in part, to any other entity, by any party to this Cooperative Agreement.

8.2 Each party to this Cooperative Agreement agrees to defend, protect, save, and hold harmless the other parties, their officers, agents and employees from any and all claims, costs, damages, and expenses arising from performance under this Cooperative Agreement.

8.3 Nothing contained in this Cooperative Agreement shall obligate any party to this Cooperative Agreement for expenditures in excess of funds made properly available, for activities or functions envisioned to be performed under this Cooperative Agreement.

8.4 Nothing contained in this Cooperative Agreement shall obligate any party to this Cooperative Agreement to perform activities or functions, which they cannot perform or for which they have no legal authority to perform.

8.5 All parties to this Cooperative Agreement agree their participation is voluntary and no part of this Cooperative Agreement is intended to be subject to the provisions of Article XI, Section 15 of the Constitution of Oregon.

### **APPROVED:**

For the Hood River County Board of Commissioners:

\_\_\_\_\_  
Commission Chair

Date: \_\_\_\_\_

For the Wasco County Board of Commissioners:

\_\_\_\_\_  
County Representative

Date: \_\_\_\_\_

For the Oregon Department of Forestry:

\_\_\_\_\_  
District Forester

Date: \_\_\_\_\_





## MOTION

**SUBJECT: Forest Classification Cooperative Agreement**

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I move to approve the Cooperative Agreement between Wasco County Board of Commissioners, Hood River County Board of Commissioners and Oregon Department of Forestry, State Forester to reconvene the joint Wasco/Hood River Forestland Classification Committee.



## AGENDA ITEM

### Transportation IGAs

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[MCEDD MEMO](#)

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[STATEWIDE TRANSPORTATION IMPROVEMENT FUND AGREEMENT](#)

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[MCEDD TRANSPORTATION AGREEMENT 2019-2021](#)

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[MOTION LANGUAGE](#)

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**MEMORANDUM**

**Date: May 29, 2019**

**To: Wasco County Board of County Commissioners**

**From: Jessica Metta, Mid-Columbia Economic Development District Deputy Director**

**Re: Transportation Contracts with MCEDD**

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**Request**

Approve the two transportation contracts between Wasco County and MCEDD.

**Background**

Wasco County is the designated recipient of three sources of public transportation funding that come from Oregon Department of Transportation (ODOT): FTA 5310 and Special Transportation Fund (STF) dollars that focus on transportation of seniors and individuals with disabilities and the Statewide Transportation Improvement Fund (STIF) Formula funds that support expansion of public transportation. For these funds to flow to The LINK, Wasco County's public transportation service currently operated by Mid-Columbia Economic Development District (MCEDD), contracts between Wasco County and MCEDD are required.

**Wasco County Transportation Services Contract**

Wasco County and MCEDD currently have a contract for completion of the FTA 5310 and STF 2017-2019 service. These two funds are issued on the same schedule and are currently implemented under the same contract with the ODOT-Wasco County grant contracts as exhibits. This current contract was developed by Wasco County when MCEDD assumed operation of The LINK from Mid-Columbia Council of Governments. In March, Wasco County approved applying for the 2019-2021 FTA 5310 and STF funds again for The LINK and the contracts are now coming to Wasco County from ODOT. Using the current MCEDD-Wasco County contract as a template, we have drafted a 2019-2021 contract for the new FTA 5310 and STF funds.

**Wasco County Statewide Transportation Improvement Fund Services Contract**

MCEDD has assisted Wasco County in developing a STIF Plan to receive the STIF Formula funds over the last year. As of May 15, 2019 those funds have begun flowing to Wasco County from the payroll tax collected since July 1, 2018. Using the current FTA 5310 and STF contract as a template, we have drafted a contract for implementing the Wasco County STIF Plan which covers the period of July 1, 2018 to June 30, 2021. The Wasco County STIF Plan can be found here: [https://www.mcedd.org/wp-content/uploads/2019/02/Wasco\\_County\\_STIF\\_Plan\\_v2\\_2018\\_12\\_12.pdf](https://www.mcedd.org/wp-content/uploads/2019/02/Wasco_County_STIF_Plan_v2_2018_12_12.pdf)

MCEDD looks forward to implementing these grants and plans for public transportation in Wasco County and the benefits they bring to our community.

## WASCO COUNTY STATEWIDE TRANSPORTATION IMPROVEMENT FUND SERVICES CONTRACT

This Contract is between WASCO COUNTY, a political subdivision, acting by and through the Board of County Commissioners (County) and Mid-Columbia Economic Development District (Contractor). The parties agree as follows:

**Effective Date and Termination Date.** The effective date of this Contract shall be July 1, 2018. Unless extended or terminated earlier in accordance with its terms, this Contract shall terminate when County accepts Contractor's completed performance as of June 30, 2021. Contract termination shall not extinguish or prejudice County's right to enforce this Contract with respect to any default by Contractor that has not been cured.

**Statement of Work.** Contractor shall perform the work described in Exhibit 1.

**Payment for Work.** County agrees to pay Contractor in accordance with Exhibit 1.

**Contract Documents.** This Contract includes page 1-11 And Exhibits 1-4.

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### CONTRACTOR DATA AND SIGNATURE

Contractor Address: 515 E. 2<sup>nd</sup> Street A, The Dalles, OR 97058

Federal Tax ID#: 93-0586118

Is Contractor a nonresident alien? ☐ Yes ☒ No

Business Designation (check one): ☐ Sole Proprietorship ☐ Partnership ☐ Corporation for-profit

☐ Corporation non-profit ☒ Council of Governments (ORS 190)

A Federal Tax ID number or Social Security number is required to be provided by the Contractor and shall be used for the administration of state, federal and local tax laws. Payment information shall be reported to the Internal Revenue Service under the name and Federal Tax ID number provided above.

I have read this Contract including the attached Exhibits. I understand this Contract and agree to be bound by its terms. NOTE: Contract shall also sign Exhibit 3.

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Signature

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Title

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Name (please print)

---

Date

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**WASCO COUNTY SIGNATURE**

Contracts are not valid and not binding on the County until signed by the Board of County Commissioners.

Dated this 5<sup>th</sup> day of June, 2019

Wasco County Board of Commissioners

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Steven D. Kramer, Chair

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Scott C. Hege, Vice-Chair

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Kathy Schwartz, County Commissioner

APPROVED AS TO FORM:

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Brad Timmons, County Counsel

## **STANDARD TERMS AND CONDITIONS**

- 1. Time is of the Essence.** Contractor agrees that time is of the essence in the performance of this Contract.
- 2. Compensation.** Payment for all work performed under this Contract shall be made in the amounts and manner set forth in Exhibit 1.
  - a. Payments shall be made to Contractor following County's review and approval of billings and deliverables submitted by Contractor.
  - b. All Contractor Billings are subject to the maximum compensation amount of this Contract.
  - c. Contractor shall not submit billings for, and County shall not pay, any amount in excess of the maximum compensation amount of this Contract.
    - 1) If the maximum compensation amount is increased by amendment to this Contract, the amendment shall be signed by both parties and fully executed before Contractor performs work subject to the amendment.
    - 2) No payment shall be made for any services performed before the beginning date or after the expiration date of this Contract.
  - d. This Contract shall not be amended after the expiration date.
  - e. Contractor shall submit quarterly performance reports and invoices for work completed. These shall describe all work performed with particularity and by whom it was performed and shall itemize and explain all expenses incurred. Invoices must be legible and include a description of the service, the date(s) of the service, and the agency providing the service.
  - f. The invoices also shall include the total amount invoiced to date by Contractor prior to the current invoice.
  - g. Prior to approval or payment of any billing, County may require and Contractor shall provide any information which County deems necessary to verify work has been properly performed in accordance with the Contract.
- 3. Delegation, SubContracts and Assignment.** Contractor shall not delegate or subContract any of the work required by this Contract or assign or transfer any of its interest in this Contract, without the prior written consent of County.
  - a. Any delegation, subContract, assignment, or transfer without prior written consent of County shall constitute a material breach of this Contract.
  - b. Any such assignment or transfer, if approved, is subject to such conditions and provisions as the County may deem necessary.
  - c. No approval by the County of any assignment or transfer of interest shall be deemed to create any obligation of the County to increase rates of payment or maximum Contract consideration.
  - d. Prior written approval shall not be required for the purchase by the Contractor of articles, supplies and services which are incidental to the provision of services under this Contract that are necessary for the performance of the work.
  - e. Any subContracts that the County may authorize shall contain all requirements of this Contract, and unless otherwise specified by the County, the Contractor shall be responsible for the performance of the subContractor.

**4. No Third Party Beneficiaries.**

- a. County and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms.
- b. Nothing in this Contract gives or provides any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name in this Contract and expressly described as beneficiaries of this Contract.

**5. Successors in Interest.** The provision of this Contract shall be binding upon and inure to the benefit of the parties and their successors and approved assigns, if any.

**6. Early Termination.** This Contract may be terminated as follows:

- a. Mutual Consent. County and Contractor, by mutual written agreement, may terminate this Contract at any time.
- b. Party's Convenience. County or Contractor may terminate this Contract for any reason upon 30 calendar days written notice to the other party.
- c. For Cause. County may also terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County, under any of the following conditions:
  - 1) If funding from the state government or other sources is not obtained and continued at levels sufficient to allow for the services as required in this Contract.
  - 2) This Contract may be modified to accommodate the change in available funds.
  - 3) If state laws, regulations or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract.
  - 4) In the event sufficient funds shall not be appropriated for the payment of consideration required to be paid under this Contract, and if County has no funds legally available for consideration from other sources.
  - 5) If any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, suspended, not renewed or change in such a way that the Contractor no longer meets requirements for such license or certificate.
- d. Contractor Default or Breach. The County, by written notice to the Contractor, may immediately terminate the whole or any part of this Contract under any of the following conditions.
  - 1) If the Contractor fails to provide services called for by this Contract within the time specified or any extension thereof.
  - 2) If the Contractor fails to perform any of the other requirements of this Contract or so fails to pursue the work so as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from the County specifying such failure, the Contractor fails to correct such failure within 10 calendar days or such other period as the County may authorize.
  - 3) Contractor institutes or has instituted against it insolvency, receivership or bankruptcy proceedings, makes an assignment for the benefit of creditors, or cease doing business on a regular basis.

e. County Default or Breach.

- 1) Contractor may terminate this Contract in the event of a breach of this Contract by the County. Prior to such termination, the Contractor shall give to the County written notice of the breach and intent to terminate.
- 2) If the County has not entirely cured the breach within 10 calendar days of the date of the notice, then the Contractor may terminate this Contract at any time thereafter by giving notice of termination.

**7. Payment on Early Termination.** Upon termination pursuant to paragraph 6, payment shall be made as follows:

- a. If terminated under subparagraphs 6a. through c. of this Contract, the County shall pay Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract. Provided however, County shall not pay Contractor for any obligations or liabilities incurred by Contractor after Contractor receives written notice of termination.
- b. If this Contract is terminated under subparagraph 6d of this Contract, County obligations shall be limited to payment for services provided in accordance with this Contract prior to the date of termination, less any damages suffered by the County.
- c. If terminated under subparagraph 6e of this Contract by the Contractor due to a breach by the County, then the County shall pay the Contractor for work performed prior to the terminate date if such work was performed in accordance with the Contract.
  - 1) With respect to services compensable on an hourly basis, for unpaid invoices, hours worked within any limits set forth in this Contract but not yet billed, authorized expenses incurred if payable according to this Contract and interest within the limits set forth under ORS 293.462 and
  - 2) With respect to deliverable-based Work, the sum designated for completing the deliverable multiplied by the percentage of Work completed and accepted by County, less previous amounts paid and any claim(s) that County has against Contractor.
  - 3) Subject to the limitations under paragraph 8 of this Contract.

**8. Remedies.** In the event of breach of this Contract the parties shall have the following remedies:

- a. Termination under subparagraphs 6a. through c. of this Contract shall be without prejudice to any obligations or liabilities of either party already reasonably incurred prior to such termination.
  - 1) Contractor may not incur obligations or liabilities after Contractor receives written notice of termination.
  - 2) Additionally, neither party shall be liable for any indirect, incidental, consequential or special damages under this Contract or for any damages of any sort arising solely from the termination of this Contract in accordance with its terms.
- b. If terminated under subparagraph 6d. of this Contract by the County due to a breach by the Contractor, County may pursue any remedies available at law or in equity.
  - 1) Such remedies may include, but are not limited to, termination of this Contract, return of all or a portion of this Contract amount, payment of interest earned on this Contract amount, and declaration of ineligibility for the receipt of future Contract awards.
  - 2) Additionally, County may complete the work either by itself, by agreement with another Contractor, or by a combination thereof. If the cost of completing the work exceeds the



remaining unpaid balance of the total compensation provided under this Contract, then the Contractor shall be liable to the County for the amount of the reasonable excess.

- c. If amounts previously paid to Contractor exceed the amount due to Contractor under this Contract, Contractor shall repay any excess to County upon demand.
- d. Neither County nor Contractor shall be held responsible for delay or default caused by fire, civil unrest, labor unrest, riot, acts of God, or war where such cause was beyond reasonable efforts to remove or eliminate performance of its obligations under this Contract. For any delay in performance as a result of the events describe in this subparagraph, Contractor shall be entitled to additional reasonable time for performance that shall be set forth in an amendment to this Contract.
- e. The passage of this Contract expiration date shall not extinguish or prejudice the County's or Contractor's right to enforce this Contract with respect to any default or defect in performance that has not been cured.
- f. County's remedies are cumulative to the extent the remedies are not inconsistent, and County may pursue any remedy or remedies singly, collectively, successively or in an order whatsoever.

**9. Contractor's Tender upon Termination.** Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract unless County expressly directs otherwise in such notice of termination.

- a. Upon termination of this Contract, Contractor shall deliver to County all documents, information, works-in-progress and other property that are or would be deliverables had this Contract been completed.
- b. Upon County's requires, Contractor shall surrender to anyone County designates, all documents, research, objects or other tangible things needed to complete the work.

**10. Work Standard.**

- a. Contractor shall be solely responsible for and shall have control over the means, methods, techniques, sequences and procedures of performing the work, subject to the plans and specifications under this Contract and shall be solely responsible for the errors and omissions of its employees, subContractors and agents.
- b. For goods and services to be provided under this Contract, Contractor agrees to:
  - 1) Perform the work in a good, workmanlike, and timely manner using the schedule, materials, plans and specifications approved by County;
  - 2) Comply with all applicable legal requirements;
  - 3) Comply with all programs, directives and instructions of County relating to safety, storage of equipment or materials;
  - 4) Take all precautions necessary to protect the safety of all persons at or near County or Contractor's facilities and areas of service under this Contract, including employees of Contractor, County and any other Contractors or subContractors and to protect the work and all other property against damage.

**11. Drugs and Alcohol.** Contractor shall adhere to and enforce a zero tolerance policy for the use of alcohol and the unlawful selling, possession or use of controlled substances while performing work under this Contract. Contractor shall adhere to FTA guidelines and requirements in accordance with Exhibit 4 attached hereto and incorporated by reference herein.

- 12. Insurance.** Contractor shall provide insurance in accordance with Exhibit 2 attached hereto and incorporated by reference herein.
- 13. Criminal Background Investigations.** Contractor understands that Contractor and Contractor's employees and agents are subject to periodic criminal background investigations by County and, if such investigations disclose criminal activity not disclosed by Contractor, such non-disclosure shall constitute a material breach of this Contract and County may terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County.
- 14. Confidentiality.** Contractor shall maintain confidentiality of information obtained pursuant to this Contract as follows:
- a. Contractor shall not use, release or disclose any information concerning any employee, client, applicant or person doing business with the County for any purpose not directly connected with the administration of County's or the Contractor's responsibilities under this Contract except upon written consent of the County, and if applicable, the employee, client, applicant or person.
  - b. The Contractor shall ensure that its agents, employees, officers and subContractors with access to County and Contractor records understand and comply with this confidentiality provision.
  - c. Contractor shall treat all information as to personal facts and circumstances obtained on Medicaid eligible individuals as privileged communication, shall hold such information confidential, and shall not disclose such information without the written consent of the individual, his or her attorney, the responsible parent of a minor child, or the child's guardian, except as required by other terms of this Contract.
  - d. Nothing prohibits the disclosure of information in summaries, statistical information, or other form that does not identify particular individuals.
  - e. Personally identifiable health information about applicants and Medicaid recipients will be subject to the transaction, security and privacy provisions of the Health Insurance Portability and Accountability Act ("HIPAA").
  - f. Contractor shall cooperate with County in the adoption of policies and procedures for maintaining the privacy and security of records and for conducting transactions pursuant to HIPAA requirements.
  - g. This Contract may be amended in writing in the future to incorporate additional requirements related to compliance with HIPAA
  - h. If Contractor receives or transmits protected health information, Contractor shall enter into a Business Associate Agreement with County, which, if attached hereto, shall become a part of this Contract.
- 15. Reports.** Contractor shall provide County with periodic performance reports on a quarterly basis. Further, at any time, County has the right to demand adequate assurances that the services provided by Contractor shall be in accordance with the Contract. Such assurances provided by Contractor shall be supported by documentation in Contractor's possession from third parties.
- 16. Access to Records.** Contractor shall maintain fiscal records and all other records pertinent to this Contract.
- a. All fiscal records shall be maintained pursuant to generally accepted accounting standards and other records shall be maintained to the extent necessary to clearly reflect actions taken.
    - 1) All records shall be retained and kept accessible for at least three years following the final payment made under this Contract or all pending matters are closed, whichever is later.

2) If an audit, litigation or other action involving this Contract is started before the end of the three year period, the records shall be retained until all issues arising out of the action are resolved or until the end of the three year period, whichever is later.

b. County and its authorized representatives shall have the right to direct access to all of Contractor's books, documents, papers and records related to this Contract for the purpose of conducting audits and examinations and making copies, excerpts and transcripts.

1) These records also include licensed software and any records in electronic form, including but not limited to computer hard drives, tape backups and other such storage devices. County shall reimburse Contractor for Contractor's cost of preparing copies.

2) At Contractor's expense, the County, the Secretary of State's Office of the State of Oregon, and their duly authorized representatives, shall have license to enter upon Contractor's premises to access and inspect the books, documents, papers, computer software, electronic files and any other records of the Contractor which are directly pertinent to this Contract.

**17. Ownership of Work.** All work of Contractor that results from this Contract (the "Work Product") is the exclusive property of the County.

- a. County and Contractor intend that such Work Product be deemed "work made for hire" of which County shall be deemed author.
- b. If, for any reason, the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to County all of its right, title and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark, trade secret or any other state or federal intellectual property law or doctrine.
- c. Contractor shall execute such further documents and instruments as County may reasonably request in order to fully vest such rights in County.
- d. Contractor forever waives any and all rights relating to Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.
- e. County shall have no rights in any pre-existing work product of Contractor provided to County by Contractor in the performance of this Contract except an irrevocable, non-exclusive, perpetual, royalty-free license to copy, use and re-use any such work product for County use only.
- f. If this Contract is terminated prior to completion, and the County is not in default, County, in addition to any other rights provided by this Contract, may require Contractor to transfer and deliver all partially completed work products, reports or documentation that Contractor has specifically developed or specifically acquired for the performance of this Contract.
- g. In the event that Work Product is deemed Contractor's Intellectual Property and not "work made for hire," Contractor hereby grants to County an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on the County's behalf.
- h. In the event that Work Product is Third Party Intellectual Property, Contractor shall secure on the County's behalf and in the name of the County, and irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on the County's behalf.

**18. County Code Provision.** There is no additional County Code Provision requiring Contractor's compliance.

**19. Partnership.** County is not, by virtue of this Contract, a partner or joint venture with Contractor in connection with activities carried out under this Contract and shall have no obligation with respect to Contractor's debts or any other liabilities of each and every nature.

**20. Indemnity and Hold Harmless.**

- a. To the fullest extent authorized by law, Contractor shall defend, save, hold harmless and indemnify the County and its officers, employees and agents from and against all claims, suites, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of Contractor or its officers, employees, Contractors or agents under this Contract, including without limitation any claims that the work, the work product or any other tangible or intangible items delivered to County by Contractor that may be the subject of protection under any state or federal intellectual property law or doctrine, or the County's use thereof, infringes any patent, copyright, trade secret, trademark, trade dress, mask work utility design or other proprietary right of any third party.
- b. Contractor shall have control of the defense and settlement of any claim that is subject to subparagraph a. of this paragraph; however, neither Contractor nor any attorney engaged by Contractor shall defend the claim in the name of Wasco County or any department or agency thereof, nor purport to act as legal representative of the County or any of its departments or agencies without first receiving from the County's legal counsel, in a form and manner determined appropriate by the County's legal counsel, authority to act as legal counsel for the County, nor shall Contractor settle any claim on behalf of the County without the approval of the County's legal counsel.
- c. To the extent permitted by Article XI, Section 10, of the Oregon Constitution and the Oregon Tort Claims Act, ORS 30.260 through 30.300, County shall defend, save, hold harmless and indemnify Contractor and its officers, employees and agents from and against all claims, suites, actions, losses, damages, liabilities costs and expenses of any nature resulting from or arising out of, or relating to the activities of County or its officers, employees, Contractors or agents under this Contract.

**21. Waiver.**

- a. County's delay in exercising, or failure to exercise any right, power or privilege under this Contract shall not operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege under this Contract preclude any other or further exercise thereof or the exercise of any other such right, power or privilege.
- b. The remedies provided herein are cumulative and not exclusive of any remedies provided by law.

**22. Governing Law.** This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law.

- a. Any claim, action, suit or proceeding (collectively, "Claim") between County and Contractor that arises from or relates to this Contract shall be brought and conducted solely and exclusively within the circuit Court of Wasco County for the State of Oregon; provide, however, if a Claim shall be brought in federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.
- b. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS. The parties agree that the UN Convention on International Sales of Goods shall not apply.



- 23. Severability.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if this Contract did not contain the particular term or provision held invalid.
- 24. Counterparts.** This Contract may be executed in several counterparts, all of which when taken together shall constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of this Contract so executed shall constitute an original.
- 25. Notice.** Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing to Contractor or County at the address or number set forth below or to such other addresses or numbers as either party may hereafter indicate in writing. Delivery may be by personal delivery, facsimile or mailing the same, postage prepaid.
- a. Any communication or notice by personal delivery shall be deemed delivered when actually given to the designated person or representative.
  - b. Any communication or notice sent by facsimile shall be deemed delivered when the transmitting machine generates receipt of the transmission. To be effective against County, such facsimile transmission shall be confirmed by telephone notice to the County Administrative Officer.
  - c. Any communication or notice mailed shall be deemed delivered five (5) days after mailing. Any notice under this Contract shall be mailed by first class postage or delivered as follows:
- |   |   |
|---|---|
| <p><u>To Contractor:</u></p> <p>Amanda Hoey, Executive Director<br/>515 E. 2<sup>nd</sup> Street A<br/>The Dalles, OR 97058</p> | <p><u>To County:</u></p> <p>Tyler Stone, Administrative Officer<br/>511 Washington Street, Suite 101<br/>The Dalles, OR 97058</p> |
|---|---|
- 26. Merger Clause.** This Contract and the attached Exhibits constitute the entire agreement between the parties.
- a. All understandings and agreements between the parties and representations by either party concerning this Contract are contained in this Contract.
  - b. No waiver, consent, modification or change in the terms of this Contract shall bind either party unless in writing signed by both parties.
  - c. Any written waiver, consent, modification or change shall be effective only in the specific instance and for the specific purpose given.
- 27. Identity Theft Protection.** Contractor and subContractors shall comply with the Oregon Consumer Identity Theft Protection Act. (ORS 646A.600 et seq.).
- 28. Survival.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Sections 4, 5, 8, 9, 15, 17, 18, 20-207, 28 and 30.
- 29. Representations and Warranties.**
- a. Contractor's Representations and Warranties. Contractor represents and warrants to County that:
    - 1) Contractor has the power and authority to enter into and perform this Contract;
    - 2) This Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms;
    - 3) Contractor has the skill and knowledge possessed by well-informed members of its industry7, trade or profession and Contractor will apply that skill and knowledge with care and diligence to

perform the Work in a professional manner and in accordance with standards prevalent in Contractor's industry;

4) Contractor shall, at all times during the term of this Contractor, be qualified, professionally competent, and duly licensed to perform the Work;

5) Contractor prepared its proposal related to this Contract, be qualified, professionally competent, and duly licensed to perform the Work;

6) Contractor's making and performance of this Contract do not and will not violate any provision of any applicable law, rule or regulation or order of any court, regulatory commission, board or other administrative agency.

b. Warranties Cumulative. The warranties set forth in this paragraph are in addition to and not in lieu of any other warranties provided.

**30. Non-Discrimination.** Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this Contract. Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or other such remedies deemed appropriate by County.

**31. SB 675 (2015) Representation and Covenant.**

- a. Contractor represents and warrants that Contractor has complied with the tax laws of this state, and where applicable, the laws of Wasco County, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318.
- b. Contractor covenants to continue to comply with the tax laws of this state, and where applicable, the laws of Wasco County, during the term of this Contract.
- c. Contractor acknowledges that failure by Contractor to comply with the tax laws of this state, and where applicable, the laws of Wasco County, at any time before Contractor has executed the Contract or during the term of the Contract is and will be deemed a default for which Wasco County may terminate the Contract and seek damages and/or other relief available under the terms of the Contract or under applicable law.

**32. Compliance with Provisions of Funding Source.** In addition to the conditions outlined in this Contract, Contractor must comply with all applicable STIF adopted rules (OAR 732-040 and OAR 732-042) as well as the state's recommended record and document management procedures, Civil Rights and Americans with Disabilities Act regulations.

**EXHIBIT 1**

**WASCO COUNTY SERVICES CONTRACT**

**STATEMENT OF WORK, COMPENSATION, PAYMENT TERMS AND SCHEDULE**

**1. Contractor shall perform the following work:**

- a. Implement the Wasco County Statewide Transportation Improvement Fund Plan as adopted by Wasco County, including administrative costs required to manage the plan and as included in the plan.
- b. This Contract includes in part operations and capitalized preventive maintenance, which are defined under 49 USC § 5310 program, as described in Circular 9070, 1F, Section 111-14-e. Generally accepted accounting principles and the Contractor's accounting system determine those costs that are to be accounted for as operating costs. Contractor may not count the same costs twice if they have multiple agreements for which these costs may be eligible. Contractor may use capital equipment funded under U.S. Department of Transportation or State-source agreements when performing services rendered through this Contract. Depreciation of capital equipment funded from U.S. Department of Transportation or State-source grants is not an eligible expense. As this agreement also includes funding through Statewide Transportation Improvement Fund (STIF), Contractor will comply with the guidelines established by Oregon Revised Statutes (ORS) 391.800 and 391.830 and Oregon Administrative Rules (OAR) Chapter 732. Contractor will receive and disburse STIF moneys from a separate governmental fund. Any interest accrued from the account must be added to the moneys and reported to the State.

Contractor will subtract income from fares, tickets and passes, either pre-paid or post-paid, from the gross operating expenses of the service. All administrative and operating expenses incurred by Contractor are reimbursable as operating expenses.

Contractor may not use assets acquired under this Contract to compete unfairly with the private sector.

**2. County Services.** County shall provide Contractor, at County's expense, with material and services described as follows: None.

**3. Consideration.**

- a. County shall pay Contractor an amount not to exceed the STIF payments from the State of Oregon as a pass-through to Mid-Columbia Economic Development District for The LINK Public Transportation as identified in the Wasco County STIF Plan. The estimated funds for each fiscal year are: \$209,267 in FY19, \$376,000 in FY20, \$431,000 in FY21.
- b. Contractor shall be entitled to reimbursement for expenses.

☒ YES    ☐ NO

**4. The maximum compensation.**

- a. The maximum compensation under this Contract, including allowable expenses, is an amount not to exceed the STIF payments from the State of Oregon, estimated at \$1,016,267.
- b. Contractor shall not submit invoices for, and County shall not pay for any amount in excess of the maximum compensation amount set forth above.

- 1) If this maximum compensation amount is increased by amendment of this Contract, the amendment shall be fully effective before Contractor performs work subject to the amendment.
- 2) Contractor shall notify County in writing of the impending expiration of this Contract thirty (30) calendar days prior to the expiration date.

**5. Schedule of Performance or Delivery.**

- a. County's obligation to pay depends upon Contractor's delivery or performance in accordance with the following: County will only pay for completed work that conforms to this schedule and only at such time as a completed Agency Periodic Report has been submitted to the Oregon Department of Transportation Public Transit Divisions OPTIS system.



## EXHIBIT 2

### WASCO COUNTY SERVICES CONTRACT

#### INSURANCE REQUIREMENTS

Contractor shall at all times maintain in force at Contractor's expense, each insurance noted below and as required by the State of Oregon Insurance Requirements listed in the Contracts attached as Exhibits 5 and 6. Insurance coverage must apply on a primary or non-contributory basis. All insurance policies, except Professional Liability, shall be written on an occurrence basis and be in effect for the term of this Contract. Policies written on a "claims made" basis must be approved and authorized by Wasco County.

**Contractor Name: Mid-Columbia Economic Development District**

**Workers Compensation** insurance in compliance with ORS 656.017, requiring Contractor and all subContractors to provide workers' compensation coverage for all subject workers, or provide certification of exempt status. Worker's Compensation Insurance to cover claims made under Worker's Compensation, disability benefit or any other employee benefit laws, including statutory limits in any state of operation with Coverage B Employer's Liability coverage all at the statutory limits. In the absence of statutory limits the limits of said Employers liability coverage shall be not less than \$1,000,000 each accident, disease and each employee. This insurance must be endorsed with waiver of subrogation endorsement, waiving the insured's right of subrogation against County.

**Commercial General Liability** insurance with combined single limit of not less than \$5 million per occurrence. Commercial General Liability insurance includes coverage for personal injury, bodily injury, advertising injury, property damage, premises, operations, products, complete operations and Contractual liability. The insurance coverages provided for herein must be endorsed as primary and non-contributory to any insurance of County, its officers, employees or agents. Each such policy obtained by Contractor shall provide that the insurer shall defend any suit against the named insured and the additional insureds, their officers, agents, or employees, even if such suit is frivolous or fraudulent. Such insurance shall provide County with the right, but not the obligation, to engage its own attorney for the purpose of defending any legal action against County, its officers, agents, or employees, and that Contractor shall indemnify County for costs and expenses, including reasonable attorney's fees, incurred or arising out of the defense of such action.

The policy shall be endorsed to name ***Wasco County, State of Oregon, their officers, agents, employees and volunteers as an additional insured.*** The additional insured endorsement shall not include declarations that reduce any per occurrence or aggregate insurance limit. The Contractor shall provide additional coverage based on any outstanding claim(s) made against policy limits to ensure that minimum insurance limits required by the County are maintained. Construction Contracts may include aggregate limits that apply on a "per location" or "per project" basis. The additional insurance protection shall extend equal protection to County as to Contractor or subContractors and shall not be limited to vicarious liability only or any similar limitation. To the extent any aspect of this Paragraph shall be deemed unenforceable, then the additional insurance protection to County shall be narrowed to the maximum amount of protection allowed by law.

**Automobile Liability insurance** with a combined single limit of not less than \$5 million per occurrence.

Automobile Liability insurance includes coverage for bodily injury and property damage resulting from operation of a motor vehicle. Commercial Automobile Liability Insurance shall provide coverage for *any* motor vehicle (symbol 1 on some insurance certificates) driven by or on behalf of Contractor during the course of providing services under this Contract. Commercial Automobile Liability is required for Contractors that own business vehicles registered to the business.

**Additional Requirements.** Contractor shall pay all deductibles and self-insured retentions. A cross-liability clause or separation of insured's condition must be included in all commercial general liability policies required by this Contract. Contractor's coverage will be primary in the event of loss.

Certificate of Insurance Required. Contractor shall furnish a current Certificate of Insurance to the County with the signed Contract. Contractor shall notify the County in writing at least 30 days in advance of any cancellation, termination, material change or reduction of limits of the insurance coverage. The Certificate shall also state the deductible or, if applicable, the self-insured retention level. Contractor shall be responsible for any deductible or self-insured retention. If requested, complete copies of insurance policies shall be provided to the County.

**EXHIBIT 3**  
**WASCO COUNTY SERVICES CONTRACT**  
**ADDITIONAL OVERSIGHT FOR STIF SUBRECIPIENTS**

CONTRACTOR shall comply with all applicable STIF adopted rules (OAR 732-040 and OAR 732-042) as well as the federal regulations listed as follows:

**Access to Records and Reports**

The record keeping and access requirements apply to all Contracts funded in whole or in part with FTA funds. Under 49 U.S.C. § 5325(g), FTA has the right to examine and inspect all records, documents, and papers, including Contracts, related to any FTA project financed with Federal assistance authorized by 49 U.S.C. Chapter 53.

1. **Record Retention.** The Contractor will retain, and will require its subContractors of all tiers to retain, complete and readily accessible records related in whole or in part to the Contract, including, but not limited to, data, documents, reports, statistics, sub-agreements, leases, subContracts, arrangements, other third party agreements of any type, and supporting materials related to those records.
2. **Retention Period.** The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.
3. **Access to Records.** The Contractor agrees to provide sufficient access to FTA and its Contractors to inspect and audit records and information related to performance of this Contract as reasonably may be required.
4. **Access to the Sites of Performance.** The Contractor agrees to permit FTA and its Contractors access to the sites of performance under this Contract as reasonably may be required.

**Civil Rights and Equal Opportunity**

The Oregon Department of Transportation (ODOT) is an Equal Opportunity Employer. As such, the ODOT agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, the ODOT agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

Under this Agreement, the Contractor shall at all times comply with the following requirements and shall include these requirements in each subContract entered into as part thereof.

- a. **Nondiscrimination.** In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

- b. **Race, Color, Religion, National Origin, Sex.** In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e *et seq.*, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- c. **Age.** In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621-634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 *et seq.*, U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- d. **Disabilities.** In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 § 12101 *et seq.*, the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

### ADA Access

The Contract agrees that facilities to be used in public transportation service, or to be designed for use in public transportation service, must comply with 42 U.S.C. Sections 12101 *et seq.* and DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR Part 37; and Joint ATBCB/DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 CFR Part 1192 and 49 CFR Part 38. USDOT incorporated by reference the ATBCB's "Americans with Disabilities Act Accessibility Guidelines" (ADAAG), revised September 2010, which include accessibility guidelines for buildings and facilities, and are incorporated into Appendix A to 49 CFR Part 37. USDOT also added specific provisions to Appendix A modifying the ADAAG, with the result that buildings and facilities must comply with both the ADAAG and amendments thereto in Appendix A to 49 CFR Part 37.



**EXHIBIT 4**  
**WASCO COUNTY SERVICES CONTRACT**  
**ADOPTED WASCO COUNTY STATEWIDE TRANSPORTATION IMPROVEMENT FUND PLAN 2019-2021**

## WASCO COUNTY TRANSPORTATION SERVICES CONTRACT

This Contract is between WASCO COUNTY, a political subdivision, acting by and through the Board of County Commissioners (County) and Mid-Columbia Economic Development District (Contractor). The parties agree as follows:

**Effective Date and Termination Date.** The effective date of this Contract shall be July 1, 2019. Unless extended or terminated earlier in accordance with its terms, this Contract shall terminate when County accepts Contractor's completed performance as of June 30, 2021. Contract termination shall not extinguish or prejudice County's right to enforce this Contract with respect to any default by Contractor that has not been cured.

**Statement of Work.** Contractor shall perform the work described in Exhibit 1.

**Payment for Work.** County agrees to pay Contractor in accordance with Exhibit 1.

**Contract Documents.** This Contract includes page 1-11 And Exhibits 1-6.

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### CONTRACTOR DATA AND SIGNATURE

Contractor Address: 515 E. 2<sup>nd</sup> Street A, The Dalles, OR 97058

Federal Tax ID#: 93-0586118

Is Contractor a nonresident alien? ☐ Yes ☒ No

Business Designation (check one): ☐ Sole Proprietorship ☐ Partnership ☐ Corporation for-profit

☐ Corporation non-profit ☒ Council of Governments (ORS 190)

A Federal Tax ID number or Social Security number is required to be provided by the Contractor and shall be used for the administration of state, federal and local tax laws. Payment information shall be reported to the Internal Revenue Service under the name and Federal Tax ID number provided above.

I have read this Contract including the attached Exhibits. I understand this Contract and agree to be bound by its terms. NOTE: Contract shall also sign Exhibit 3.

---

Signature

---

Title

---

Name (please print)

---

Date

---

**WASCO COUNTY SIGNATURE**

Contracts are not valid and not binding on the County until signed by the Board of County Commissioners.

Dated this 5th day of June, 2019

Wasco County Board of Commissioners

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Steven D. Kramer, Chair

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Scott C. Hege, Vice-Chair

---

Kathy Schwartz, County Commissioner

APPROVED AS TO FORM:

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Brad Timmons, County Counsel

## **STANDARD TERMS AND CONDITIONS**

1. **Time is of the Essence.** Contractor agrees that time is of the essence in the performance of this Contract.
2. **Compensation.** Payment for all work performed under this Contract shall be made in the amounts and manner set forth in Exhibit 1.
  - a. Payments shall be made to Contractor following County's review and approval of billings and deliverables submitted by Contractor.
  - b. All Contractor Billings are subject to the maximum compensation amount of this contract.
  - c. Contractor shall not submit billings for, and County shall not pay, any amount in excess of the maximum compensation amount of this Contract.
    - 1) If the maximum compensation amount is increased by amendment to this Contract, the amendment shall be signed by both parties and fully executed before Contractor performs work subject to the amendment.
    - 2) No payment shall be made for any services performed before the beginning date or after the expiration date of this contract.
  - d. This Contract shall not be amended after the expiration date.
  - e. Contractor shall submit quarterly performance reports and invoices for work completed. These shall describe all work performed with particularity and by whom it was performed and shall itemize and explain all expenses incurred. Invoices must be legible and include a description of the service, the date(s) of the service, and the agency providing the service.
  - f. The invoices also shall include the total amount invoiced to date by Contractor prior to the current invoice.
  - g. Prior to approval or payment of any billing, County may require and Contractor shall provide any information which County deems necessary to verify work has been properly performed in accordance with the Contract.
3. **Delegation, Subcontracts and Assignment.** Contractor shall not delegate or subcontract any of the work required by this Contract or assign or transfer any of its interest in this Contract, without the prior written consent of County.
  - a. Any delegation, subcontract, assignment, or transfer without prior written consent of County shall constitute a material breach of this contract.
  - b. Any such assignment or transfer, if approved, is subject to such conditions and provisions as the County may deem necessary.
  - c. No approval by the County of any assignment or transfer of interest shall be deemed to create any obligation of the County to increase rates of payment or maximum Contract consideration.
  - d. Prior written approval shall not be required for the purchase by the Contractor of articles, supplies and services which are incidental to the provision of services under this Contract that are necessary for the performance of the work.
  - e. Any subcontracts that the County may authorize shall contain all requirements of this contract, and unless otherwise specified by the County, the Contractor shall be responsible for the performance of the subcontractor.



**4. No Third Party Beneficiaries.**

- a. County and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms.
- b. Nothing in this Contract gives or provides any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name in this Contract and expressly described as beneficiaries of this Contract.

**5. Successors in Interest.** The provision of this Contract shall be binding upon and inure to the benefit of the parties and their successors and approved assigns, if any.

**6. Early Termination.** This Contract may be terminated as follows:

- a. Mutual Consent. County and Contractor, by mutual written agreement, may terminate this Contract at any time.
- b. Party's Convenience. County or Contractor may terminate this Contract for any reason upon 30 calendar days written notice to the other party.
- c. For Cause. County may also terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County, under any of the following conditions:
  - 1) If funding from federal government, state, or other sources is not obtained and continued at levels sufficient to allow for the services as required in this contract.
  - 2) This Contract may be modified to accommodate the change in available funds.
  - 3) If state laws, regulations or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract.
  - 4) In the event sufficient funds shall not be appropriated for the payment of consideration required to be paid under this Contract, and if County has no funds legally available for consideration from other sources.
  - 5) If any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, suspended, not renewed or change in such a way that the Contractor no longer meets requirements for such license or certificate.
- d. Contractor Default or Breach. The County, by written notice to the Contractor, may immediately terminate the whole or any part of this Contract under any of the following conditions.
  - 1) If the Contractor fails to provide services called for by this Contract within the time specified or any extension thereof.
  - 2) If the Contractor fails to perform any of the other requirements of this Contract or so fails to pursue the work so as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from the County specifying such failure, the Contractor fails to correct such failure within 10 calendar days or such other period as the County may authorize.
  - 3) Contractor institutes or has instituted against it insolvency, receivership or bankruptcy proceedings, makes an assignment for the benefit of creditors, or cease doing business on a regular basis.

e. County Default or Breach.

- 1) Contractor may terminate this Contract in the event of a breach of this Contract by the County. Prior to such termination, the Contractor shall give to the County written notice of the breach and intent to terminate.
- 2) If the County has not entirely cured the breach within 10 calendar days of the date of the notice, then the Contractor may terminate this Contract at any time thereafter by giving notice of termination.

**7. Payment on Early Termination.** Upon termination pursuant to paragraph 6, payment shall be made as follows:

- a. If terminated under subparagraphs 6a. through c. of this Contract, the County shall pay Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract. Provided however, County shall not pay Contractor for any obligations or liabilities incurred by Contractor after Contract receives written notice of termination.
- b. If this Contract is terminated under subparagraph 6d of this Contract, County obligations shall be limited to payment for services provided in accordance with this Contract prior to the date of termination, less any damages suffered by the County.
- c. If terminated under subparagraph 6e of this Contract by the Contractor due to a breach by the County, then the County shall pay the Contractor for work performed prior to the terminate date if such work was performed in accordance with the Contract.
  - 1) With respect to services compensable on an hourly basis, for unpaid invoices, hours worked within any limits set forth in this Contract but not yet billed, authorized expenses incurred if payable according to this Contract and interest within the limits set forth under ORS 293.462 and
  - 2) With respect to deliverable-based Work, the sum designated for completing the deliverable multiplied by the percentage of Work completed and accepted by County, less previous amounts paid and any claim(s) that County has against Contractor.
  - 3) Subject to the limitations under paragraph 8 of this Contract.

**8. Remedies.** In the event of breach of this Contract the parties shall have the following remedies:

- a. Termination under subparagraphs 6a. through c. of this Contract shall be without prejudice to any obligations or liabilities of either party already reasonably incurred prior to such termination.
  - 1) Contractor may not incur obligations or liabilities after Contractor receives written notice of termination.
  - 2) Additionally, neither party shall be liable for any indirect, incidental, consequential or special damages under this Contract or for any damages of any sort arising solely from the termination of this Contract in accordance with its terms.
- b. If terminated under subparagraph 6d. of this Contract by the County due to a breach by the Contractor, County may pursue any remedies available at law or in equity.
  - 1) Such remedies may include, but are not limited to, termination of this contract, return of all or a portion of this Contract amount, payment of interest earned on this Contract amount, and declaration of ineligibility for the receipt of future contract awards.
  - 2) Additionally, County may complete the work either by itself, by agreement with another Contractor, or by a combination thereof. If the cost of completing the work exceeds the

remaining unpaid balance of the total compensation provided under this Contract, then the Contractor shall be liable to the County for the amount of the reasonable excess.

- c. If amounts previously paid to Contractor exceed the amount due to Contractor under this Contract, Contractor shall repay any excess to County upon demand.
- d. Neither County nor Contractor shall be held responsible for delay or default caused by fire, civil unrest, labor unrest, riot, acts of God, or war where such cause was beyond reasonable efforts to remove or eliminate performance of its obligations under this Contract. For any delay in performance as a result of the events describe in this subparagraph, Contractor shall be entitled to additional reasonable time for performance that shall be set forth in an amendment to this Contract.
- e. The passage of this Contract expiration date shall not extinguish or prejudice the County's or Contractor's right to enforce this Contract with respect to any default or defect in performance that has not been cured.
- f. County's remedies are cumulative to the extent the remedies are not inconsistent, and County may pursue any remedy or remedies singly, collectively, successively or in an order whatsoever.

**9. Contractor's Tender upon Termination.** Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract unless County expressly directs otherwise in such notice of termination.

- a. Upon termination of this Contract, Contractor shall deliver to County all documents, information, works-in-progress and other property that are or would be deliverables had this Contract been completed.
- b. Upon County's requires, Contractor shall surrender to anyone County designates, all documents, research, objects or other tangible things needed to complete the work.

**10. Work Standard.**

- a. Contractor shall be solely responsible for and shall have control over the means, methods, techniques, sequences and procedures of performing the work, subject to the plans and specifications under this Contract and shall be solely responsible for the errors and omissions of its employees, subcontractors and agents.
- b. For goods and services to be provided under this Contract, Contractor agrees to:
  - 1) Perform the work in a good, workmanlike, and timely manner using the schedule, materials, plans and specifications approved by County;
  - 2) Comply with all applicable legal requirements;
  - 3) Comply with all programs, directives and instructions of County relating to safety, storage of equipment or materials;
  - 4) Take all precautions necessary to protect the safety of all persons at or near County or Contractor's facilities and areas of service under this Contract, including employees of Contractor, County and any other contractors or subcontractors and to protect the work and all other property against damage.

**11. Drugs and Alcohol.** Contractor shall adhere to and enforce a zero tolerance policy for the use of alcohol and the unlawful selling, possession or use of controlled substances while performing work under this Contract. Contractor shall adhere to FTA guidelines and requirements in accordance with Exhibit 4 attached hereto and incorporated by reference herein.

- 12. Insurance.** Contractor shall provide insurance in accordance with Exhibit 2 attached hereto and incorporated by reference herein.
- 13. Criminal Background Investigations.** Contractor understands that Contractor and Contractor's employees and agents are subject to periodic criminal background investigations by County and, if such investigations disclose criminal activity not disclosed by Contractor, such non-disclosure shall constitute a material breach of this Contract and County may terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County.
- 14. Confidentiality.** Contractor shall maintain confidentiality of information obtained pursuant to this Contract as follows:
- a. Contractor shall not use, release or disclose any information concerning any employee, client, applicant or person doing business with the County for any purpose not directly connected with the administration of County's or the Contractor's responsibilities under this Contract except upon written consent of the County, and if applicable, the employee, client, applicant or person.
  - b. The Contractor shall ensure that its agents, employees, officers and subcontractors with access to County and Contractor records understand and comply with this confidentiality provision.
  - c. Contractor shall treat all information as to personal facts and circumstances obtained on Medicaid eligible individuals as privileged communication, shall hold such information confidential, and shall not disclose such information without the written consent of the individual, his or her attorney, the responsible parent of a minor child, or the child's guardian, except as required by other terms of this Contract.
  - d. Nothing prohibits the disclosure of information in summaries, statistical information, or other form that does not identify particular individuals.
  - e. Personally identifiable health information about applicants and Medicaid recipients will be subject to the transaction, security and privacy provisions of the Health Insurance Portability and Accountability Act ("HIPAA").
  - f. Contractor shall cooperate with County in the adoption of policies and procedures for maintaining the privacy and security of records and for conducting transactions pursuant to HIPAA requirements.
  - g. This Contract may be amended in writing in the future to incorporate additional requirements related to compliance with HIPAA
  - h. If Contractor receives or transmits protected health information, Contractor shall enter into a Business Associate Agreement with County, which, if attached hereto, shall become a part of this Contract.
- 15. Reports.** Contractor shall provide County with periodic performance reports on a quarterly basis. Further, at any time, County has the right to demand adequate assurances that the services provided by Contractor shall be in accordance with the Contract. Such assurances provided by Contractor shall be supported by documentation in Contractor's possession from third parties.
- 16. Access to Records.** Contractor shall maintain fiscal records and all other records pertinent to this Contract.
- a. All fiscal records shall be maintained pursuant to generally accepted accounting standards and other records shall be maintained to the extent necessary to clearly reflect actions taken.
    - 1) All records shall be retained and kept accessible for at least three years following the final payment made under this Contract or all pending matters are closed, whichever is later.



2) If an audit, litigation or other action involving this Contract is started before the end of the three year period, the records shall be retained until all issues arising out of the action are resolved or until the end of the three year period, whichever is later.

- b. County and its authorized representatives shall have the right to direct access to all of Contractor's books, documents, papers and records related to this Contract for the purpose of conducting audits and examinations and making copies, excerpts and transcripts.

1) These records also include licensed software and any records in electronic form, including but not limited to computer hard drives, tape backups and other such storage devices. County shall reimburse Contractor for Contractor's cost of preparing copies.

2) At Contractor's expense, the County, the Secretary of State's Office of the State of Oregon, the Federal Government, and their duly authorized representatives, shall have license to enter upon Contractor's premises to access and inspect the books, documents, papers, computer software, electronic files and any other records of the Contractor which are directly pertinent to this Contract.

**17. Ownership of Work.** All work of Contractor that results from this Contract (the "Work Product") is the exclusive property of the County.

- a. County and Contractor intend that such Work Product be deemed "work made for hire" of which County shall be deemed author.
- b. If, for any reason, the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to County all of its right, title and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark, trade secret or any other state or federal intellectual property law or doctrine.
- c. Contractor shall execute such further documents and instruments as County may reasonably request in order to fully vest such rights in County.
- d. Contractor forever waives any and all rights relating to Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.
- e. County shall have no rights in any pre-existing work product of Contractor provided to County by Contractor in the performance of this Contract except an irrevocable, non-exclusive, perpetual, royalty-free license to copy, use and re-use any such work product for County use only.
- f. If this Contract is terminated prior to completion, and the County is not in default, County, in addition to any other rights provided by this Contract, may require Contractor to transfer and deliver all partially completed work products, reports or documentation that Contractor has specifically developed or specifically acquired for the performance of this Contract.
- g. In the event that Work Product is deemed Contractor's Intellectual Property and not "work made for hire," Contractor hereby grants to County an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on the County's behalf.
- h. In the event that Work Product is Third Party Intellectual Property, Contractor shall secure on the County's behalf and in the name of the County, and irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on the County's behalf.

**18. County Code Provision.** There is no additional County Code Provision requiring Contractor's compliance.

**19. Partnership.** County is not, by virtue of this contract, a partner or joint venture with Contractor in connection with activities carried out under this contract and shall have no obligation with respect to Contractor's debts or any other liabilities of each and every nature.

**20. Indemnity and Hold Harmless.**

- a. To the fullest extent authorized by law, Contractor shall defend, save, hold harmless and indemnify the County and its officers, employees and agents from and against all claims, suites, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of Contractor or its officers, employees, contractors or agents under this Contract, including without limitation any claims that the work, the work product or any other tangible or intangible items delivered to County by Contractor that may be the subject of protection under any state or federal intellectual property law or doctrine, or the County's use thereof, infringes any patent, copyright, trade secret, trademark, trade dress, mask work utility design or other proprietary right of any third party.
- b. Contractor shall have control of the defense and settlement of any claim that is subject to subparagraph a. of this paragraph; however, neither contractor nor any attorney engaged by Contractor shall defend the claim in the name of Wasco County or any department or agency thereof, nor purport to act as legal representative of the County or any of its departments or agencies without first receiving from the County's legal counsel, in a form and manner determined appropriate by the County's legal counsel, authority to act as legal counsel for the County, nor shall Contractor settle any claim on behalf of the County without the approval of the County's legal counsel.
- c. To the extent permitted by Article XI, Section 10, of the Oregon Constitution and the Oregon Tort Claims Act, ORS 30.260 through 30.300, County shall defend, save, hold harmless and indemnify Contractor and its officers, employees and agents from and against all claims, suites, actions, losses, damages, liabilities costs and expenses of any nature resulting from or arising out of, or relating to the activities of County or its officers, employees, contractors or agents under this Contract.

**21. Waiver.**

- a. County's delay in exercising, or failure to exercise any right, power or privilege under this Contract shall not operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege under this Contract preclude any other or further exercise thereof or the exercise of any other such right, power or privilege.
- b. The remedies provided herein are cumulative and not exclusive of any remedies provided by law.

**22. Governing Law.** This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law.

- a. Any claim, action, suit or proceeding (collectively, "Claim") between County and Contractor that arises from or relates to this Contract shall be brought and conducted solely and exclusively within the circuit Court of Wasco County for the State of Oregon; provide, however, if a Claim shall be brought in federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.
- b. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS. The parties agree that the UN Convention on International Sales of Goods shall not apply.

- 23. Severability.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if this Contract did not contain the particular term or provision held invalid.
- 24. Counterparts.** This Contract may be executed in several counterparts, all of which when taken together shall constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of this Contract so executed shall constitute an original.
- 25. Notice.** Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing to Contractor or County at the address or number set forth below or to such other addresses or numbers as either party may hereafter indicate in writing. Delivery may be by personal delivery, facsimile or mailing the same, postage prepaid.
- a. Any communication or notice by personal delivery shall be deemed delivered when actually given to the designated person or representative.
  - b. Any communication or notice sent by facsimile shall be deemed delivered when the transmitting machine generates receipt of the transmission. To be effective against County, such facsimile transmission shall be confirmed by telephone notice to the County Administrative Officer.
  - c. Any communication or notice mailed shall be deemed delivered five (5) days after mailing. Any notice under this Contract shall be mailed by first class postage or delivered as follows:
- |   |   |
|---|---|
| <p><u>To Contractor:</u></p> <p>Amanda Hoey, Executive Director<br/>515 E. 2<sup>nd</sup> Street A<br/>The Dalles, OR 97058</p> | <p><u>To County:</u></p> <p>Tyler Stone, Administrative Officer<br/>511 Washington Street, Suite 101<br/>The Dalles, OR 97058</p> |
|---|---|
- 26. Merger Clause.** This Contract and the attached Exhibits constitute the entire agreement between the parties.
- a. All understandings and agreements between the parties and representations by either party concerning this Contract are contained in this Contract.
  - b. No waiver, consent, modification or change in the terms of this Contract shall bind either party unless in writing signed by both parties.
  - c. Any written waiver, consent, modification or change shall be effective only in the specific instance and for the specific purpose given.
- 27. Identity Theft Protection.** Contractor and subcontractors shall comply with the Oregon Consumer Identity Theft Protection Act. (ORS 646A.600 et seq.).
- 28. Survival.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Sections 4, 5, 8, 9, 15, 17, 18, 20-207, 28 and 30.
- 29. Representations and Warranties.**
- a. Contractor's Representations and Warranties. Contractor represents and warrants to County that:
    - 1) Contractor has the power and authority to enter into and perform this Contract;
    - 2) This Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms;
    - 3) Contractor has the skill and knowledge possessed by well-informed members of its industry7, trade or profession and Contractor will apply that skill and knowledge with care and diligence to

perform the Work in a professional manner and in accordance with standards prevalent in Contractor's industry;

4) Contractor shall, at all times during the term of this Contractor, be qualified, professionally competent, and duly licensed to perform the Work;

5) Contractor prepared its proposal related to this Contract, be qualified, professionally competent, and duly licensed to perform the Work;

6) Contractor's making and performance of this Contract do not and will not violate any provision of any applicable law, rule or regulation or order of any court, regulatory commission, board or other administrative agency.

b. Warranties Cumulative. The warranties set forth in this paragraph are in addition to and not in lieu of any other warranties provided.

**30. Non-Discrimination.** Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this Contract. Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this contract or other such remedies deemed appropriate by County.

**31. SB 675 (2015) Representation and Covenant.**

a. Contractor represents and warrants that Contractor has complied with the tax laws of this state, and where applicable, the laws of Wasco County, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318.

b. Contractor covenants to continue to comply with the tax laws of this state, and where applicable, the laws of Wasco County, during the term of this contract.

c. Contractor acknowledges that failure by Contractor to comply with the tax laws of this state, and where applicable, the laws of Wasco County, at any time before Contractor has executed the contract or during the term of the contract is and will be deemed a default for which Wasco County may terminate the Contract and seek damages and/or other relief available under the terms of the Contract or under applicable law.

**32. Compliance with Provisions of Funding Source.** In addition to the conditions outlined in this Contract, Contractor must comply with all provisions specified in both Federal Regulations and Required Third-Party Contract Clauses (Exhibit 4), Agreement No. 33507 (exhibit 5) between Wasco County and the Oregon Department of Transportation (ODOT) and Agreement No. 3 \_\_\_\_\_ (exhibit 6) between Wasco County and the Oregon Department of Transportation (ODOT).



**EXHIBIT 1**

**WASCO COUNTY SERVICES CONTRACT**

**STATEMENT OF WORK, COMPENSATION, PAYMENT TERMS AND SCHEDULE**

**1. Contractor shall perform the following work:**

- a. Provide public transportation to seniors, individuals with disabilities and the general public in Wasco County, specifically in The Dalles area. The local services are demand-responsive, available Monday through Friday. Passengers are picked up at their origins and dropped off at their destinations. Local service is available within the City of The Dalles as well as a broad area outside the community. Project may support the administrative costs required to manage the service contract.
- b. Provide service designed to benefit seniors and individuals with disabilities and may also be made available to the general public.

Schedules, days, hours and service type (demand responsive, fixed route or other) will be designed to meet the needs of seniors and individuals with disabilities as determined by County in consultation with Contractor, the affected community members and stakeholders identified by County.

Services will be provided in accordance with the locally adopted Human Services and transportation Coordinated Plan. Contractor will coordinate the delivery of transportation services with other public and private transportation providers to enhance regional services and to avoid duplication of services. Coordinated service may be made available to a variety of potential users, including the general public.

County may require that the service design be amended at any time in accordance with local demand, funding issues, changes in the Coordinated Plan, or any other situation that requires service to be changed.

Contractor will actively market the services to the target users.

- c. Provide for preventative maintenance on vehicles and non-vehicle assets in the provision of public transportation. Proper maintenance ensures assets are kept in good condition and that safety standards are met. Preventative maintenance reimbursed in this contract is for assets used in the provision of public transportation services for the general public, seniors or individuals with disabilities. This contract does not provide for maintenance on staff vehicles, vehicles used for business of the Contractor or maintenance vehicles.
- d. Support special transportation services benefitting seniors and individuals with disabilities. Funding originating from the Wasco County/State of Oregon Agreement No. 32024 STF may be used for projects that improve transportation for senior and disabled populations, including but not limited to: maintenance and expansion of existing transportation programs, creation of new programs and services, planning and development for improved access to transportation, capital purchases and as matching funds for state and federal programs also providing transportation and services to seniors and individuals with disabilities.
- e. The following performance measure(s) will be used to evaluate the effectiveness of the project:  
Ridership: The actual or estimated one-way passenger trips provided to seniors and individuals with disabilities. For the entire 2019-2021 Contract between the County and ODOT the goal includes

300 unduplicated individuals and 35,000 one-way rides for FY19-21. A passenger trip is a unit of service counted each time a passenger trip.

- f. This Contract is for operations and capitalized preventive maintenance, which are defined under 49 USC § 5310 program, as described in Circular 9070, 1F, Section 111-14-e. Generally accepted accounting principles and the Contractor's accounting system determine those costs that are to be accounted for as operating costs. Contractor may not count the same costs twice if they have multiple agreements for which these costs may be eligible. Contractor may use capital equipment funded under U.S. Department of Transportation or State-source agreements when performing services rendered through this contract. Depreciation of capital equipment funded from U.S. Department of Transportation or State-source grants is not an eligible expense. As this agreement also includes funding through Special Transportation Formula Funds, Contractor will comply with the guidelines established by Oregon Revised Statutes (ORS) 391.800 and 391.830 and Oregon Administrative Rules (OAR) Chapter 732. Contractor will receive and disburse STF moneys from a separate governmental fund. Any interest accrued from the account must be added to the moneys and reported to the State.

Sources of funding that may be used as match for § 5310 program funds covered under this contract include Special Transportation Formula Funds, other local funds, service contract revenue, advertisement income, other earned income, cash donations, and other verifiable in-kind contributions that are integral to the project budget. Contractor may not use passenger fares as match.

Contractor will subtract income from fares, tickets and passes, either pre-paid or post-paid, from the gross operating expenses of the service. All administrative and operating expenses incurred by Contractor are reimbursable as operating expenses. The required match share will be subtracted from the project expenses to determine the contractual share of the project expense.

Contractor may not use assets acquired under this Contract to compete unfairly with the private sector.

#### ESTIMATED PROJECT EXPENSE

Project Estimated Cost:

Purchased Service (5310): \$150,045.61 in state funds and local match of \$17,173.39.

Preventative Maintenance: \$35,892.00 in state funds and local match of \$4,108.00.

Operating (STF): \$135,400 in state funds.

2. **County Services.** County shall provide Contractor, at County's expense, with material and services described as follows: None.

3. **Consideration.**

- a. County shall pay Contractor a fixed amount of **\$185,937.61 (total Wasco County/State of Oregon agreement)** during the 2019-2021 biennium in funds obtained from the Federal Transit Administration (FTA) Section 5310 Program as administered by the State of Oregon Department of Transportation.
- b. County shall pay Contractor an additional fixed amount of **\$135,400.00 (total Wasco County/State of Oregon agreement)** during the 2019-2021 biennium in STF funds obtained from the State of Oregon, acting by and through its Department of Transportation, Rail and Public Transit Division.

- c. Contractor shall be entitled to reimbursement for expenses.

☒ YES      ☐ NO

**4. The maximum compensation.**

- a. The maximum compensation under this contract, including allowable expenses, is \$321,337.61.
- b. Contractor shall not submit invoices for, and County shall not pay for any amount in excess of the maximum compensation amount set forth above.
- 1) If this maximum compensation amount is increased by amendment of this contract, the amendment shall be fully effective before contractor performs work subject to the amendment.
- 2) Contractor shall notify County in writing of the impending expiration of this Contract thirty (30) calendar days prior to the expiration date.

**5. Schedule of Performance or Delivery.**

- a. County's obligation to pay depends upon Contractor's delivery or performance in accordance with the following: County will only pay for completed work that conforms to this schedule and only at such time as a completed Agency Periodic Report has been submitted to the Oregon Department of Transportation Public Transit Divisions OPTIS system.

**EXHIBIT 2**  
**WASCO COUNTY SERVICES CONTRACT**  
**INSURANCE REQUIREMENTS**

Contractor shall at all times maintain in force at Contractor's expense, each insurance noted below and as required by the State of Oregon Insurance Requirements listed in the contracts attached as Exhibits 5 and 6. Insurance coverage must apply on a primary or non-contributory basis. All insurance policies, except Professional Liability, shall be written on an occurrence basis and be in effect for the term of this contract. Policies written on a "claims made" basis must be approved and authorized by Wasco County.

**Contractor Name: Mid-Columbia Economic Development District**

**Workers Compensation** insurance in compliance with ORS 656.017, requiring Contractor and all subcontractors to provide workers' compensation coverage for all subject workers, or provide certification of exempt status. Worker's Compensation Insurance to cover claims made under Worker's Compensation, disability benefit or any other employee benefit laws, including statutory limits in any state of operation with Coverage B Employer's Liability coverage all at the statutory limits. In the absence of statutory limits the limits of said Employers liability coverage shall be not less than \$1,000,000 each accident, disease and each employee. This insurance must be endorsed with waiver of subrogation endorsement, waiving the insured's right of subrogation against County.

**Commercial General Liability** insurance with combined single limit of not less than \$5 million per occurrence. Commercial General Liability insurance includes coverage for personal injury, bodily injury, advertising injury, property damage, premises, operations, products, complete operations and contractual liability. The insurance coverages provided for herein must be endorsed as primary and non-contributory to any insurance of County, its officers, employees or agents. Each such policy obtained by Contractor shall provide that the insurer shall defend any suit against the named insured and the additional insureds, their officers, agents, or employees, even if such suit is frivolous or fraudulent. Such insurance shall provide County with the right, but not the obligation, to engage its own attorney for the purpose of defending any legal action against County, its officers, agents, or employees, and that Contractor shall indemnify County for costs and expenses, including reasonable attorney's fees, incurred or arising out of the defense of such action.

The policy shall be endorsed to name ***Wasco County, State of Oregon, their officers, agents, employees and volunteers as an additional insured.*** The additional insured endorsement shall not include declarations that reduce any per occurrence or aggregate insurance limit. The contractor shall provide additional coverage based on any outstanding claim(s) made against policy limits to ensure that minimum insurance limits required by the County are maintained. Construction contracts may include aggregate limits that apply on a "per location" or "per project" basis. The additional insurance protection shall extend equal protection to County as to Contractor or subcontractors and shall not be limited to vicarious liability only or any similar limitation. To the extent any aspect of this Paragraph shall be deemed unenforceable, then the additional insurance protection to County shall be narrowed to the maximum amount of protection allowed by law.

**Automobile Liability insurance** with a combined single limit of not less than \$5 million per occurrence.

Automobile Liability insurance includes coverage for bodily injury and property damage resulting from operation of a motor vehicle. Commercial Automobile Liability Insurance shall provide coverage for *any* motor vehicle (symbol 1 on some insurance certificates) driven by or on behalf of Contractor during the



course of providing services under this contract. Commercial Automobile Liability is required for contractors that own business vehicles registered to the business.

**Additional Requirements.** Contractor shall pay all deductibles and self-insured retentions. A cross-liability clause or separation of insured's condition must be included in all commercial general liability policies required by this Contract. Contractor's coverage will be primary in the event of loss.

**Certificate of Insurance Required.** Contractor shall furnish a current Certificate of Insurance to the County with the signed Contract. Contractor shall notify the County in writing at least 30 days in advance of any cancellation, termination, material change or reduction of limits of the insurance coverage. The Certificate shall also state the deductible or, if applicable, the self-insured retention level. Contractor shall be responsible for any deductible or self-insured retention. If requested, complete copies of insurance policies shall be provided to the County.

### EXHIBIT 3

#### WASCO COUNTY SERVICES CONTRACT

##### **COMPLIANCE WITH REQUIREMENTS OF FUNDING SOURCE AND FEDERAL AND STATE LAWS, STATUTES, RULES REGULATIONS, EXECUTIVE ORDERS AND POLICIES**

**Contractor certifies under penalty of perjury that the following statements are true to the best of Contractor's knowledge:**

1. If Contractor is currently performing work for the county, State of Oregon or Federal Government, Contractor, by signature to this Contract, declares and certifies that Contractor's Work to be performed under this Contract creates no potential or actual conflict of interest as defined by ORS 244 and no rules or regulations of Contractor's employee agency (County, State or Federal) would prohibit Contractor's Work under this Contract. Contractor is not an "officer," "employee," or "agent" of the County, as those terms are used in ORS 30.265.
2. No federally appropriated funds have been paid or shall be paid, by or on behalf of Contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan or cooperative agreement.
  - a. If any funds other than federally appropriated funds have been paid or shall be apid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, and officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan or cooperative agreement, Contractor agrees to complete and submit Standard Form LLL "Disclosure Form to Report Lobbying," in accordance with its instructions.
    - 1) Standard Form-LLL and instructions are located in 45 CFR Part 93 Appendix B.
    - 2)If instructions require filing the form with the applicable federal entity, Contractor shall then as a material condition of this Contract also file a copy of the Standard Form-LLL with the Department.
    - 3)This filing shall occur at the same time as the filing in accordance with the instructions.
  - b. Contractor understands this certification is a material representation of fact upon which the County has relied in entering into this Contract. Contractor further understands that submission of this certification is a prerequisite, imposed by 31 USC 1352 for entering into this Contract.
  - c. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
  - d. Contractor shall include the language of this certification in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.
  - e. Contractor is solely responsible for all liability arising from a failure by Contractor to comply with the terms of this certification.
  - f. Contractor promises to indemnify County for any damages suffered by County as a result of Contractor's failure to comply with the terms of this certification.
3. Contractor understands that, if this Contract involves federally appropriated funds, this certification is a material representation of facts upon which reliance was placed when this Contract was made or

entered into, submission of this certification is a prerequisite for making or entering in to this Contract imposed by Section 1352, Title 311, U.S. Code and that any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

4. Contractor must furnish to County proof of signed Certifications and Assurances for Federal Transit Administration Assistance Programs for each year this Contract is in effect.

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Contractor's Signature

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Date

## **EXHIBIT 4**

### **WASCO COUNTY SERVICES CONTRACT**

#### **SUMMARY OF FEDERAL REQUIREMENTS AND INCORPORATING BY REFERENCE ANNUAL LIST OF CERTIFICATIONS AND ASSURANCES FOR FTA GRANTS AND COOPERATIVE AGREEMENTS AND FEDERAL TRANSIT ADMINISTRATION MASTER AGREEMENT**

**ALL OR PART OF THIS CONTRACT IS FEDERALLY FUNDED.** CONTRACTOR shall comply with all applicable federal regulations in addition to all other specifications, terms and conditions of the attached contract as follows:

Contractor must comply with all applicable federal requirements contained in the Certifications and Assurances available at [www.transit.dot.gov](http://www.transit.dot.gov). The Certifications and Assurances, including as they may be changed during the term of this Contract, are by this reference incorporated herein.

Contractor further agrees to comply with all applicable requirements included in the Master Agreement that is signed and attested to by the State of Oregon. This Master Agreement is incorporated by reference and made part of this Contract. Said Master Agreement is available upon request from the State by calling 503.986.3300, or at [www.transit.dot.gov](http://www.transit.dot.gov).

#### **No Federal Government Obligation to Third Parties**

The County and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to the County, Contractor or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

#### **Program Fraud and False or Fraudulent Statements or Related Acts**

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.



The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

### **Access to Records and Reports**

The record keeping and access requirements apply to all contracts funded in whole or in part with FTA funds. Under 49 U.S.C. § 5325(g), FTA has the right to examine and inspect all records, documents, and papers, including contracts, related to any FTA project financed with Federal assistance authorized by 49 U.S.C. Chapter 53.

1. Record Retention. The Contractor will retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, data, documents, reports, statistics, sub- agreements, leases, subcontracts, arrangements, other third party agreements of any type, and supporting materials related to those records.
2. Retention Period. The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.
3. Access to Records. The Contractor agrees to provide sufficient access to FTA and its contractors to inspect and audit records and information related to performance of this contract as reasonably may be required.
4. Access to the Sites of Performance. The Contractor agrees to permit FTA and its contractors access to the sites of performance under this contract as reasonably may be required.

### **Changes to Federal Requirements Clause**

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between [AGENCY} and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

### Civil Rights and Equal Opportunity

The Oregon Department of Transportation (ODOT) is an Equal Opportunity Employer. As such, the ODOT agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, the ODOT agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

Under this Agreement, the Contractor shall at all times comply with the following requirements and shall include these requirements in each subcontract entered into as part thereof.

- a. **Nondiscrimination.** In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.
- b. **Race, Color, Religion, National Origin, Sex.** In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e *et seq.*, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- c. **Age.** In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621-634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 *et seq.*, U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- d. **Disabilities.** In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 § 12101 *et seq.*, the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it

will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

### **Disadvantaged Business Enterprises (DBE)**

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 C.F.R. part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the County deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the contractor from future bidding as non-responsible. 49 C.F.R. § 26.13(b).

Further, Recipients (County) must establish a contract clause to require prime contractors to pay subcontractors for satisfactory performance of their contracts no later than 30 days from receipt of each payment the County makes to the prime contractor. 49 C.F.R. § 26.29(a). Finally, for contracts with defined DBE contract goals, each FTA Recipient must include in each prime contract a provision stating that the contractor shall utilize the specific DBEs listed unless the contractor obtains the County's written consent; and that, unless the County's consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE. 49 C.F.R. § 26.53(f) (1).

### **Incorporation of FTA Terms**

The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any County's requests which would cause County to be in violation of the FTA terms and conditions.

### **Debarment, Suspension, Ineligibility, and Voluntary Exclusion**

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the bidder or proposer certifies as follows: The certification in this clause is a material representation of fact relied upon by County. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to County, the Federal Government may pursue

available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

### **Lobbying**

Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier-to-tier up to the County.

### **Clean Air**

1. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq.* The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
2. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

### **Clean Water**

1. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 *et seq.* The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.
2. The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

### **Contract Work Hours and Safety Standards Act**

1. **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible



therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

**3. Withholding for unpaid wages and liquidated damages** - The (write in the name of the grantee) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

**4. Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

### **Public Transportation Employee Protective Agreements**

The Contractor agrees to comply with the following employee protective arrangements of 49 U.S.C. § 5333(b):

- a. U.S. DOL Certification. Under this Contract or any Amendments thereto that involve public transportation operations that are supported with federal assistance, a certification issued by U.S. DOL is a condition of the Contract.
- b. Special Warranty. When the Contract involves public transportation operations and is supported with federal assistance appropriated or made available for 49 U.S.C. § 5311, U.S. DOL will provide a Special Warranty for its Award, including its Award of federal assistance under the Tribal Transit Program. The U.S. DOL Special Warranty is a condition of the Contract.
3. Special Arrangements. The conditions of 49 U.S.C. § 5333(b) do not apply to Contractors providing public transportation operations pursuant to 49 U.S.C. § 5310. FTA reserves the right to make case-by-case determinations of the applicability of 49 U.S.C. § 5333(b) for all transfers of funding authorized under title 23, United States Code (flex funds), and make other exceptions as it deems appropriate, and, in those instances, any special arrangements required by FTA will be incorporated herein as required.

### **Charter Service**

The contractor agrees to comply with 49 U.S.C. 5323(d) and 49 CFR Part 604, which provides that Recipients (County) and subrecipients of FTA assistance are prohibited from providing charter

service using federally funded equipment or facilities unless the contractor adheres to the exceptions provided in 49 CFR part 604.6 through 49 CFR part 604.11 and adheres to the reporting requirements of 49 CFR part 604.12.

### **School Bus Operations**

The contractor agrees to comply with 49 U.S.C. 5323(f), and 49 C.F.R. part 604, and not engage in school bus operations using federally funded equipment or facilities in competition with private operators of school buses, except as permitted under:

1. Federal transit laws, specifically 49 U.S.C. § 5323(f);
2. FTA regulations, "School Bus Operations," 49 C.F.R. part 605;
3. Any other Federal School Bus regulations; or
4. Federal guidance, except as FTA determines otherwise in writing.

If Contractor violates this School Bus Agreement, FTA may:

1. Bar the Contractor from receiving Federal assistance for public transportation; or
2. Require the contractor to take such remedial measures as FTA considers appropriate.

When operating exclusive school bus service under an allowable exemption, the contractor may not use federally funded equipment, vehicles, or facilities.

The Contractor should include the substance of this clause in each subcontract or purchase under this contract that may operate public transportation services.

### **Drug and Alcohol Testing**

The contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 CFR part 655, produce any documentation necessary to establish its compliance with part 655, and permit any authorized representative of the United States Department of Transportation or its operating administrations, the Oregon Department of Transportation, or the County, to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 CFR parts 655 and review the testing process.

### **Energy Conservation**

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

### **ADA Access**

The contract agrees that facilities to be used in public transportation service, or to be designed for use in public transportation service, must comply with 42 U.S.C. Sections 12101 *et seq.* and DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR Part 37; and Joint ATBCB/DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 CFR Part 1192 and 49 CFR Part 38. USDOT incorporated by reference the ATBCB's "Americans with Disabilities Act Accessibility Guidelines" (ADAAG), revised

September 2010, which include accessibility guidelines for buildings and facilities, and are incorporated into Appendix A to 49 CFR Part 37. USDOT also added specific provisions to Appendix A modifying the ADAAG, with the result that buildings and facilities must comply with both the ADAAG and amendments thereto in Appendix A to 49 CFR Part 37.

**EXHIBIT 5**  
**WASCO COUNTY SERVICES CONTRACT**  
**AGREEMENT #33507 BETWEEN OREGON DEPARTMENT OF TRANSPORTATION AND WASCO COUNTY**



**EXHIBIT 6**

**WASCO COUNTY SERVICES CONTRACT**

**AGREEMENT #3 BETWEEN OREGON DEPARTMENT OF TRANSPORTATION AND WASCO COUNTY**



## MOTION

### **SUBJECT: STIF and STF Services Agreements**

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I move to approve the Wasco County Statewide Transportation Improvement Fund Services Contract with Mid-Columbia Economic Development District for the implementation of the Wasco County Statewide Transportation Improvement Fund Plan as adopted by Wasco County.

I move to approve the Wasco County Transportation Agreement Mid-Columbia Economic Development District for the provision of public transportation to seniors, individual with disabilities and the general public in Wasco County, specifically in The Dalles area.



## AGENDA ITEM

### QLife Budget

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[QLIFE BUDGET FY20](#)

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[MOTION LANGUAGE](#)

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# QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

## PROPOSED BUDGET FISCAL YEAR 2020

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# QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

## BUDGET MESSAGE

### FISCAL YEAR 2020

I am pleased to present to you the QLife Proposed Budget for the Fiscal Year 2020. This budget covers the period of July 1<sup>st</sup>, 2019 to Jun 30<sup>th</sup> 2020.

The QualityLife Intergovernmental Agency (QLife) is a partnership between the City of The Dalles and Wasco County. QLife is an intergovernmental agency consisting of the City of The Dalles and Wasco County, governed by a Board of Directors and run by an Administrator. QLife is a transport and dark fiber service provider that facilitates broadband, Ethernet, wide area networks, internet access, and virtual private networks through local internet service providers. QLife has been operational since December of 2003. The original mission and purpose of QLife was to bring a middle mile fiber solution to the City of The Dalles in an effort to meet certain needs of critical agencies for reliable high speed data services and to provide and promote an environment for successful economic development. Recently QLife has embarked on a project to bring fiber to the home in Maupin, OR. This project will be completed in fiscal year 2019 (FY19), making fiscal year 2020 (FY20) the first full year of operating off of revenues generated by the system.

This narrative explains the proposed QLife budget for FY20. The budget encompasses three (3) funds: The Operating (General) Fund, the Capital Fund and the Maupin Fund. The Maupin Fund is for operations and capital bringing and building QLife services in the Maupin area. The intent is for the Maupin Fund to function without subsidy from the Operating fund serving The Dalles. FY20 will be the first fiscal year of operations.

The Proposed Budget totals \$2,855,182 combined for all three (3) funds. This decrease over the budget for FY19 is \$689,648. This is due to the Maupin project's scheduled completion in April 2019. This has decreased the budget significantly (\$1,011,504) for the Maupin fund as the capital expenses have been paid and now the project will be operating off of revenues generated.

Fund	FY19 Budget	FY20 Budget	Difference	%
General Fund	760,147	764,260	4,113	0.5%
<i>The operations fund is primarily for operation in The Dalles area</i>				
Capital Fund	1,718,649	2,036,392	317,743	18.5%
<i>The capital fund is used for system expansion in The Dalles area</i>				
Maupin Fund	1,066,034	54,530	(1,011,504)	-94.9%
<i>The Maupin fund is used to provide service in the Maupin area</i>				
Grand Total	3,544,830	2,855,182	(689,648)	-19.5%

## **Financial Health**

The General (Operations) Fund for The Dalles area is in good shape. The projected resources are \$764,260 for FY20. This includes a Beginning Fund Balance of \$96,952. Normal operations are \$315,890 with an additional \$20,000 set aside each year for capital equipment. This fund is stable at this point. Part of the stability has been by decreasing the planned transfers to the Capital Fund by \$45,780. This transfer is still \$327,020 in FY20 and represents 49.1% of all the Utility Service Charges collected. This is while still maintaining a healthy fund balance totaling 28.9% of the operating and capital costs of the fund.

The Capital Fund starts FY20 with \$1,665,172 in Beginning Fund Balance. Another \$327,020 will be transferred in from the General (Operations) Fund. This puts the total resources of the fund at \$2,036,392. There is a small transfer budgeted to move to the Maupin Fund, but this is only \$30,000 and will only be utilized if warranted and with the approval of the Qlife Board. The remaining \$1,066,108 is split between Contingency and Reserve for System Improvements. (Both of these are effectively “Contingency” budgets, the reserved funds are just serve a more focused purpose.) The fund remains healthy and continues to grow.

The Maupin Fund will have the first year of functioning on self-generated revenues. Total resources are \$54,530 and this includes a potential transfer of \$30,000 from the Capital Fund. It is not planned to utilize this and will only be done if deemed necessary by the Qlife Board. Effectively, the transfer covers most of the Contingency and Reserve for WIFI. (As above, the reserve account is a focused “Contingency” type account.) Resources and requirements are significantly reduced due to the completion of the primary system project. The resources of this fund will have to grow to be able to generate a return on the investment. Currently, the Maupin Fund has received \$156,655 from the Capital Fund. More had been budgeted but was never utilized. As of April 2019, the total of all expenses to date for the Maupin Fund since creation are \$946,446, of which 16.6% was funded by the General Fund. (This total includes more than the Maupin Fiber project. There was a sizable grant to provide WIFI service that remains to be served. This is included in the FY20 budget.)

## **Transfers**

Transfers are used to move funds from one fund to another – this is not an exchange of funds for value but rather a reallocation of resources. The General (Operations) Fund is budgeted to transfer \$327,020 to the Capital Fund. This is to set resources aside for current and future capital needs. This allows the General Fund to operate with fewer spikes and smooths out the business cycle. The transfer budgeted for the Capital Fund to the Maupin Fund serves a different purpose. This transfer will only be executed if determined to be required the Qlife Board – it is in essence a “just in case” funding for the contingency budget in the Maupin Fund. No transfer is scheduled at this time for the Maupin Fund to repay the funds transferred in from the Capital Fund. This will come in future fiscal periods as the Maupin Fund grows. A summary is shown below.

From Fund	To Fund	Amount	Purpose
General	Capital	\$ 327,050	Fund capital expenses of the system
Capital	Maupin	\$ 30,000	To fund the Contingency funds if determined necessary by the Qlife Board
Maupin	Capital	\$ -	No funds of the \$156,665 transferred in since inception will be repaid in FY20

### Contingency and Reserves

Contingency amounts are appropriations included in the budget but cannot be spent – it is available to be transferred to an appropriate expense line by the governing body. The Qlife budget also uses Reserves which are an additional contingency amount but more focused in intent. For Oregon Local Budget Law application these funds are Contingency also. It is not a problem to have more than one Contingency line in a fund budget.

The General (Operating) Fund has a contingency of \$50,000 – the same as FY19. This is 14.8% of the budgeted operating cost of the fund. This is nearly two (2) months of expenses. This is considered adequate at this point by management.

The Capital Fund has a contingency of \$390,983 and a reservation for \$675,125 – the total is \$1,066,108. The reservation is dedicated to system improvements.

The Maupin Fund contingency is \$7,500 and a reservation for \$28,320 – the total is \$35,820. The reservation is dedicated to providing WIFI service. The private grant accepted is intended to offset providing WIFI service for three years. One year is in the budgeted expenses of the fund and the remaining two (2) are in the reservation.

### Capital Outlay

The General (Operations) Fund has budgeted \$20,000 for capital outlay. This is to meet Item #3 of the agencies Financial Priorities Policy – specifically to have \$20,000 available for expansion and replacement of electronics in the system.

The Capital Fund has budgeted \$940,284 for capital outlay in FY20. This starts with \$80,000 for a generator replacement. The primary system has \$660,284 budgeted to address a list of potential projects with estimated costs below. Secondary line extension is the third category of capital outlay for the fund – this is \$200,000 and will be used for new connections requiring a line extension which increases the value of the system. No specific extensions are identified at this time.

<u>Project Title</u>	<u>Estimated Cost</u>
St. Mary's	\$371,000
Pon Beta	\$50,000
East Bisector	\$186,000

Downtown Bypass	\$76,000
Co-location Space – Big Eddy	\$232,000
Downtown Metro Loop	\$120,000
Decrease to Balance Fund	<u>(\$374,716)</u>
Total Primary System	<u>\$660,284</u>

Not all the primary system projects will be executed in FY20 and the costs at this point are preliminary estimates meant to function as a consideration in prioritization. There are funds available to complete the entire list, but these are currently budgeted in the contingency and reservation lines. History has shown that constraints of the time available and system /customer needs prevent all projects identified from being executed in the same fiscal period.

The Maupin Fund has a minimal amount (\$1,000) budgeted for capital outlay in FY20. There are funds in contingency and reservation to transfer in if necessary, but it is not expected. The \$1,000 is not dedicated to any specific item but rather for needs of the primary system. The project is completing in FY19 so the capital outlay needs of the fund decrease significantly.

Capital Outlay		
Fund	Purpose	Amount
General (Operating)	Telcom Equipment	\$ 20,000
Capital Fund	Equipment	80,000
	Primary System Maintenance	660,284
	Secondary Line Extension	<u>200,000</u>
Total Capital Fund		940,284
Maupin Fund	Primary System	1,000
Total Capital Outlay		961,284.00

### Budget Appropriation

The Proposed Budget contains line item detail; however the legal level of control for the budget is at the Fund/Department level. This means for each fund, amounts will be appropriated at the legal level of control by Beginning Balance, Operations (noncapital and capital), Pass-Through, Transfer In/Out, Reserve, Contingency and Unappropriated.



Qlife FY20 Budget Summary for Resolution  
Budget by Fund-Department

<b>Fund</b>	<b>Department/Classification</b>	<b>Budget Revenue/ Resources</b>	<b>Budget Expense/ Requirements</b>
GENERAL (OPERATIONS)	OPERATIONS	764,260	335,890
	TRANSFERS	-	327,020
	CONTINGENCY	-	50,000
	UNAPROPRIATED	-	51,350
<b>TOTAL GENERAL</b>		<b>764,260</b>	<b>764,260</b>
CAPITAL	OPERATIONS	1,709,372	940,284
	TRANSFERS	327,020	30,000
	CONTINGENCY	-	1,066,108
	UNAPPROPRIATED	-	-
<b>TOTAL CAPITAL</b>		<b>2,036,392</b>	<b>2,036,392</b>
MAUPIN	OPERATIONS	24,530	18,710
	TRANSFERS	30,000	-
	CONTINGENCY	-	35,820
	UNAPPROPRIATED	-	-
<b>TOTAL MAUPIN</b>		<b>54,530</b>	<b>54,530</b>
<b>Total Appropriation</b>		<b>2,855,182</b>	<b>2,855,182</b>
<b>Unappropriated - for us in Future fiscal periods</b>		<b>-</b>	<b>51,350</b>
<b>Appropriated For FY20 Use</b>		<b>2,855,182</b>	<b>2,803,832</b>

# Qlife Budget Detail General (Operating) Fund

Fund	General Fund
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Row Labels	FY16 - Actual	FY17 - Actual	FY18 - Actual	FY19 - Budget	FY19 - Projection	FY20 - Budget Request	FY20 - Approved	FY20 - Adopted
<b>Revenue</b>								
<b>Revenue</b>								
600.60.6000.400.000 - BEGINNING FUND BALANCE	231,823	157,296	108,640	87,800	96,952	96,952		
600.60.6000.414.500 - UTILITY SERVICE CHARGES	648,860	601,430	661,043	669,147	655,764	665,460		
600.60.6000.414.501 - CONNECT CHARGES	4,200	2,000	1,700	1,000	100	1,000		
600.60.6000.417.104 - INTEREST EARNED	4,950	11,053	1,613	2,000	847	948		
600.60.6000.421.241 - MISC RECEIPTS	3,933	108	4,003	200	1,586	200		
600.60.6000.422.132 - E-RATE REIMBURSEMENTS	41,290	-	-	-	-	-		
<b>Revenue Total</b>	<b>935,056</b>	<b>771,887</b>	<b>776,999</b>	<b>760,147</b>	<b>755,249</b>	<b>764,560</b>		
<b>Expense</b>								
<b>Materials &amp; Services</b>								
600.60.6000.52101 - ADVERTISING & PROMOTIONS	500	673	2,837	1,500	1,500	1,500		
600.60.6000.52111 - DUES & SUBSCRIPTIONS	1,433	1,616	3,525	3,000	2,000	3,000		
600.60.6000.52113 - INSURANCE & BONDS	7,317	19,586	15,242	21,000	18,000	21,000		
600.60.6000.52115 - LEGAL NOTICES & PUBLISHING	296	209	36	400	400	400		
600.60.6000.52116 - POSTAGE	-	120	359	200	180	200		
600.60.6000.52120 - RENT - OFFICE	7,752	7,752	7,752	7,752	7,752	7,752		
600.60.6000.52122 - TELEPHONE	412	421	450	420	550	500		
600.60.6000.52148 - GENERAL GRANTS	2,000	2,000	3,000	2,000	2,000	2,000		
600.60.6000.52151 - SCHOLARSHIP	2,000	2,000	2,000	2,000	2,000	2,000		
600.60.6000.52350 - TAXES/PERMITS/ASSESSMENTS	-	-	415	400	785	800		
600.60.6000.52370 - MISC EXPENDITURES	674	120	832	1,000	2,000	1,000		
600.60.6000.52398 - ADMINISTRATIVE COST	31,793	38,221	54,500	55,350	55,350	58,671		
600.60.6000.52401 - CONTRACTED SERVICES	-	-	-	-	325	-		
600.60.6000.52406 - CONTR SRVCS - LEGAL CONUNSEL CONTR	12,480	6,846	9,162	9,000	6,000	6,000		
600.60.6000.52409 - CONTR SRVCS - OTHER	12,278	10,723	7,998	15,100	8,000	15,100		
600.60.6000.52412 - CONTR SRVCS - AUDIT CONTRACT	4,750	6,600	3,650	6,000	4,000	4,200		
600.60.6000.52477 - CONTRACTED SVSC - ENGINEERING	35,210	45,796	37,174	20,000	64,587	50,000		
600.60.6000.52479 - CONTRACTED SVSC - NETWORK SYSTEM MGMT	71,845	56,972	55,870	51,000	78,490	71,000		
600.60.6000.52480 - POLE CONNECTION FEES	8,447	4,650	15,088	10,500	15,000	12,392		
600.60.6000.52481 - RIGHT OF WAY FEES	19,466	18,043	23,730	20,075	20,075	20,075		
600.60.6000.52502 - NETWORK COMPONENTS	1,597	-	730	5,000	2,000	5,000		
600.60.6000.52601 - EQUIPMENT - NON CAPITAL		1,304	1,504	5,000	1,000	5,000		
600.60.6000.52701 - TRAINING & EDUCATION	195	325	514	700	500	700		
600.60.6000.52711 - MEALS, LODGING & REGISTRATION	1,973	518	1,546	2,000	1,656	5,000		

## Qlife Budget Detail General (Operating) Fund

Fund	General Fund
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Row Labels	FY16 - Actual	FY17 - Actual	FY18 - Actual	FY19 - Budget	FY19 - Projection	FY20 - Budget Request	FY20 - Approved	FY20 - Adopted
600.60.6000.52801 - BLDG REPAIR & MAINT	247	315	-	1,600	200	1,600		
600.60.6000.52808 - OUTSIDE PLANT MAINTENANCE	7,226	32,424	23,255	20,000	8,500	20,000		
600.60.6000.52882 - UTILITIES - ELECTRICITY	454	619	737	800	690	800		
600.60.6000.52910 - SUPPLIES - OFFICE	295	178	361	200	107	200		
600.60.6000.52608 - EASEMENTS - NON-CAPITAL			-	1,000	-	-		
<b>Capital Outlay</b>								
600.60.6000.53301 - EQUIPMENT - CAPITAL	1,688	-	-	20,000	2,000	20,000		
600.60.6000.53403 - EASEMENTS	-	-	18,000	-	-	-		
<b>Transfer</b>								
600.60.6000.55601 - TRANSFER TO QLIFE CAPITAL	504,140	405,391	392,898	372,800	372,800	327,020		
<b>Pass-Through</b>								
600.60.6000.52399 - ESD E-RATE PASS THROUGH	41,290	-	-	-	-	-		
<b>Contingency</b>								
600.60.6000.57600 - CONTINGENCY	-	-	-	50,000	-	50,000		
<b>Unappropriated</b>								
600.60.6000.59000 - UNAPPROPRIATED	-	-	-	54,350	-	51,350		
<b>Expense Total</b>	<b>777,758</b>	<b>663,422</b>	<b>683,164</b>	<b>760,147</b>	<b>678,447</b>	<b>764,260</b>		

Qlife Budget Detail Capital Fund

Fund	Capital Fund							
Row Labels	FY16 - Actual	FY17 - Actual	FY18 - Actual	FY19 - Budget	FY19 - Projection	FY20 - Budget Request	FY20 - Approved	FY20 - Adopted
Revenue								
Revenue								
601.60.6000.400.000 - BEGINNING FUND BALANCE	377,826	870,111	1,011,310	1,315,777	1,391,871	1,665,172		
601.60.6000.414.501 - CONNECT CHARGES	13,569	5,100	-	19,000	-	19,000		
601.60.6000.417.104 - INTEREST EARNED	-	625	17,542	1,072	25,285	25,200		
601.60.6000.450.600 - TRANSFER FROM QLIFE OPERATING FUND	504,140	405,391	392,898	372,800	372,800	327,020		
601.60.6000.450.602 - TRANSFER FROM QLIFE MAUPIN FUND	-	-	-	10,000	-	-		
601.60.6000.490.490 - LOAN PROCEEDS	-	-	-	-	-	-		
Revenue Total	895,535	1,281,227	1,421,750	1,718,649	1,789,956	2,036,392		
Expense								
Materials & Services								
601.60.6000.52477 - CONTRACTED SVSC - ENGINEERING	1,085	10,961	4,068	11,000	(4,470)	-		
601.60.6000.52478 - CONTRACTED SVSC - CUSTOMER CONNECTIONS	1,354	-	-	4,000	-	-		
601.60.6000.52651 - EQUIPMENT - REPAIR & MAINTENANCE	-	11,344	-	8,000	-	-		
Capital Outlay								
601.60.6000.53101 - BUILDINGS	-	-	-	-	-	-		
601.60.6000.53301 - EQUIPMENT - CAPITAL	-	302	-	80,000	-	80,000		
601.60.6000.53313 - PRIMARY SYSTEM	2,263	89,581	22,055	600,000	250,000	660,284		
601.60.6000.53314 - SECONDARY LINE EXTENSION	20,722	1,074	3,756	200,000	5,000	200,000		
601.60.6000.53315 - POLE MAKE READY	-	-	-	-	-	-		
Transfer								
601.60.6000.55602 - TRANSFER TO QLIFE MAUPIN	-	156,655	-	200,000	-	30,000		
Contingency								
601.60.6000.57601 - CONTINGENCY	-	-	-	390,983	-	390,983		
Distribution								
601.60.6000.56001 - DISTRIBUTION TO SPONSORS	-	-	-	-	-	-		
Reserve								
601.60.6000.58001 - RESERVE FOR SYSTEM IMPROVEMENTS	-	-	-	224,666	-	675,125		
601.60.6000.58002 - RESERVE FOR EXPANSION	-	-	-	-	-	-		
Unappropriated								
601.60.6000.59000 - UNAPPROPRIATED		-	-	-	-	-		
Expense Total	25,424	269,917	29,879	1,718,649	250,530	2,036,392		



Qlife Budget Detail Maupin Fund

Fund	Maupin Fund
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Row Labels	FY16 - Actual	FY17 - Actual	FY18 - Actual	FY19 - Budget	FY19 - Projection	FY20 - Budget Request	FY20 - Approved	FY20 - Adopted
<b>Revenue</b>								
<b>Revenue</b>								
602.60.6000.400.000 - BEGINNING FUND BALANCE	-	13,620	139,176	128,434	117,048	17,110		
602.60.6000.412.674 - STATE GRANT	-	80,427	186,227	190,000	494,069	-		
602.60.6000.412.700 - PRIVATE SECTOR GRANTS	87,880	-	-	-	-	-		
602.60.6000.414.500 - UTILITY SERVICE CHARGES	-	-	-	-	-	-		
602.60.6000.417.104 - INTEREST EARNED	-	25	2,188	-	1,475	60		
602.60.6000.421.241 - MISC RECEIPTS	-	-	-	-	-	-		
602.60.6000.450.600 - TRANSFER FROM QLIFE OPERATING FUND	-	-	-	200,000	-	-		
602.60.6000.450.601 - TRANSFER FROM QLIFE CAPITAL FUND	-	156,655	-	220,000	-	30,000		
602.60.6000.490.490 - LOAN PROCEEDS	-	-	-	-	-	-		
602.60.6000.414.306 - CITY OF MAUPIN FLOW THROUGH GRANT 1	-	-	-	546,000	-	-		
602.60.6000.414.505 - CITY OF MAUPIN - GORGE.NET RECEIPTS	-	-	-	-	-	3,360		
602.60.6000.414.506 - CITY OF MAUPIN - LSN RECEIPTS	-	-	-	-	-	4,000		
<b>Revenue Total</b>	<b>87,880</b>	<b>250,727</b>	<b>327,591</b>	<b>1,284,434</b>	<b>612,592</b>	<b>54,530</b>		
<b>Expense</b>								
<b>Materials &amp; Services</b>								
602.60.6000.52113 - INSURANCE & BONDS	-	-	-	1,000	-	-		
602.60.6000.52398 - ADMINISTRATIVE COST	26,678	-	-	14,160	494	-		
602.60.6000.52406 - CONTR SVCS - LEGAL CONUNSEL CONTR	-	1,845	648	2,000	2,500	2,500		
602.60.6000.52476 - CONTRACTED SVSC - WIFI	-	-	11,909	1,000	500	14,160		
602.60.6000.52477 - CONTRACTED SVSC - ENGINEERING	-	-	19,125	-	2,000	-		
602.60.6000.52480 - POLE CONNECTION FEES	-	-	-	1,050	-	1,050		
602.60.6000.52651 - EQUIPMENT - REPAIR & MAINTENANCE	-	-	-	-	-	-		
602.60.6000.52882 - UTILITIES - ELECTRICITY	-	-	-	-	-	-		
602.60.6000.52883 - UTILITIES - NATURAL GAS	-	-	-	-	-	-		
602.60.6000.54278 - CONTRACTED SVSC - CUSTOMER CONNECTIONS	-	-	-	-	-	-		
<b>Capital Outlay</b>								
602.60.6000.53101 - BUILDINGS	-	-	-	-	-	-		
602.60.6000.53301 - EQUIPMENT - CAPITAL	17,097	-	3,148	-	4,148	-		
602.60.6000.53313 - PRIMARY SYSTEM	30,486	109,707	175,281	600,000	557,143	1,000		
602.60.6000.53314 - SECONDARY LINE EXTENSION	-	-	433	-	-	-		
602.60.6000.53315 - POLE MAKE READY	-	-	-	-	-	-		
<b>Transfer</b>								

Qlife Budget Detail Maupin Fund

Fund		Maupin Fund						
Row Labels	FY16 - Actual	FY17 - Actual	FY18 - Actual	FY19 - Budget	FY19 - Projection	FY20 - Budget Request	FY20 - Approved	FY20 - Adopted
602.60.6000.55601 - TRANSFER TO QLIFE CAPITAL	-	-	-	10,000	-	-		
<b>Contingency</b>								
602.60.6000.57602 - CONTINGENCY	-	-	-	377,664	-	7,500		
<b>Reserve</b>								
602.60.6000.58004 - RESERVE FOR WIFI	-	-	-	59,160	-	28,320		
<b>Unappropriated</b>								
602.60.6000.59000 - UNAPPROPRIATED		-	-	-	-	-		
<b>Expense Total</b>	<b>74,261</b>	<b>111,552</b>	<b>210,543</b>	<b>1,066,034</b>	<b>566,785</b>	<b>54,530</b>		

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.400.000**

**BEGINNING FUND BALANCE**

---

Account Definition:

Resources carried over from the prior fiscal period

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FY14 Actual: 93,154

FY15 Actual: 180,966

FY16 Actual: 231,823

FY17 Actual: 157,296

FY18 Actual: 108,640

FY19 Budgeted: 87,800

FY19 Projected: 96,952

FY20 Proposed: 96,952

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Projected FY19 Ending Fund Balance as of 4/18/19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.414.500**

**UTILITY SERVICE CHARGES**

---

Account Definition:

Charges for service

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FY14 Actual: 575,730

FY15 Actual: 622,155

FY16 Actual: 648,860

FY17 Actual: 601,430

FY18 Actual: 661,043

FY19 Budgeted: 669,147

FY19 Projected: 655,764

FY20 Proposed: 665,460

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

March 2019 = \$55,455; set as base 12\*55,455= \$665,460



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.414.501**

**CONNECT CHARGES**

---

Account Definition:

When a customer is billed for service being added, the one-time revenue for connecting is recorded here

---

FY14 Actual: 3,600

FY15 Actual: 3,150

FY16 Actual: 4,200

FY17 Actual: 2,000

FY18 Actual: 1,700

FY19 Budgeted: 1,000

FY19 Projected: 100

FY20 Proposed: 1,000

FY20 Approved:

FY20 Adopted:

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Budget Notes:

Estimated at just over 2 service added; Estimated connection fees are \$6,450; \$450 for Turn up fee, \$1,000 for Electronic Switch and \$5,000 for service line

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.417.104**

**INTEREST EARNED**

---

Account Definition:

Interest on bank accounts

---

FY14 Actual:	568
FY15 Actual:	1,505
FY16 Actual:	4,950
FY17 Actual:	11,053
FY18 Actual:	1,613
FY19 Budgeted:	2,000
FY19 Projected:	847
FY20 Proposed:	948
FY20 Approved:	
FY20 Adopted:	

---

Budget Notes:

Estimate based on principal

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.421.241**

**MISC RECEIPTS**

---

Account Definition:

Receipts that are not service charges, connection charges or interest. This should be minimal and if a revenue source is significant and/or recurring, a specific account line should be considered

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FY14 Actual:	134
FY15 Actual:	5,637
FY16 Actual:	3,933
FY17 Actual:	108
FY18 Actual:	4,003
FY19 Budgeted:	200
FY19 Projected:	1,586
FY20 Proposed:	200
FY20 Approved:	
FY20 Adopted:	

---

Budget Notes:

As title implies. Not known - this is used for 1 time receipts that are not appropriate in a different revenue line.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.422.132**

**E-RATE REIMBURSEMENTS**

---

Account Definition:

This is not processed through Qlife anymore

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FY14 Actual: 36,936

FY15 Actual: 13,075

FY16 Actual: 41,290

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

This flowthrough is not processed through Qlife anymore



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52101**

**ADVERTISING & PROMOTIONS**

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Account Definition:

Advertising and promotional spending

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FY14 Actual: 1,055

FY15 Actual: 529

FY16 Actual: 500

FY17 Actual: 673

FY18 Actual: 2,837

FY19 Budgeted: 1,500

FY19 Projected: 1,500

FY20 Proposed: 1,500

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same: This line is for costs to advertise and promote the Qlife system

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52111**

**DUES & SUBSCRIPTIONS**

---

Account Definition:

Dues for memberships in groups and associations and subscriptions. Specifically, Special Districts Associations of Oregon & Oregon Joint Use Association

---

FY14 Actual:	25
FY15 Actual:	255
FY16 Actual:	1,433
FY17 Actual:	1,616
FY18 Actual:	3,525
FY19 Budgeted:	3,000
FY19 Projected:	2,000
FY20 Proposed:	3,000
FY20 Approved:	
FY20 Adopted:	

---

Budget Notes:

Base on FY18 Actual; Special Districts Association of Oregon & Oregon Joint Use Association

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52113**

**INSURANCE & BONDS**

---

Account Definition:

Insurance costs for insuring the agency property

---

FY14 Actual: 5,665

FY15 Actual: 5,730

FY16 Actual: 7,317

FY17 Actual: 19,586

FY18 Actual: 15,242

FY19 Budgeted: 21,000

FY19 Projected: 18,000

FY20 Proposed: 21,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Cover higher insurance in FY18; Calendar year 2017 premium = \$14,260 (\$6,505 of which is property insurance); \$1,600 Pole Attachment Bond for PUD; Project for FY18 - Liability \$7,940; Property \$6,505; Pole Attachment Bond \$1,600; buffer for increases \$4,

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52115**

**LEGAL NOTICES & PUBLISHING**

---

Account Definition:

Publishing required documents, specifically meeting notices and notice of bids/proposal requests

---

FY14 Actual: 240

FY15 Actual: 116

FY16 Actual: 296

FY17 Actual: 209

FY18 Actual: 36

FY19 Budgeted: 400

FY19 Projected: 400

FY20 Proposed: 400

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; For the publication of legal notices - specifically meeting notices and request for bids in the paper and other places



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52116**

**POSTAGE**

---

Account Definition:

For all mailing costs - this is not restricted to USPS as at times other services are required to send a package. Not intended for Freight charges.

---

FY14 Actual: 112

FY15 Actual: 113

FY16 Actual:

FY17 Actual: 120

FY18 Actual: 359

FY19 Budgeted: 200

FY19 Projected: 180

FY20 Proposed: 200

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; Postage for mailings and normal mailing costs.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52120**

**RENT - OFFICE**

---

Account Definition:

Rent for space

---

FY14 Actual: 7,752

FY15 Actual: 7,752

FY16 Actual: 7,752

FY17 Actual: 7,752

FY18 Actual: 7,752

FY19 Budgeted: 7,752

FY19 Projected: 7,752

FY20 Proposed: 7,752

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Rent of City Hall space. One room \$141/month; second room \$121/month; third addition \$176/month; covered storage at City PW facility \$209/month = \$646/month

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number Account Title

**600.60.6000.52122 TELEPHONE**

---

Account Definition:

Telephone service

---

FY14 Actual: 410

FY15 Actual: 376

FY16 Actual: 412

FY17 Actual: 421

FY18 Actual: 450

FY19 Budgeted: 420

FY19 Projected: 550

FY20 Proposed: 500

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; This covers the cost for phone service and monthly maintenance contract with Gorge Networks

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52148**

**GENERAL GRANTS**

---

Account Definition:

Grant for the Northern Wasco County School District for the robotics program

---

FY14 Actual: 2,000

FY15 Actual: 2,000

FY16 Actual: 2,000

FY17 Actual: 2,000

FY18 Actual: 3,000

FY19 Budgeted: 2,000

FY19 Projected: 2,000

FY20 Proposed: 2,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Grant for school robotics program - Paid to Northern Wasco County School District



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52151**

**SCHOLARSHIP**

---

Account Definition:

Two scholarships to the CGCC Foundation to award

---

FY14 Actual: 2,000

FY15 Actual: 2,000

FY16 Actual: 2,000

FY17 Actual: 2,000

FY18 Actual: 2,000

FY19 Budgeted: 2,000

FY19 Projected: 2,000

FY20 Proposed: 2,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Scholarship paid to CGCC Foundation for two \$1,000 scholarships

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52350**

**TAXES/PERMITS/ASSESSMENTS**

---

Account Definition:

Permits & assements tied to projects and property

---

FY14 Actual:

FY15 Actual: 228

FY16 Actual:

FY17 Actual:

FY18 Actual: 415

FY19 Budgeted: 400

FY19 Projected: 785

FY20 Proposed: 800

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Increased the FY20 budget to match the FY19 actuals; Payments for filing Audit paperwork with state, Oregon Ethics Assessment, Public Utility Commission of Oregon and Bureau of Labor and Industries; Related to St Mary's project currently

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52370**

**MISC EXPENDITURES**

---

Account Definition:

Expense costs not appropriate for other expense lines - should be one-time and minimal. An ongoing cost should look to have a line added depending on size.

---

FY14 Actual:	460
FY15 Actual:	3,889
FY16 Actual:	674
FY17 Actual:	120
FY18 Actual:	832
FY19 Budgeted:	1,000
FY19 Projected:	2,000
FY20 Proposed:	1,000
FY20 Approved:	
FY20 Adopted:	

---

Budget Notes:

This expense is for items that do not fit into a different expense line. It should be kept to a minimum and new categories of expense that will be used repeated should look to have a line created that fits

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52398**

**ADMINISTRATIVE COST**

---

Account Definition:

Wasco County fee for administering the Qlife program

---

FY14 Actual: 15,909

FY15 Actual: 29,113

FY16 Actual: 31,793

FY17 Actual: 38,221

FY18 Actual: 54,500

FY19 Budgeted: 55,350

FY19 Projected: 55,350

FY20 Proposed: 58,671

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Compensation to County for Administrative support; FY18 level + 2.5% increase for wages; also includes the Cost of Labor adjustment;



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52399**

**ESD E-RATE PASS THROUGH**

---

Account Definition:

This is not processed through Qlife anymore

---

FY14 Actual: 36,936

FY15 Actual: 13,075

FY16 Actual: 41,290

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

This flowthrough is not processed through Qlife anymore

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52401**

**CONTRACTED SERVICES**

---

Account Definition:

Contracts for service that are not legal, audit, engineering, network management or intended for "Contracted Services - Other" (see Budget note for planned contracts.)

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected: 325

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget to \$0; this is a general contracted service line - it is preferred to use the more specific lines below.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52406**

**CONTR SRVCS - LEGAL COUNSEL CONTR**

---

Account Definition:

Legal services

---

FY14 Actual: 4,110

FY15 Actual: 4,630

FY16 Actual: 12,480

FY17 Actual: 6,846

FY18 Actual: 9,162

FY19 Budgeted: 9,000

FY19 Projected: 6,000

FY20 Proposed: 6,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Legal services - based on FY19 actual usage

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52409**

**CONTR SRVCS - OTHER**

---

Account Definition:

Tree trimming, OSP Insight and Joe Fannel

---

FY14 Actual:

FY15 Actual: 6,887

FY16 Actual: 12,278

FY17 Actual: 10,723

FY18 Actual: 7,998

FY19 Budgeted: 15,100

FY19 Projected: 8,000

FY20 Proposed: 15,100

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

\$3000 Tree trimming; \$2,100 OSP Insight estimate; \$10,000 Joe Fannel



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52412**

**CONTR SRVCS - AUDIT CONTRACT**

---

Account Definition:

Annual audit

---

FY14 Actual: 6,350

FY15 Actual: 5,500

FY16 Actual: 4,750

FY17 Actual: 6,600

FY18 Actual: 3,650

FY19 Budgeted: 6,000

FY19 Projected: 4,000

FY20 Proposed: 4,200

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Expected audit fees

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52477**

**CONTRACTED SVSC - ENGINEERING**

---

Account Definition:

Engineering services not tied to a project

---

FY14 Actual: 17,577

FY15 Actual: 17,356

FY16 Actual: 35,210

FY17 Actual: 45,796

FY18 Actual: 37,174

FY19 Budgeted: 20,000

FY19 Projected: 64,587

FY20 Proposed: 50,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Engineering not related to projects; If the Engineering is tied to a project, it should be in the Capital fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52479**

**CONTRACTED SVSC - NETWORK SYSTEM MGMT**

---

Account Definition:

Network System Management not tied to a project. Also includes the base monthly fee system management

---

FY14 Actual: 61,126

FY15 Actual: 60,847

FY16 Actual: 71,845

FY17 Actual: 56,972

FY18 Actual: 55,870

FY19 Budgeted: 51,000

FY19 Projected: 78,490

FY20 Proposed: 71,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

\$2,000 per month for Basic Services + \$67/hour during regular business and \$140/hour outside normal hours. Historically, Basicic Service \$24,000. Network System Management should be tied to projects whenever possible and be in the Capital fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52480**

**POLE CONNECTION FEES**

---

Account Definition:

Cost paid to attach to poles

---

FY14 Actual: 8,653

FY15 Actual: 10,335

FY16 Actual: 8,447

FY17 Actual: 4,650

FY18 Actual: 15,088

FY19 Budgeted: 10,500

FY19 Projected: 15,000

FY20 Proposed: 12,392

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Used the FY19 actual cost; this is the fee paid annually for the connection to the poles.



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52481**

**RIGHT OF WAY FEES**

---

Account Definition:

Paid to The Dalles due to operating within the city limits. The amount is 3% of the Utility Service charge

---

FY14 Actual: 17,272

FY15 Actual: 18,645

FY16 Actual: 19,466

FY17 Actual: 18,043

FY18 Actual: 23,730

FY19 Budgeted: 20,075

FY19 Projected: 20,075

FY20 Proposed: 20,075

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Fee of 3% of customer revenues for The Dalles due to being in The Dalles

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52502**

**NETWORK COMPONENTS**

---

Account Definition:

Noncapital network components (Capital is typically over \$5,000 and useful life exceeds 3 years.)

---

FY14 Actual: 1,190

FY15 Actual:

FY16 Actual: 1,597

FY17 Actual:

FY18 Actual: 730

FY19 Budgeted: 5,000

FY19 Projected: 2,000

FY20 Proposed: 5,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; Network components needed that are not tied to a capital project

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52601**

**EQUIPMENT - NON CAPITAL**

---

Account Definition:

Noncapital equipment (Capital is typically over \$5,000 and useful life exceeds 3 years.)

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 1,304

FY18 Actual: 1,504

FY19 Budgeted: 5,000

FY19 Projected: 1,000

FY20 Proposed: 5,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Network equipment that does not meet the definition of capital (capital is over \$5K and useful life exceeds 3 years)

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52608**

**EASEMENTS - NON-CAPITAL**

---

Account Definition:

Easements - right to access an area for a specific purpose. Is not ownership and is less than \$5,000 and/or shorter than 3 years

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 1,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Non-Capital Easements



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52701**

**TRAINING & EDUCATION**

---

Account Definition:

Cost for training and education not covered in meals, lodging and registration

---

FY14 Actual:

FY15 Actual: 130

FY16 Actual: 195

FY17 Actual: 325

FY18 Actual: 514

FY19 Budgeted: 700

FY19 Projected: 500

FY20 Proposed: 700

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; costs for training session not including lodging, meals and travel

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52711**

**MEALS, LODGING & REGISTRATION**

---

Account Definition:

Meals, lodging and registration for conferences, training and education

---

FY14 Actual: 1,031

FY15 Actual: 1,254

FY16 Actual: 1,973

FY17 Actual: 518

FY18 Actual: 1,546

FY19 Budgeted: 2,000

FY19 Projected: 1,656

FY20 Proposed: 5,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

For conferences; increased in FY20 as for the next 3 years the conference will be in Ashland; it was in Hood River. This will increase costs

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52801**

**BLDG REPAIR & MAINT**

---

Account Definition:

Noncapital repairs and maintenance on structures (Capital is typically over \$5,000 and useful life exceeds 3 years.)

---

FY14 Actual:

FY15 Actual:

FY16 Actual: 247

FY17 Actual: 315

FY18 Actual:

FY19 Budgeted: 1,600

FY19 Projected: 200

FY20 Proposed: 1,600

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the budget the same; repairs & maintenance on buildings

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52808**

**OUTSIDE PLANT MAINTENANCE**

---

Account Definition:

Noncapital repairs and maintenance for the fiber. If it is new (not a repair) or will be reimbursed by others - it should be in the capital fund

---

FY14 Actual: 16,816

FY15 Actual: 14,733

FY16 Actual: 7,226

FY17 Actual: 32,424

FY18 Actual: 23,255

FY19 Budgeted: 20,000

FY19 Projected: 8,500

FY20 Proposed: 20,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Repair of the fiber optic lines. Placing fiber on poles and repairing breaks. If new work or reimbursable by others it is in the capital fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52882**

**UTILITIES - ELECTRICITY**

---

Account Definition:

Electricity bill

---

FY14 Actual: 532

FY15 Actual: 504

FY16 Actual: 454

FY17 Actual: 619

FY18 Actual: 737

FY19 Budgeted: 800

FY19 Projected: 690

FY20 Proposed: 800

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Based on trending - to pay electrical bills



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.52910**

**SUPPLIES - OFFICE**

---

Account Definition:

Office supplies such as paper, toner, binders, etc

---

FY14 Actual:

FY15 Actual: 72

FY16 Actual: 295

FY17 Actual: 178

FY18 Actual: 361

FY19 Budgeted: 200

FY19 Projected: 107

FY20 Proposed: 200

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Keep the same as last fiscal year. This is for general office supplies

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.53301**

**EQUIPMENT - CAPITAL**

---

Account Definition:

Capital equipment (Capital is typically over \$5,000 and useful life exceeds 3 years.)

---

FY14 Actual:

FY15 Actual: 5,692

FY16 Actual: 1,688

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 20,000

FY19 Projected: 2,000

FY20 Proposed: 20,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Item #3 of the agencies Financial Priorities Policy is to reserve \$20,000 for expansion and replacement of the electronics of the system.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.53403**

**EASEMENTS**

---

Account Definition:

Easements that exceed \$5,000 and are for longer than 3 years.

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual: 18,000

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Not budgeting Easements in FY20 - should be in FY23 again; There are 5 easments totalling \$18,000 every 5 years

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.55601**

**TRANSFER TO QLIFE CAPITAL**

---

Account Definition:

Monthly shift of resources from the General Fund to the Capital Fund to fund future capital projects

---

FY14 Actual: 321,933

FY15 Actual: 382,905

FY16 Actual: 504,140

FY17 Actual: 405,391

FY18 Actual: 392,898

FY19 Budgeted: 372,800

FY19 Projected: 372,800

FY20 Proposed: 327,020

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Transfer \$27,251.67/mth to Qlife Capital fund from Operations Fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.57600**

**CONTINGENCY**

---

Account Definition:

Funds budgeted for unplanned costs that arise

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 50,000

FY19 Projected:

FY20 Proposed: 50,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

The target is at least 10% of the monthly operating expenses, this more - 15%



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**600.60.6000.59000**

**UNAPPROPRIATED**

---

Account Definition:

Funds set aside to provide resources in a future fiscal period.

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 54,350

FY19 Projected:

FY20 Proposed: 51,350

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

The target is 3 months average spending. That is 82,472. The average is \$27,491 per month. At this time putting in 15.6%. The purpose is to ensure operating funds are available for future fiscal periods.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.400.000**

**BEGINNING FUND BALANCE**

---

Account Definition:

Resources carried over from the prior fiscal period

---

FY14 Actual: 141,124

FY15 Actual: 183,319

FY16 Actual: 377,826

FY17 Actual: 870,111

FY18 Actual: 1,011,310

FY19 Budgeted: 1,315,777

FY19 Projected: 1,391,871

FY20 Proposed: 1,665,172

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Projected ending Fund balance for FY19 as of 4/18/19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.414.501**

**CONNECT CHARGES**

---

Account Definition:

When a customer is billed for service being added, the one-time revenue for connecting is recorded here if part of a project.

---

FY14 Actual: 19,415

FY15 Actual: 17,607

FY16 Actual: 13,569

FY17 Actual: 5,100

FY18 Actual:

FY19 Budgeted: 19,000

FY19 Projected:

FY20 Proposed: 19,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Based on trending - should be \$6,000 per new customer. This amount is just slightly about 3 new customers. None had occurred in FY19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.417.104**

**INTEREST EARNED**

---

Account Definition:

Interest on bank accounts

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 625

FY18 Actual: 17,542

FY19 Budgeted: 1,072

FY19 Projected: 25,285

FY20 Proposed: 25,200

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Interest earned on accounts. LGIP is generating this due to current rates at 2.75%

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.450.600**

**TRANSFER FROM QLIFE OPERATING FUND**

---

Account Definition:

Monthly shift of resources from the General Fund to the Capital Fund to fund future capital projects

---

FY14 Actual: 321,933

FY15 Actual: 382,905

FY16 Actual: 504,140

FY17 Actual: 405,391

FY18 Actual: 392,898

FY19 Budgeted: 372,800

FY19 Projected: 372,800

FY20 Proposed: 327,020

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Transfer \$27,251.67/mth to Qlife Capital fund from Operations Fund



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.450.602**

**TRANSFER FROM QLIFE MAUPIN FUND**

---

Account Definition:

Transfers from the Maupin Fund - this will be intended to repay the fund used to partially fund the Maupin project

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 10,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Annual repayment from franchise fees; none scheduled in FY20 as the fund needs time to recover;  
When the Maupin fund starts to repay the Capital Fund - it will show here.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.52477**

**CONTRACTED SVSC - ENGINEERING**

---

Account Definition:

Noncapital engineering services - in the capital fund all expenses should be out of the capital lines - started budgeting \$0 in FY20

---

FY14 Actual:	904
FY15 Actual:	4,735
FY16 Actual:	1,085
FY17 Actual:	10,961
FY18 Actual:	4,068
FY19 Budgeted:	11,000
FY19 Projected:	- 4,470
FY20 Proposed:	
FY20 Approved:	
FY20 Adopted:	

---

Budget Notes:

The Capital Fund is focused on Capital type costs. If not capital, it should be in the Operations fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.52478**

**CONTRACTED SVSC - CUSTOMER CONNECTIONS**

---

Account Definition:

Noncapital customer connections - in the capital fund all expenses should be out of the capital lines - started budgeting \$0 in FY20

---

FY14 Actual:

FY15 Actual: 1,016

FY16 Actual: 1,354

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 4,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

The Capital Fund is focused on Capital type costs. If not capital, it should be in the Operations fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.52651**

**EQUIPMENT - REPAIR & MAINTENANCE**

---

Account Definition:

Noncapital repair & maintenance - in the capital fund all expenses should be out of the capital lines - started budgeting \$0 in FY20

---

FY14 Actual: 15,722

FY15 Actual: 913

FY16 Actual:

FY17 Actual: 11,344

FY18 Actual:

FY19 Budgeted: 8,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

The Capital Fund is focused on Capital type costs. If not capital, it should be in the Operations fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.53101**

**BUILDINGS**

---

Account Definition:

Capital outlay for structures

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No buildings in the current budget capital plan



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.53301**

**EQUIPMENT - CAPITAL**

---

Account Definition:

Capital outlay for equipment

---

FY14 Actual: 14,360

FY15 Actual:

FY16 Actual:

FY17 Actual: 302

FY18 Actual:

FY19 Budgeted: 80,000

FY19 Projected:

FY20 Proposed: 80,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Generator Replacement

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.53313**

**PRIMARY SYSTEM**

---

Account Definition:

Projects to either extend/expand the primary system or capital repairs

---

FY14 Actual: 1,516

FY15 Actual: 7,149

FY16 Actual: 2,263

FY17 Actual: 89,581

FY18 Actual: 22,055

FY19 Budgeted: 600,000

FY19 Projected: 250,000

FY20 Proposed: 660,284

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

\$371K St Mary's; \$50K Pon Beta; \$186K East Bisector; \$76K Downtown Bypass; \$232K Co-location Space - Big Eddy; \$120K Downtown Metro Loop; -\$375K to bring to \$660K and balance

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.53314**

**SECONDARY LINE EXTENSION**

---

Account Definition:

Projects to either extend/expand secondary lines or capital repairs to secondary lines

---

FY14 Actual: 35,038

FY15 Actual: 62,527

FY16 Actual: 20,722

FY17 Actual: 1,074

FY18 Actual: 3,756

FY19 Budgeted: 200,000

FY19 Projected: 5,000

FY20 Proposed: 200,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

New connects that require a line extension will add value to system and need to be capitalized. As needed - no specific projects identified

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.53315**

**POLE MAKE READY**

---

Account Definition:

Costs to "make poles ready" - should actually be part of the Project cost so was \$0 budgeted starting in FY19

---

FY14 Actual: 2,809

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Should be part of the Capital project

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.55602**

**TRANSFER TO QLIFE MAUPIN**

---

Account Definition:

Transfer of resources to Maupin Fund

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 156,655

FY18 Actual:

FY19 Budgeted: 200,000

FY19 Projected:

FY20 Proposed: 30,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Up to \$30K is set as a "just in case" funding transfer. It is not anticipated to be needed.



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.56001**

**DISTRIBUTION TO SPONSORS**

---

Account Definition:

Distribution of resources to agency sponsors (Wasco County & The Dalles)

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No planned distribution in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.57601**

**CONTINGENCY**

---

Account Definition:

Funds budgeted for unplanned costs that arise

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 390,983

FY19 Projected:

FY20 Proposed: 390,983

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

For FY20 unanticipated needs

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.58001**

**RESERVE FOR SYSTEM IMPROVEMENTS**

---

Account Definition:

Funds budgeted for system improvements not expected to be expended in the current FY

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 224,666

FY19 Projected:

FY20 Proposed: 675,125

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Board Priority #9: Create a reserve for future expansion, modernization or replacement of systems; This is a specific "contingency" type fund

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.58002**

**RESERVE FOR EXPANSION**

---

Account Definition:

Funds budgeted for system expansion not expected to be expended in the current FY

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No planned reserve in FY18

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**601.60.6000.59000**

**UNAPPROPRIATED**

---

Account Definition:

Funds set aside to provide resources in a future fiscal period.

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

There is no unappropriated fund balance in the Capital fund.



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.400.000**

**BEGINNING FUND BALANCE**

---

Account Definition:

Resources carried over from the prior fiscal period

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 13,620

FY18 Actual: 139,176

FY19 Budgeted: 128,434

FY19 Projected: 117,048

FY20 Proposed: 17,110

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Projected Beginning Balance FY20 - assuming project completes in April 2019 with fully expending budget

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.412.674**

**STATE GRANT**

---

Account Definition:

Grants and legislative appropriations

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 80,427

FY18 Actual: 186,227

FY19 Budgeted: 190,000

FY19 Projected: 494,069

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No state grants are expected in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.412.700**

**PRIVATE SECTOR GRANTS**

---

Account Definition:

Grants from the private sector

---

FY14 Actual:

FY15 Actual:

FY16 Actual: 87,880

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No private sector grants are expected in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.414.306**

**CITY OF MAUPIN FLOW THROUGH GRANTS 1&2**

---

Account Definition:

Grants received by the City of Maupin that flow thorough to the Maupin Fund in Qlife

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 546,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No grant funds inf FY20 planned

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.414.500**

**UTILITY SERVICE CHARGES**

---

Account Definition:

Charges for service - not planned to be utilized at this point, see specific revenue lines below

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Base Utility Service Charges - Not used currently as specific lines created for Gorge.net and LSN



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.414.505**

**CITY OF MAUPIN - GORGE.NET RECEIPTS**

---

Account Definition:

Revenues due from Gorge.net agreement flows through City of Maupin to Qlife

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed: 3,360

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Gorge.net projected revenue updated as of 4/18/19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.414.506**

**CITY OF MAUPIN - LSN RECEIPTS**

---

Account Definition:

Revenues due from LSN

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed: 4,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

LSN projected revenue updated as of 4/18/19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.417.104**

**INTEREST EARNED**

---

Account Definition:

Interest on bank accounts

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 25

FY18 Actual: 2,188

FY19 Budgeted:

FY19 Projected: 1,475

FY20 Proposed: 60

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Planned lower cash balance means significantly less interest

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.421.241**

**MISC RECEIPTS**

---

Account Definition:

Receipts that are not service charges, connection charges or interest. This should be minimal and if a revenue source is significant and/or recurring, a specific account line should be considered

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

In FY18 budgeted franchise fee here - moved to own line in FY19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.450.600**

**TRANSFER FROM QLIFE OPERATING FUND**

---

Account Definition:

Transfer of resources from the General Fund to the Maupin Fund

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 200,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No transfers from the Operations Fund



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.450.601**

**TRANSFER FROM QLIFE CAPITAL FUND**

---

Account Definition:

Transfer of resources from the Capital Fund to the Maupin Fund

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 156,655

FY18 Actual:

FY19 Budgeted: 220,000

FY19 Projected:

FY20 Proposed: 30,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

"Just in case" funding for a safety net from the Capital fund. Is not anticipated to be used.

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.490.490**

**LOAN PROCEEDS**

---

Account Definition:

Resources received from a loan

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Not really loan to Qlife - State issued bonds and gave awards so no payback look to State Grant line

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52113**

**INSURANCE & BONDS**

---

Account Definition:

Insurance costs for insuring the agency property

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 1,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Insurance and Bond costs should be recorded here. Due to the resource limits on the fund, this is not anticipated to be spent in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52398**

**ADMINISTRATIVE COST**

---

Account Definition:

Wasco County fee for administering the Qlife program

---

FY14 Actual:

FY15 Actual:

FY16 Actual: 26,678

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 14,160

FY19 Projected: 494

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Administrative fees should be paid out of this fund for the County services. However, due to a lack of resources, this is not being budgeted in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52406**

**CONTR SRVCS - LEGAL COUNSEL CONTR**

---

Account Definition:

Legal services

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual: 1,845

FY18 Actual: 648

FY19 Budgeted: 2,000

FY19 Projected: 2,500

FY20 Proposed: 2,500

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Legal Counsel contracted service



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52476**

**CONTRACTED SVSC - WIFI**

---

Account Definition:

Maintain the WIFI service in Maupin

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual: 11,909

FY19 Budgeted: 1,000

FY19 Projected: 500

FY20 Proposed: 14,160

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Estimated cost to maintain wireless service in compliance with the Google grant

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52477**

**CONTRACTED SVSC - ENGINEERING**

---

Account Definition:

Engineering services not tied to a project

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual: 19,125

FY19 Budgeted:

FY19 Projected: 2,000

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

No engineering budgeted as system maintenance is up to LSN

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52480**

**POLE CONNECTION FEES**

---

Account Definition:

Cost paid to attach to poles

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 1,050

FY19 Projected:

FY20 Proposed: 1,050

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Expected costs for connections to poles

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52651**

**EQUIPMENT - REPAIR & MAINTENANCE**

---

Account Definition:

Noncapital equipment repair & maintenance

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None budgeted in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52882**

**UTILITIES - ELECTRICITY**

---

Account Definition:

Electricity bill

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None budgeted in FY20



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.52883**

**UTILITIES - NATURAL GAS**

---

Account Definition:

Natural Gas bill

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None budgeted in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.53101**

**BUILDINGS**

---

Account Definition:

Capital outlay for structures

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None budgeted in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.53301**

**EQUIPMENT - CAPITAL**

---

Account Definition:

Capital outlay for equipment

---

FY14 Actual:

FY15 Actual:

FY16 Actual: 17,097

FY17 Actual:

FY18 Actual: 3,148

FY19 Budgeted:

FY19 Projected: 4,148

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None budgeted in FY20

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.53313**

**PRIMARY SYSTEM**

---

Account Definition:

Capital outlay for the Primary sytem to extend/expand

---

FY14 Actual:

FY15 Actual:

FY16 Actual: 30,486

FY17 Actual: 109,707

FY18 Actual: 175,281

FY19 Budgeted: 600,000

FY19 Projected: 557,143

FY20 Proposed: 1,000

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Minimal amount - for work on the Primary system

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.53314**

**SECONDARY LINE EXTENSION**

---

Account Definition:

Capital outlay for the Secondary Line(s) to be extended

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual: 433

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

All project should be Primary system as all is included there



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.53315**

**POLE MAKE READY**

---

Account Definition:

Cost to make poles ready - should actually be part of the project

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None in FY19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.54278**

**CONTRACTED SVSC - CUSTOMER CONNECTIONS**

---

Account Definition:

Contracted services to create customer connections

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

None in FY19

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.55601**

**TRANSFER TO QLIFE CAPITAL**

---

Account Definition:

Transfer of resouces to Capital Fund

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 10,000

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Will need to repay the funds transferred in from the Capital fund. It will not be starting in FY20 - wait for fund to generating revenue

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.57602**

**CONTINGENCY**

---

Account Definition:

Funds budgeted for unplanned costs that arise

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 377,664

FY19 Projected:

FY20 Proposed: 7,500

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Base Contingency for unanticipated costs

## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.58004**

**RESERVE FOR WIFI**

---

Account Definition:

Funds budgeted for WIFI costs not expected to be expended in the current FY

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted: 59,160

FY19 Projected:

FY20 Proposed: 28,320

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Two years of support for the WIFI service based on the 3 year grant requirement - 1 year is budgeted in the expenses



## QUALITYLIFE (QLIFE) INTERGOVERNMENTAL AGENCY

### BUDGET WORKSHEETS FISCAL YEAR 2020 (FY20)

Account Number

Account Title

**602.60.6000.59000**

**UNAPPROPRIATED**

---

Account Definition:

Funds set aside to provide resources in a future fiscal period.

---

FY14 Actual:

FY15 Actual:

FY16 Actual:

FY17 Actual:

FY18 Actual:

FY19 Budgeted:

FY19 Projected:

FY20 Proposed:

FY20 Approved:

FY20 Adopted:

---

Budget Notes:

Funds set aside for use in future fiscal periods



## **MOTION**

**SUBJECT: QLife Budget**

---

I move to approve the 2019-2020 Quality Life Intergovernmental Agency Fiscal Year Budget as presented.



## AGENDA ITEM

### Mid-Columbia Center for Living CDBG Hearing

---

[STAFF MEMO](#)

---

[ARTIST'S RENDERING](#)

---



## MEMORANDUM

**SUBJECT: Mid-Columbia Center for Living Construction Project Completion**

**TO: BOARD OF COUNTY COMMISSIONERS**

**FROM: JACQUE SCHEI & ELDA ORR**

**DATE: 5/29/2019**

### BACKGROUND INFORMATION:

In 2015, Wasco County received \$2 million from the Community Development Block Grant program from the Oregon Business Development Department. The Community Development Block Grant program is a federal program that provides resources to local governments to address a range of community development needs, such as affordable housing or infrastructure that creates jobs. The grant was to support construction of a new mental health facility in The Dalles. Since this grant can only be awarded to government agencies, Wasco County applied in partnership with Mid-Columbia Center for Living. As the grant recipient, the County officially owns the new facility for the first five years of the project.

In addition to grant funds, the project was supported by MCCFL funds and a loan from Wasco County. The construction contract was awarded to Griffin Construction, LLC and construction started in May of 2018. The facility, at 1060 Webber Street, was built on land owned by MCCFL and was completed in late May of 2019. It includes space to consolidate all MCCFL programs and administration, and enable separate treatment areas for adult and children services. In addition, the building will provide for state of the art lighting, electrical, plumbing, heating, and technology. It will also provide a comfortable, safe healing center designed and developed for and with people who have mental illness, addictions and/or developmental disabilities. The facility will allow MCCFL to provide treatment and services for 1,600 low-to moderate-income adults, children and families dealing with mental illness, addictions and/or developmental disabilities.

Wasco County would like to obtain citizens' views about the project and to take comments about the local government's performance during the project.

Mid-Columbia Center for Living  
1060 Webber Street  
The Dalles, OR 97058

## NEW CLINICAL CARE FACILITY PROJECT OVERVIEW

General Contractor: *Griffin Construction*

Architect: *Scott Edwards Architects*

Construction Start: *May 8, 2018*

Certificate of Occupancy Issued: *May 21, 2019*

Planned Occupancy: *First Week in August, 2019*

Construction Cost: *\$6,747,795*

Community Development Block Grant: *\$2,000,000*

Square Feet: *22,639, Wood Frame, Two Story Building*

Zoning: *RH- High Density Residential with NC- Neighborhood Commercial Overlay*

Car Parking: *47 Regular*

*17 Compact*

*3 ADA Accessible (1 Van)*

Bicycle Parking: *8 spaces*

## FACILITY PROGRAMS

### FIRST FLOOR

#### *The Cottage*

- A drop-in center focused on skill building groups and social networking activities for adults. Includes waiting/living room area, teaching kitchen, activity room, 2 group rooms, personal care services (showers, laundry) and lockers.

#### *Administration*

- Including Executive Director, Finance, Human Resources and support staff
- Information Technology Department
- Conference Rooms (3 total)
- Crisis Room, Medication Dispensing, and Intake Area

### SECOND FLOOR:

#### *Children's Mental Health*

- Separate Youth Waiting area, Group Room, 5 care rooms and Parent/Child Interaction Therapy Room.

#### *Intellectual Development Services, Mental Health and Addictions*

- 12 care rooms, 4 meeting rooms, referral coordinator

#### *Physical Health Services and Laboratory*

- 3 Exam Rooms, Lab, Medication Dispensing, Drug Testing services









## AGENDA ITEM

### Executive Session

---

[PURSUANT TO ORS 192.660\(2\)\(H\) CONFERRING WITH LEGAL COUNSEL  
REGARDING LITIGATION](#)

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## AGENDA ITEM

### Work Session

---

[NO DOCUMENTS HAVE BEEN SUBMITTED FOR THIS ITEM – RETURN TO AGENDA](#)

---



511 Washington St., Ste. 207 • The Dalles, OR 97058  
p: [541] 506-2770 • f: [541] 506-2771 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

***Pioneering pathways to prosperity.***

6/03/2019

To: Board of County Commissioners  
From: Mike Middleton – Finance Director  
Re: Building Codes Vehicle Bids

The Bids have been received and reviewed. Three (3) of the of the vendors responded with bids – bids have been requested from four (4) local vendors.

All the bids received meet the specifications of the bid with a range of \$95,560 to \$100,000. Bids are attached.

The lowest bid is from C H Urness Motors Company for 4 2019 Jeep Compass Sport 4x4. The bid amount is \$95,560 with delivery available the week of June 10<sup>th</sup>, 2019 as required in the bid documents.

It is important to review other factors to consider in the purchase – such as mileage and reviews from the market place. These factors are included in the summary of bid comparison attached.

The Jeep did have the lowest reviews of the three on Consumer Reports, Cars.com and Edmonds. However, on Cars.com and Edmonds the Jeep scored 3.9 and 3.7 respectfully. This is on a scale of 0-5 so does not indicate a problem – just that some cars are perceived as better. The Consumer Reports overall score is 41 which is the bottom of the range – the top end was an 89. Basically, the vehicle is not as refined as others in the class but still meets the requirements. Most categories were rated as 3 out of 5.

Mileage was considered. The differences are not large, but this was examined to get an idea of complete costs. Assuming \$3.50/gallon (currently the County pays less than \$3/gal) and 24,000 miles annually per car, the cost ranking does not change.

Based on the review of bids, I am recommending the Board of County Commissioners to accept and select the bid from C H Urness Motors Company for 4 2019 Jeep Compass vehicles for \$95,560.

Summary of Bid comparisons

Bid #	Vendor Name	Items Bid	Meet Min Bid Specs?	Consumer Reports	Consumer Reviews Score (0-5): Cars.com	Consumer Reviews Score (0-5): Edmonds	Bid	Fuel Costs					Estimated Fuel Cost	Bid + Fuel
								EPA City	EPA Highway	City Cost	Highway Cost			
1	C H Urness Motors Company	4 2019 Jeep Compass Sport 4x4	Yes	41	3.9	3.7 (3 reviews)	95,560.00	22	30	3,054.55	8,960.00		12,014.55	107,574.55
2	Ray Schultens Motors	4 2019 Nissan Rogue S	Yes	74	4.6	4.2 (11 reviews)	97,288.52	25	32	2,688.00	8,400.00		11,088.00	108,376.52
3	Columbia Gorge Motors	4 2019 Honda CR-V LX	Yes	77	4.4	3.9 (69 reviews)	100,000.00	25	31	2,688.00	8,670.97		11,358.97	111,358.97
							Bid #1 - Bid #2							(801.97)
							Bid #1 - Bid #3							(3,784.42)

<b>Assumptions</b>	
Gas Price	3.50 Gal
Annual Miles	96,000 miles (4 vehicles going 24,000/yr)
City Mileage %	20%
Highway Mileage %	80%



# **Bid #1**

**C H Urness Motors Company**

**4 2019 Jeep Compass Sport 4x4**

Welcome

## WASCO COUNTY BUILDING CODES DEPT



### 2019 COMPASS SPORT 4X4

At Your Service

**Eric Mullins**

O: 541-296-2284 M: 541-980-4779

[eric@urnessmotors.com](mailto:eric@urnessmotors.com)

Monday	8:00 am TO 6:00 pm
Tuesday	8:00 am TO 6:00 pm
Wednesday	8:00 am TO 6:00 pm
Thursday	8:00 am TO 6:00 pm
Friday	8:00 am TO 6:00 pm
Saturday	8:00 am TO 6:00 pm
Sunday	CLOSED



**OPEN eCATALOG**

## C H URNESS MOTORS COMPANY

505 Cherry Heights Rd, The Dalles, OR 97058

**Customer Information:**

WASCO COUNTY BUILDING CODES DEPT  
MIKEM@CO.WASCO.OR.US  
511 WASHINGTON ST STE 207  
THE DALLES, OR 97058  
(541) 506-2770

**Sales Consultant Information:**

Eric Mullins  
eric@urnessmotors.com  
505 Cherry Heights Rd  
The Dalles, OR  
541-980-4779

PRICE SUMMARY

MSRP: \$23,345.00  
Your Selections: \$3,190.00  
Destination Charge: \$1,495.00  
Incentive: -\$4,259.00 (Government Incentives)  
Other: \$119.00 (Oregon Priv. Tax)  
Other: \$71,670.00 ( X 4)

Your Price: \$95,560.00

COMMENTS

Total purchase price for four 2019 Jeep Compass Sport 4x4 vehicles \$95,560.

\*vehicles may have slightly different options and/or colors depending on availability.

Signature: \_\_\_\_\_  
WASCO COUNTY BUILDING CODES DEPT

Date: \_\_\_\_\_

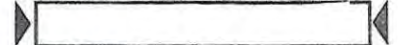


2019 MODEL YEAR

# Jeep COMPASS SPORT 4x4

THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES.

MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION



**JEOP COMPASS SPORT 4X4**  
Exterior Color: Billet Silver Metallic Clear-Coat Exterior Color  
Interior Color: Black Interior Color  
Interior: Cloth Loop-Bank Bucket Seats  
Engine: 2.4L I4 M-Air Engine

Transmission: 9-Speed Automatic Transmission  
**STANDARD EQUIPMENT** (UNLESS REPLACED BY OPTIONAL EQUIPMENT)  
FUNCTIONAL SAFETY FEATURES

Advanced Multistage Front Airbags  
Driver Inflatable Knee-Bolster Airbag  
Supplemental Side-Curtain Front and Rear Airbags  
Supplemental Front Seat-Mounted Side Airbags  
Remote Keyless Entry  
Pushbutton Start  
Speed Control  
Speed Sensitive Power Locks  
ParkView® Rear Back-Up Camera  
Rear Window Defroster  
Variable Intermittent Windshield Wipers  
Sentry® System  
Electronic Stability Control  
Electronic Roll Mitigation  
4-Wheel Disc Anti-Lock Brakes  
Tire Pressure Monitoring Display

**INTERIOR FEATURES**  
Uconnect® 4 with 7-Inch Display  
Apple CarPlay®  
Google Android Auto™  
Cluster 3.5-Inch Black / White Driver Info Display  
Bluetooth® Streaming Audio  
Steering Wheel Mounted Audio Controls  
Power Front Windows w/ 1-Touch Up and Down Feature  
Tilt / Telescope Steering Column  
Rear 60 / 40 Folding Seat  
Height-Adjustable Front Shoulder Belts  
Sliding Sun Visors with Mirrors  
6-Speakers  
Manual 6-Way Driver / Passenger Seats  
Rear View Day / Night Mirror  
A/C Auto Temperature Control with Dual Zone Control  
USB Host Flip  
Media Hub (USB, Aux)  
Remote USB Port Second-Row  
115-Volt Auxiliary Power Outlet  
Auxiliary 12-Volt Rear Power Outlet

**EXTERIOR FEATURES**  
16-Inch x 5.5-Inch Styled Black Steel Wheels

Power Adjustable Mirrors  
Exterior Mirrors with Heating Element  
Daytime Running Lamp System  
Halogen Quad Headlamps  
Headlamps with Turn-Off Time Delay  
Black Day Light Opening Moldings  
Incandescent Tail Lamps  
**OPTIONAL EQUIPMENT** (May Replace Standard Equipment)  
Customer Preferred Package 27A \$995  
Sport Appearance Group  
Bright Day Light Opening Molding  
Deep Tint Sunscreen Glass  
16-Inch x 5.5-Inch Silver Painted Aluminum Wheels  
Black Side Roof Rails  
Technology Group \$695  
Remote Proximity Keyless Entry  
Cluster 7.0-Inch Color Driver Information Display  
SiriusXM® with 1-Year Radio Sub Call 800-643-2112  
ParkSense® Rear Park-Assist System  
Body-Color Door Handles \$1,500  
9-Speed Automatic Transmission  
AutoStick® Automatic Transmission  
Center Console / Rear Seats Air Vents  
**Destination Charge** \$1,495



**WARRANTY COVERAGE**  
5-year or 60,000-mile Powertrain Limited Warranty.  
3-year or 36,000-mile Basic Limited Warranty.  
Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

**5 YEAR / 60,000 MILE  
POWERTRAIN WARRANTY**

S.L.

59410

59410

594

THIS LABEL IS ADDED TO THIS VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REVOLED OR ALTERED PRIOR TO DELIVERY TO THE ULTIMATE PURCHASER.

\* STATE AND/OR LOCAL TAXES IF ANY, LICENSE AND TITLE FEES AND DEALER SUPPLIES AND INSTALLED OPTIONS AND ACCESSORIES ARE NOT INCLUDED IN THIS PRICE. DEDUCT, IF ANY, IS BASED ON PRICE OF OTHER EQUIPMENTED VEHICLE.

For more information visit: [www.jeep.com](http://www.jeep.com)  
or call 1-877-IAM-JEEP

FCA US LLC

**EPA DOT**

**Fuel Economy and Environment**

Gasoline Vehicle

**Fuel Economy** These estimates reflect new EPA methods beginning with 2017 models.

**25** **MPG**  
combined city/hwy

22 30  
city highway

4.0 gallons per 100 miles

**You spend \$750**  
in fuel costs over 5 years compared to the average new vehicle.

**Annual fuel cost \$1,550**

**Fuel Economy & Greenhouse Gas Rating** (tailpipe only)

1 5 10 Best

**Smog Rating** (tailpipe only)

1 7 10 Best

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 27 MPG and cost \$7,000 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$2.55 per gallon. (MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.)

**fuel economy.gov**  
Calculate personalized estimates and compare vehicles

Smartphone QR Code

**GOVERNMENT 5-STAR SAFETY RATINGS**

**Overall Vehicle Score** ★★★★★

Based on the combined ratings of frontal, side, and rollover. Should ONLY be compared to other vehicles of similar size and weight.

**Frontal Crash** ★★★★★  
Driver Passenger ★★★★★

Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.

**Side Crash** ★★★★★  
Front seat ★★★★★  
Rear seat ★★★★★

Based on the risk of injury in a side impact.

**Rollover** ★★★

Based on the risk of rollover in a single-vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★), with 5 being the highest. Source: National Highway Traffic Safety Administration (NHTSA) [www.safercar.gov](http://www.safercar.gov) or 1-888-327-4236

The safety ratings above are based on Federal Government tests of particular vehicles equipped with certain features and options. The performance of this vehicle may differ.

**PARTS CONTENT INFORMATION**

FOR VEHICLES IN THIS CARLINE:  
**U.S./CANADIAN PARTS CONTENT: 17%**

**MAJOR SOURCES OF FOREIGN PARTS CONTENT:**  
**MEXICO : 72%**

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

**FOR THIS VEHICLE:**  
**FINAL ASSEMBLY POINT:**  
**TOLUCA, MEXICO**

**COUNTRY OF ORIGIN:**  
**ENGINE: UNITED STATES**  
**TRANSMISSION: UNITED STATES**

**VEHICLE PROTECTION**  
A PRODUCT OF FCA US LLC

Ask for Mopar Vehicle Protection for your vehicle. We Build It. We Back It.







**Bid #2**

**Ray Schultens Motors**

**4 2019 Nissan Rogue S**



May 31, 2019

**ATTENTION:**

**Mike Middleton**

**Finance Director**

**WASCO COUNTY**

**2019 Nissan Rogue S AWD**

2019 Nissan Rogue S

All wheel drive (AWD)

Standard Equipment

Optional Equipment: Splash guards, Floor mats with cargo area protector and first aid kit

Vehicle meets/exceeds your requirements:

- 1) Vehicle is a new 2019 Nissan Rogue S
- 2) AWD
- 3) Minimum ground clearance is 8.2 inches (8.4 inches)
- 4) Fuel type: Gas
- 5) Minimum EPA rated mileage is 22 city/30 highway (25 city/32 highway)
- 6) Minimum 50 cu. Ft. cargo space (70 Cu ft. with rear seat folded down)
- 7) Three (3) year warranty (3yr/36,000 mile warranty)
- 8) Same make and model (all Nissan Rogues)
- 9) Color- any stock color
- 10) Delivery available the week of June 10<sup>th</sup>, 2019
- 11) Bid includes all applicable costs (including tax and lic/reg)

MSRP: \$27,765

FLEET PRICE: \$26,476- \$2,250 (rebates) + \$121.13 (tax) = **\$24,347.13 each**

**The price for four vehicles would be \$97,388.52**

CONTACT DAVID LAND AT 541-296-6191 IF YOU HAVE ANY QUESTIONS. THANK YOU!

\*\*\*price valid until 6/12

**Bid #3**

**Columbia Gorge Motors**

**4 2019 Honda CR-V LX**



Mike Middleton &lt;mikem@co.wasco.or.us&gt;

## Building Codes Dept. Bid

2 messages

**bodie** <bodie@columbiagorgemotors.com>  
 Reply-To: bodie <bodie@columbiagorgemotors.com>  
 To: mikem@co.wasco.or.us

Wed, May 29, 2019 at 2:55 PM

Hi Mike,

Thanks for the phone call yesterday. I'll follow up with regarding this bid in case you have questions and please don't hesitate to call me if something comes up and we haven't covered it yet.

I've looked at a number of models we handle here including Toyota Rav4, Honda CR-V and HR-V. Both for your specification requirements and budget.

Our proposal is for 4 new 2019 Honda CR-V LX at 25000.00 per unit.

Factory supplied Warranties: 3 year / 36000 mile New Vehicle Limited Warranty and the 5 year / 60000 mile Limited Power Train Warranty

Columbia Gorge Honda Supplied 2 year / 24000 mile Honda Scheduled Maintenance coverage

Bodie Sanderson  
 Columbia Gorge Motors  
 The Dalles, OR  
 541-980-8972 (C)

**Mike Middleton** <mikem@co.wasco.or.us>  
 To: bodie <bodie@columbiagorgemotors.com>

Wed, May 29, 2019 at 3:10 PM

Bodie,  
 Thank you for the bid. I looked up some specs on line and would like to confirm. This is the AWD version with 8.2 inches of clearance. All the specs check out when I look up the vehicle. I will be creating my recommendation in the afternoon on 6/3/19 and present it to the BOCC at the meeting on Wednesday, June 5th. I will be able to notify the winning bid at that time.



**Mike Middleton | Finance Director**  
**FINANCE**

mikem@co.wasco.or.us | www.co.wasco.or.us  
 541-506-2770 | Fax 541-506-2771  
 511 Washington Street, Suite 207 | The Dalles, OR 97058

[Quoted text hidden]

Hi Mike,

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Columbia Gorge Honda Supplied 2 year / 24000 mile Honda Scheduled Maintenance coverage

Bodie Sanderson  
Columbia Gorge Motors  
The Dalles, OR  
541-980-8972 (C)



# Model Information



2019  
Honda CR-V

## Specifications For:

**Continuously Variable Transmission  
AWD LX**

Engineering <a href="#">back to top</a>	
Engine Type	In-Line 4-Cylinder
Displacement	2356 cc
Horsepower (SAE net)	184 @ 6400 rpm
Torque (SAE net)	180 lb-ft @ 3900 rpm
Bore and Stroke	87.0 mm x 99.1 mm
Compression Ratio	11.1 : 1
Valve Train	16-Valve DOHC i-VTEC®
Fuel Injection	Direct
Electric Parking Brake with Automatic Brake Hold	
Eco Assist™ System	
Active Noise Cancellation™ (ANC)	
Hill Start Assist	

<b>Engineering</b>		<a href="#">back to top</a>
<b>Direct Ignition System with Immobilizer</b>		
<b>Real Time AWD with Intelligent Control System™</b>		
<b>CARB Emissions Rating<sup>1</sup></b>	LEV3-ULEV70	

<sup>1</sup> LEV3-ULEV70 (Ultra-Low-Emission Vehicle) models as certified by the California Air Resources Board (CARB).

<b>Transmission</b>	<a href="#">back to top</a>
<b>Continuously Variable Transmission (CVT) with Sport Mode:</b>	
Ratio Range:	2.645~0.405
Reverse:	1.859~1.265
Final Drive:	5.050

<b>Body/Suspension/Chassis</b>	<a href="#">back to top</a>
<b>MacPherson Strut Front Suspension</b>	
<b>Multi-Link Double Wishbone Rear Suspension</b>	
<b>Variable Ratio Electric Power-Assisted Rack-and-Pinion Steering (EPS)</b>	
<b>Stabilizer Bar (front/rear)</b>	23.0 mm (tubular) / 13.0 mm (solid)
<b>Steering Wheel Turns, Lock-to-Lock</b>	2.3
<b>Steering Ratio</b>	12.30 : 1
<b>Turning Diameter, Curb-to-Curb</b>	37.4
<b>Power-Assisted Ventilated Front Disc/Solid Rear Disc Brakes (front/rear)</b>	11.1 in / 10.2 in
<b>Wheels</b>	17 in Alloy
<b>All-Season Tires</b>	235 / 65 R17 104H
<b>Compact Spare Tire</b>	T155 / 90 D17 112M



Exterior Measurements <a href="#">back to top</a>	
Wheelbase	104.7 in
Length	180.6 in
Height	66.5 in
Width	73.0 in
Track (front/rear)	62.9 in / 63.5 in
Ground Clearance (unladen)	8.2 in
Approach/Departure Angles	20.8° / 24.8°
Curb Weight	3421 lbs
Weight Distribution (front/rear)	58% / 42%
Towing Capacity	1500 lbs

Interior Measurements <a href="#">back to top</a>	
Headroom (front/rear)	40.1 in / 39.2 in
Legroom (front/rear)	41.3 in / 40.4 in
Shoulder Room (front/rear)	57.9 in / 55.6 in
Hiproom (front/rear)	55.1 in / 49.5 in
Cargo Volume (rear seat up/down)	39.2 cu ft / 75.8 cu ft
Passenger Volume	105.9 cu ft
Seating Capacity	5

EPA Mileage Ratings <sup>2</sup> /Fuel <a href="#">back to top</a>
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EPA Mileage Ratings <sup>2</sup> /Fuel		<a href="#">back to top</a>
Continuously Variable Transmission (CVT) (AWD, City/Highway/Combined)	25/31/27	
Fuel Tank Capacity	14.0 gal	
Required Fuel	Regular Unleaded	

<sup>2</sup> Based on 2019 EPA mileage ratings. Use for comparison purposes only. Your mileage will vary depending on how you drive and maintain your vehicle, driving conditions and other factors.

Active Safety		<a href="#">back to top</a>
Vehicle Stability Assist™ (VSA®) with Traction Control <sup>3</sup>		
Anti-Lock Braking System (ABS)		
Electronic Brake Distribution (EBD)		
Brake Assist		
Tire Pressure Monitoring System (TPMS) <sup>4</sup>		
LED Daytime Running Lights (DRL)		
Multi-Angle Rearview Camera <sup>5</sup>	with Guidelines	

<sup>3</sup> VSA is not a substitute for safe driving. It cannot correct the vehicle's course in every situation or compensate for reckless driving. Control of the vehicle always remains with the driver.

<sup>4</sup> For optimal tire wear and performance, tire pressure should be checked regularly with a gauge. Do not rely solely on the monitor system. Please see your Honda dealer for details.

<sup>5</sup> Always visually confirm that it is safe to drive before backing up; the rearview camera display does not provide complete information about all conditions and objects at the rear of your vehicle.

Passive Safety		<a href="#">back to top</a>
Advanced Compatibility Engineering™ (ACE™) Body Structure		
Advanced Front Airbags (i-SRS)		
SmartVent® Front Side Airbags		
Side Curtain Airbags with Rollover Sensor		



## Passive Safety

[back to top](#)

**3-Point Seat Belts at all Seating Positions**

**Front 3-Point Seat Belts with Automatic Tensioning System**

**Lower Anchors and Tethers for Children (LATCH): Lower Anchors (2nd-Row All), Tether Anchors (2nd-Row All)**

**Driver's and Front Passenger's Seat-Belt Reminder**

**Child-Proof Rear Door Locks**

## Exterior Features

[back to top](#)

**Two-Speed Intermittent Windshield Wipers**

**Power Side Mirrors**

**Active Shutter Grille**

**Multi-Reflector Halogen Headlights with Auto-Off**

**Fin-Type Roof-Mounted Antenna**

**Remote Entry System**

**Reverse-Linked Intermittent Rear Window Wiper/Washer with Heated Wiper Zone**

**Body-Colored Roofline Spoiler with Integrated Brake Light**

Black

**Body-Colored Door Handles**

Black

## Comfort & Convenience

[back to top](#)

**Automatic Climate Control System**

**Power Windows with Auto-Up/Down Driver's Window**

**Power Door and Tailgate Locks**

**Cruise Control**



**Comfort & Convenience**[back to top](#)**One-Touch Turn Indicators****Tilt and Telescopic Steering Column****Instrument Panel-Mounted Shifter****Capless Fuel Filler****Multi-Functional Center Console Storage with Sliding Armrest****Sliding Sunvisors****Conversation Mirror with Sunglasses Holder****Beverage Holders (front & rear)****Lockable Glove Compartment****Door-Pocket Storage Bins****Map Lights****Floor Mats****Rear-Seat Center Armrest****Driver-Side Garment Hook****Remote Fuel Filler Door Release****Rear-Seat Heater Ducts****Rear-Window Defroster****Cargo Area Tie-Down Anchors****Cargo Area Lights****Illuminated Steering Wheel-Mounted Controls****Driver's and Front Passenger's Vanity Mirrors**

<b>Seating</b>	<a href="#">back to top</a>
<b>Driver's Seat with 6-Way Manual Adjustment</b>	
<b>Adjustable Front Seat-Belt Anchors</b>	
<b>Easy Fold-Down 60/40 Split Rear Seatback</b>	
<b>Head Restraints at all Seating Positions</b>	

<b>Audio &amp; Connectivity</b>	<a href="#">back to top</a>
<b>160-Watt Audio System with 4 Speakers</b>	
<b>5-Inch Color LCD Screen</b>	
<b>Bluetooth® HandsFreeLink®<sup>14</sup></b>	
<b>Bluetooth® Streaming Audio<sup>14</sup></b>	
<b>Pandora®<sup>15</sup> Compatibility</b>	
<b>Radio Data System (RDS)</b>	
<b>Speed-Sensitive Volume Compensation (SVC)</b>	
<b>1.0-Amp USB Audio Interface<sup>16</sup></b>	Center Console (1 Port)
<b>12-Volt Power Outlets</b>	Front and Center Console

<sup>14</sup> The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc., and any use of such marks by Honda Motor Co., Ltd., is under license.

<sup>15</sup> Pandora, the Pandora logo, and the Pandora trade dress are trademarks or registered trademarks of Pandora Media, Inc. Used with permission. Compatible with select smartphones. See: [www.pandora.com/everywhere/mobile](http://www.pandora.com/everywhere/mobile). Not all devices compatible with USB connection. Your wireless carrier's rate plans apply.

<sup>16</sup> The USB interface is used for playback of MP3, WMA or AAC music files from digital audio players and other USB devices, as well as smartphone data transfer on designated Smartphone/Audio Interface ports. Some USB devices and files may not work. Please see your Honda dealer for details.

<b>Multi-Information Display</b>	<a href="#">back to top</a>
<b>Average Fuel Economy Indicators</b>	
<b>Digital Speedometer</b>	



<b>Multi-Information Display</b>	<a href="#">back to top</a>
<b>Exterior Temperature Indicator</b>	
<b>Instant Fuel Economy Indicator</b>	
<b>Maintenance Minder™ System</b>	
<b>Miles-to-Empty Indicator</b>	
<b>Odometer and Trip Meters (2)</b>	
<b>Shift Lever Position Indicator</b>	

<b>Instrumentation</b>	<a href="#">back to top</a>
<b>12-Volt Battery-Charging System Indicator</b>	
<b>ABS Indicator</b>	
<b>Airbag System Indicator</b>	
<b>Automatic Brake Hold Indicators</b>	
<b>Brake Depress Indicator</b>	
<b>Brake System Indicator</b>	
<b>Coolant Temperature Indicator</b>	
<b>Cruise Control Indicators</b>	
<b>Door-Open Indicator</b>	
<b>ECON Button</b>	
<b>ECON Mode Indicator</b>	
<b>Electric Power Steering (EPS) Indicator</b>	
<b>Fuel Level Indicator</b>	

<b>Instrumentation</b>	<a href="#">back to top</a>
<b>High-Beam Indicator</b>	
<b>Low-Fuel Indicator</b>	
<b>Low-Oil Pressure Indicator</b>	
<b>Low-Tire Pressure Indicator</b>	
<b>Maintenance Minder™ Indicator</b>	
<b>Malfunction Indicator</b>	
<b>Power Reduced Indicator</b>	
<b>Seat-Belt Reminder Indicator</b>	
<b>System Message Indicator</b>	
<b>Tachometer</b>	
<b>Tailgate-Open Indicator</b>	
<b>TPMS Indicator</b>	
<b>Turn Signal/Hazard Indicators</b>	
<b>VSA Off/Engaged/System Indicators</b>	
<b>AWD System Indicator</b>	



## 2019 CR-V 2.4L AWD LX

EXT: MODERN STEEL M.

ENGINE NUMBER: K24W9-

INT: BLACK

### STANDARD EQUIPMENT AT NO EXTRA COST

#### \* TECHNICAL FEATURES \*

- 184hp 2.4-Liter i-VTEC 4-Cyl. Direct-Injection Engine
- All-Wheel Drive System
- Continuously Variable Transmission (CVT)
- 4-Wheel Disc Brakes
- Front MacPherson Strut Suspension
- Rear Multi-Link Suspension
- Electric Power Steering

#### \* SAFETY FEATURES \*

- Driver's and Front Passenger's Airbags
- Driver's and Front Passenger's Side Airbags
- Side Curtain Airbags with Rollover Sensor
- Vehicle Stability Assist (VSA)
- Anti-Lock Braking System (ABS)
- Electronic Brake Distribution (EBD)
- Brake Assist
- Tire Pressure Monitoring System
- LED Daytime Running Lights
- LATCH System for Child Seats

#### \* INTERIOR FEATURES \*

- Audio System with 4 Speakers
- Color LCD Screen and Multi-View Rear Camera

- Bluetooth HandsFreeLink
- USB Audio Interface
- Automatic Climate Control System with Air Filtration System
- Driver's Seat Height Adjustment
- Front Center Console
- Rear Console Vents
- 60/40 Split Fold-Down Rear Seatback
- Driver's Auto Up/Down Window
- Power Windows and Door Locks
- 12-Volt Power Outlets
- Cruise Control
- Electric Parking Brake
- Floor Mats

#### \* EXTERIOR FEATURES \*

- 17" Alloy Wheels
- 235/65 R17 All-Season Tires
- Auto-off Headlights
- Intermittent Windshield Wipers
- Power Door Mirrors
- Tailgate Spoiler
- Remote Entry System
- Capless Fuel Filler

Manufacturer's  
Suggested  
Retail Price

**\$25,750**

Full Tank of Fuel

No C

-Honda Roadside Assistance  
3YR/36K Mile Warranty Term

Destination and Handling

1,0

### TOTAL VEHICLE PRICE

(includes Pre-Delivery Service)

**\$26,795**

License and title fees, state and local taxes and dealer options and accessories are not included in the manufacturer's suggested retail price.

GRIFFITH HONDA  
1800 WEST 6TH ST  
THE DALLES, OR 97058

VIN: 5J6RW6H3XKL001322



PORT OF ENTRY: EAST LIBERTY  
DELIVERY POINT: PORTLAND  
SHIP#:   
ROW/SPACE: 871-005  
TRANS.METHOD: B00 PORTLAND

ORIG. DLR: 208279  
REF.NO: 40533  
HN CODE: HN-9439  
EMISSION: 50 STATE  
CONTROL NO: 374536  
DEALER: 208279





**AFFIDAVIT OF MAILING, POSTING AND SERVICE**

I certify that on May 6<sup>th</sup>, 2019, I caused to be mailed by email to The Dalles Chronicle Legal Notices department a copy of the attached Notice of Public Hearing on the proposed vacation of certain roads and sections of road in Tygh Valley, said notice to be published twice; Saturday, May 11, 2019 and Saturday, May 25, 2019.

I also certify that on May 7<sup>th</sup>, 2019, I caused to be posted a copy of the attached Notice of Public Hearing on the proposed vacation of certain roads and sections of road in Tygh Valley at the Dufur Post Office, Maupin Post Office, Tygh Valley Post Office and the Wamic Post Office. I also posted notice at the following public places:

Near the intersection of St. Charles Avenue and 4<sup>th</sup> Street and at the terminus of Church Avenue, south of 4<sup>th</sup> Street, all in Tygh Valley, Oregon.

I also certify that on May 8<sup>th</sup>, 2019, notice was served of the public hearing on the proposed vacation of certain roads and sections of road in Tygh Valley to the following persons:

Craig Hansen  
PO Box 123  
Tygh Valley, OR 97063


Chad & Tami McDonald  
PO Box 84  
Tygh Valley, OR 97063

Steven & Cindy Flegel  
57580 Leonard Ave  
Tygh Valley, OR 97063

George Nelson  
96566 Wamic Market Road  
Wamic, OR 97063

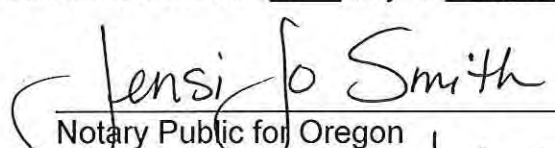
Harold Lindell  
80661 Friend Road  
Dufur, OR 97021

The notice consisted of copies of the attached Notice of Public Hearing, and the map marked Exhibit "A"; and was served by mail to each person found to have interest in the real property abutting the road(s).

  
\_\_\_\_\_  
Arthur Smith  
Public Works Director

Signed and attested before me this 5<sup>th</sup> day of June, 2019



  
\_\_\_\_\_  
Notary Public for Oregon  
My Commission Expires July 27, 2020

## Wasco County Board of Commissioners Appearance Record

[illegible]

DATE:

DATE: June 5, 2019  
Packet: Supplement to Complete Record 921-19-000086-PLN  
Wilson Zone Change Hearing



June 3, 2019

Dear Wasco County Board of Commissioners,

RE: File # 921-18-000086-PLNG: Application for a Comprehensive Plan Amendment, Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I agree with the concerns contained in the Staff Report presented to the Planning Commission on April 2nd and the reasons for denial of the application for a rezone from Forest F-2 (80) to Forest Farm F-F (10). (Page numbers below correspond to that earlier report.)

Attachment A – Staff Recommendation and Planning Commission Options contained the 4 concerns discussed below. The staff took a neutral position.

**Staff concern 1. Conducting forestry operations are not currently impracticable (Goal 4)**

Staff report p. 37 **I was involved in the Transitional Lands Study Area (TLSA) Study which is referred to in the staff report.** It was an extensive long term study (1993-1997) that studied development concerns in northern Wasco County including water availability, fire hazards, conflicts with wildlife, etc. **It did not recommend further development of Seven Mile beyond the existing zoning as it would not be sustainable.** The only rezoning on Seven Mile that resulted was described as “housekeeping” by the Planning Director at the time and included 8 parcels north of Seven Mile Hill Rd. being rezoned as RR-10 from FF-10 to avoid the conditional use review requirement. Page 17 of TLSA Study, Exhibit 1, summarizes the recommendation.

**Forest land including this one was not rezoned due to its value as resource land.** The TLSA Study recommendations integrated future development with resource protection.

**In 2013 there was an application to rezone this property and several adjacent parcels – the majority owned by Ken Thomas and David Wilson (totaling 287 acres and the creation of 22 potential lots) to F-F(10).** p. 6 The application was **denied** by the County Commission after the Planning Department received a letter from **Department of Land Conservation and Development (DLCD) and Oregon Department of Forestry (ODF) in strong opposition to this rezone due to its value as forest land.**

**DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained.** At the County Commission hearing there were also **concerns expressed by the Board of County Commissioners regarding fire safety and water supply.**

**As an application to rezone this property has already been denied, why is this being brought up again?** Nothing has changed. A **precedent was set** when you said “no” to this rezone. **No new valid reasons** have been presented. **Conditions have only gotten worse** with the lowering water supply.

**Irrevocably Committed Exception**

The applicant hasn’t established that the nonresidential uses are impacting the residential uses nearby. Farm and Forest Act protects accepted farm and forest practices. **Adding more residences increases**



any conflicts with accepted forest practices which are protected by Oregon law under the Farm and Forest Practices Act. The staff report (p. 19) refers to fire risk from houses, fencing, and spraying conflicts – no one sprays for insects around here.

**On p.19 refers to the area being surrounded by existing residential development on 3 sides. There is only residential development on 2 sides.**

The DLCD letter addressed the irrevocably committed exception:

OAR 660-004-0028(6)(c) prohibits impacts from rural residential uses approved pursuant to the statewide land use goals from being used to justify a committed exception to nearby property. Where a county decision relies in part on impacts from nearby residential uses to conclude that the resource lands are irrevocably committed to nonresource use, the findings must establish that those conflicts do not arise from residential areas that were approved pursuant to statewide planning goal exceptions. *Friends of Yamhill County v. Yamhill County*, 38 Or LUBA 62 (2006).

**DLCD said it was their understanding that the nearby residential development relied upon by the applicant was located in approved exception areas. Therefore this development is not available to consider and can't be used to determine that the property is irrevocably committed to other uses.**

#### **Physically Developed Exception**

**Staff report p. 11 Refers to the two abandoned buildings in the center of the property The old house as unusable in its current condition. It is dilapidated and missing part of an exterior wall and some windows, and has no foundation. Using the old house as a dwelling is not an allowed use since he has a replacement dwelling. It was abandoned when the replacement dwelling was built but was never torn down although it should have been. There is another old metal outbuilding which is also unusable but has also never been torn down. This outbuilding is missing its roof and appears to be falling down. There is very little physical development on the property.**

Both buildings are visible from the road when you drive by the property. Neither of these buildings are in the photos submitted to the Planning Commission which would have shown their poor condition.

According to the staff report, p. 12 the land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

In its letter, DLCD said that a local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal (Physically developed exception OAR 660-004-0025 (1). According to longstanding case law from the Land Use Board of Appeals (LUBA):

#### **According to LUBA:**

**"The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded. Uses established in accordance with these goals cannot be used to justify such an exception" *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).**



A local government may not assume that the entire parcel or ownership occupied by an existing dwelling or road is physically developed so that it is not available for uses allowed under the goals, *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 5-8 (1994).

The staff report, p. 23 also does not support a physically developed exception:

p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.

This property has a long history of agricultural use and just because he doesn't use most of it as forest land is irrelevant. He could have planted trees. Once forest land is gone, it's gone forever.

**84% of wildfires are human caused** (Proceedings of the National Academy of Sciences, February 2017).

**According to ODF, introducing more development as a way to guard against wildfire (residential buffer argument) doesn't make sense.** Fire often originates from residential areas and fires that threaten homes and property routinely receive fire fighting resources that would otherwise be used to protect forest land. The position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through and spot over right-of-way areas. Introducing additional development just pushes the urban-wildland fire interface more deeply into private forests to the detriment of commercial forest management while increasing the risk and costs of fire. They strongly encouraged the county to reject this argument.

DLCD said they did not believe that the subject property was either physically developed or irrevocably committed. They were concerned that the applicant's contentions regarding wildfire were misplaced and could lead to a dangerous precedent. They recommended that the existing plan and zone designations be retained.

**Residential buffer idea is absurd. All forest land is bordered by something, which makes the argument that there is already development moot. If you are allowing development because it is next to development, where does it end? Using the residential buffer argument logic would eliminate all forest land.**

**The conversion of this property would result in further encroachment of residential use into resource zones. The next property owner will want to do the same thing and how do you deny that? You could be setting a precedent. Could the same applicant use this rezone as a reason to rezone his other 69 acres? p. 12 The applicant owns 69 adjoining acres of forest land for a total of 109 acres. He could use the exact same arguments to rezone that if you allow this. How could you deny it if you allow this?**

Why hasn't Ken Thomas weighed in on this? As adjacent property owner, is he planning to apply for a rezone next if this is approved?

Everyone should have understood their zoning when they bought their property, including the applicant.

More residences mean more fire risk, less water supply, less forest land, and less wildlife habitat.



The soils, slope and other information indicate this property is capable of being used for commercial forest uses. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

p.42 The Comprehensive Plan definition of the purpose of the Farm Forest designation is that it is limited to Class 6 or 7 soils, which are not on this parcel at all.

**P. 42 The soil types (Class 4) on this property support commercial timber.** At 57.2 cubic feet per acre/per year it significantly exceeds the requirement for forestry use lands to exceed 20 cubic feet per acre per year.

The surrounding properties are tree covered. **The fact that the current owner is not using most of this property for forest purposes and hasn't replanted the open field (or let it grow back naturally) doesn't make it less valuable as forest land.**

The area is not irrevocably committed to residential use. At the April 2<sup>nd</sup> meeting of the Planning Commission it was stated that this is the only surrounding F-2 property on the road and is surrounded on 3 sides by residential or potentially residential development. This is a misleading statement as the most of the west side and all of the south side are zoned F-2.

There is a 16 acre lot to the west that has split zoning with the upper north part FF-10 and the rest F-2. To the west of that lot is commercial forest land that stretches almost a mile west. To the south of the Wilson property is a 1,100 acre tract of timberland under one ownership with more forest land beyond that.

According to the staff report, p. 12 The land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

The staff report, p. 23 also does not support a physically developed exception:

p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.

**Staff concern 2. More residences would result in the loss of more wildlife habitat (Goal 5)**

There would be the loss of pine oak habitat. This is sensitive wildlife habitat and low elevation big game winter range. The winter range used to extend all the way to the Columbia River.

**Staff concern 3. The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7)**

If a fire starts in this area, it will spread to the adjoining forest lands. It takes 60 to 80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Dept. of Forestry. Response time is slow due to terrain and distance. Fire risk and intensity have increased.

If a fire from this property headed towards our property (which is not in a fire district) it would be potentially unstoppable due to the terrain and lack of road access. The last time there was a fire near us

it took an hour for the Department of Forestry to arrive (without water). We and the neighbors put out the fire with shovels and the help of a couple of Mosier fire volunteers. It was a human caused fire.

p. 37 and 43 Due to concerns related to public safety and welfare in this area, the request should be denied. New residences increase fire risk and Seven Mile Hill Rd. serves as a buffer.

**Staff concern 4. The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11)**

Water issues are increasing in the area. The neighbors (Morgans) just up the road (about 780 feet away) had their well drop 50 feet between January and March and go dry.

p. 42 There is a concern with lowering water supply and general fire risk.

p.43 There has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years (2 foot per year decline, p.30) according to Robert Wood, Watermaster.

In regards to housing, on the County GIS map you can see property ownership. Many houses and property are purchased as second homes, vacation homes, and investment properties by well-off people living out of the area. **The demand is unlimited.** The Wasco County 2040 survey shows that county residents would like development to occur near areas with services. The choice is higher density vs. sprawl onto resource lands. Higher density is the better solution.

As an **application to rezone this property has already been denied, why is this being brought up again?** Nothing has changed. A **precedent was set** when you said "no" to this rezone. **No new valid reasons** have been presented. **Conditions have only gotten worse** with the lowering water supply.

As it only takes one criterion not being met to recommend denial of the request, this request should be denied.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040





# Oregon

John A. Kitzhaber, MD, Governor

## Department of Land Conservation and Development

Bend RSC, Millpoint Building  
650 SW Columbia St, Ste 7100

(541) 322-2032

www.lcd.state.or.us

January 22, 2014

John Roberts, Director  
Wasco County Planning Department  
2705 E 2<sup>nd</sup> Street  
The Dalles, OR 97058

RE: Local File PLALEG-13-08-0002  
DLCD File: 001-13

Mr. Roberts:

This letter includes the joint comments of the Oregon Department of Forestry (ODF) and the Oregon Department of Land Conservation and Development (DLCD). Both departments would like to thank Wasco County for the opportunity to review and comment on the land use proposal referenced above. The subject proposal seeks to take a "physically developed" and "irrevocably committed" exception pursuant to OAR 660-004-0025 & 0028 to statewide planning goal 4 (Forest Lands). If successful, the proposal would convert about 287 acres from a Forest Plan designation and F2 (80) Zoning district to a Farm-Forest Plan designation and F-F(10) district.

It is our understanding that the subject property is composed of eight tax lots and five legal parcels. Two of the five legal parcels in common ownership are a portion of a much larger contiguous forest tract. Five homes are present. It is not clear to us whether the existing homes have been approved under state and local provisions implementing Goal 4 or whether they pre-exist modern planning and zoning programs.

Our initial observation is that the subject property appears capable to be managed as forest land and is not an obvious candidate for redesignation to provide for rural residential development. Our comments and concerns are as follows.

### ***Physically Developed Exception – OAR 660-004-0025***

A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. OAR 660-004-0025(1). Longstanding case law from the Land Use Board of Appeals (LUBA) provides additional guidance:



## Oregon Department of Forestry

Salem Headquarters

2600 State Street

Salem Oregon 97310

(503) 945-7200





- “ The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded. Uses established in accordance with the goals cannot be used to justify such an exception.” *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).
- “ A local government may not assume that the entire parcel or ownership occupied by an existing dwelling or road is physically developed so that it is not available for uses allowed under the goals”. *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994).

Based on our understanding, the subject property does not qualify as being “physically developed” because only a handful of homes and some minimum road and spring improvements exist, all of which may have been approved under forestland requirements implementing Goal 4.

***Irrevocably Committed Exception – OAR 660-004-0028***

A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable. OAR 660-004-0028(1).

Our review of the materials submitted by the applicant shows that proximity to existing rural residential areas is the principle argument offered to explain why the subject property is deserving of an irrevocably committed exception. According to the Land Use Board of Appeals:

- “ OAR 660-004-0028(6)(c) prohibits impacts from rural residential uses approved pursuant to the statewide land use goals from being used to justify a committed exception for nearby property. Where a county decision relies in part on impacts from nearby residential uses to conclude that the resource lands are irrevocably committed to nonresource use, the findings must establish that those conflicts do not arise from residential areas that were approved pursuant to statewide planning goal exceptions.” *Friends of Yamhill County v. Yamhill County*, 38 Or LUBA 62 (2006)

It is our understanding that the nearby residential development relied upon by the applicant is located in approved exception areas. Therefore, this development is not available to consider and can not be used to determine the subject property is irrevocably committed to other uses.

*Wildfire*

The applicant's material includes detailed discussions on wildfire and suggests that allowing the property to convert to a rural residential scenario would help to better manage fire risks. The notion of guarding against wildfire by introducing additional development does not seem reasonable to us. As the applicant's material points out, fire often originates from residential areas and fire events that threaten homes and property routinely receive fire fighting resources that would otherwise be devoted to protecting productive forest land.

Furthermore, the position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through or spot over right-of-way areas.

Taken together, introducing additional development just pushes the urban-wildland fire interface more deeply into private forests to the detriment of commercial forest management while increasing risk and costs of fire. We strongly encourage the county to reject this argument.

*Conclusion*

As our comments indicate we do not believe the subject property is either physically developed or irrevocably committed. Furthermore, we are concerned that the applicant's contentions regarding wildfire are misplaced and could lead to a dangerous precedent. We recommend that the existing plan and zone designations be retained.

Again, thank you for this opportunity to comment. We request that this letter be entered into the record of these proceedings and that we receive a copy of the decision. If additional information is provided at the hearing, we ask that the hearing be continued, pursuant to ORS 197.763(4)(b), to allow us time to review the new information and respond if necessary.

Respectfully,



Jon Jinings  
Community Services Specialist  
Community Services Division  
Dept of Land Conservation & Development



John Tokarczyk  
Policy Analyst  
Forest Resources Planning  
Oregon Dept of Forestry

Cc: Katherine Daniels, DLCD  
Scott Edelman, DLCD



Submitted via email – June 1, 2019

May 27, 2019

Dear Wasco County Commissioners,

I have the following concerns regarding the Wilson application:

Aquifers in the area are declining at a rate of about 2 feet a year according to Watermaster Robert Wood. A neighbor reported that their well had dropped 50 feet between January and March of this year. There is widespread concern in the area about the water table and the water demands from new residences. As a result of the excessive number of lots created north of Seven Mile Hill Road in the early 1900s, there is already a significant demand on the water resources there.

A recent PBS report on wildfire stated that it is irresponsible to continue residential development in high fire risk zones and high wind zones, citing Paradise, California as a perfect example. "The Oregon Department of Forestry (ODF) has identified the Seven Mile Hill area as one of particularly high fire risk during fire season and has repeatedly identified residential and associated buildings as significant fire hazards." ODF has also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost ." (Beitzing Record, page 230.)

It has been noted that the soil type has been designated as a Class 4, which is very capable of supporting commercial forestry. "The Comprehensive Plan definition of the purpose of the Forest-Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all."

Staff report to Planning Commission, Denial Finding, p. 20:

"Based on current composition of the subject parcel as being predominately open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber... The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres... The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this property could practicably be used for forest uses per OAR 660-004-0028 (3)."

During the 1970s and earlier, this property was used to grow 3 cuttings of hay per year. It was known as the Decker Ranch. The west part of the property in front of the log house, where there has been no mowing, is tree covered now.

The reason that there are small parcels on the south side of Seven Mile Hill Road is that most were pre-existing at the time of the Transitional Lands Study Area (TLSA) Study.

Staff Report to Planning Commission, Denial Finding, p. 37 – p. 38:

"A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area." "This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established."

Submitted via email – June 1, 2019

"This area... has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire."

This area is part of the Big Game Winter Range and residential development would have a negative impact on this use and the wildlife habitat there.

Staff Report to Planning Commission, Denial Finding, p. 33:

"This application fails to meet Goal 4 requirements and does not adequately address LDC administrative rule requirements for "built" and/or "committed" exceptions. The proposal does not comply with Goal 4."

At the April 2<sup>nd</sup> Planning Commission hearing, it was stated that it only takes one criterion not being met to recommend denial of the request. In my opinion, several of the criterion have not been met which should result in a denial of the application.

I am very concerned about the fact that the Planning Department Staff Report that was presented to the Wasco County Planning Commission was much more complete than the redacted version of the Staff Report that was given to the Wasco County Commissioners. The Planning Commission version of the Staff Report included much information regarding valid reasons for denying the Wilson application, whereas none of these reasons for denial was even included in the redacted version of the Staff Report given to the County Commissioners. Why do these Staff Reports differ?

To make an informed decision about a precedent-setting Zone change from a Forest Resource Zone to Residential designation, the Commissioners absolutely need to know ALL the Staff's pertinent findings for a denial of the application, which has been entirely excluded from the Commissioners version of this Report. This omission is remiss at best and all the denial findings should immediately be given to you, the County Commissioners, before you make any decision on the Wilson application. Thank you for your attention.

Sincerely,

Jill Barker  
3375 Vensel Rd./P.O. Box 572  
Mosier, Oregon 97040



# Oregon

John A. Kitzhaber, MD, Governor

## Department of Land Conservation and Development

Bend RSC, Millpoint Building  
650 SW Columbia St, Ste 7100  
(541) 322-2032  
www.lcd.state.or.us

January 22, 2014

John Roberts, Director  
Wasco County Planning Department  
2705 E 2<sup>nd</sup> Street  
The Dalles, OR 97058

RE: Local File PLALEG-13-08-0002  
DLCD File: 001-13

Mr. Roberts:

This letter includes the joint comments of the Oregon Department of Forestry (ODF) and the Oregon Department of Land Conservation and Development (DLCD). Both departments would like to thank Wasco County for the opportunity to review and comment on the land use proposal referenced above. The subject proposal seeks to take a “physically developed” and “irrevocably committed” exception pursuant to OAR 660-004-0025 & 0028 to statewide planning goal 4 (Forest Lands). If successful, the proposal would convert about 287 acres from a Forest Plan designation and F2 (80) Zoning district to a Farm-Forest Plan designation and F-F(10) district.

It is our understanding that the subject property is composed of eight tax lots and five legal parcels. Two of the five legal parcels in common ownership are a portion of a much larger contiguous forest tract. Five homes are present. It is not clear to us whether the existing homes have been approved under state and local provisions implementing Goal 4 or whether they pre-exist modern planning and zoning programs.

Our initial observation is that the subject property appears capable to be managed as forest land and is not an obvious candidate for redesignation to provide for rural residential development. Our comments and concerns are as follows.

### ***Physically Developed Exception – OAR 660-004-0025***

A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. OAR 660-004-0025(1). Longstanding case law from the Land Use Board of Appeals (LUBA) provides additional guidance:



## Oregon Department of Forestry

Salem Headquarters  
2600 State Street  
Salem Oregon 97310  
(503) 945-7200





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- “ The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded. Uses established in accordance with the goals cannot be used to justify such an exception.” *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).
- “ A local government may not assume that the entire parcel or ownership occupied by an existing dwelling or road is physically developed so that it is not available for uses allowed under the goals”. *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508 (1994).

Based on our understanding, the subject property does not qualify as being “physically developed” because only a handful of homes and some minimum road and spring improvements exist, all of which may have been approved under forestland requirements implementing Goal 4.

***Irrevocably Committed Exception – OAR 660-004-0028***

A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable. OAR 660-004-0028(1).

Our review of the materials submitted by the applicant shows that proximity to existing rural residential areas is the principle argument offered to explain why the subject property is deserving of an irrevocably committed exception. According to the Land Use Board of Appeals:

- “ OAR 660-004-0028(6)(c) prohibits impacts from rural residential uses approved pursuant to the statewide land use goals from being used to justify a committed exception for nearby property. Where a county decision relies in part on impacts from nearby residential uses to conclude that the resource lands are irrevocably committed to nonresource use, the findings must establish that those conflicts do not arise from residential areas that were approved pursuant to statewide planning goal exceptions.” *Friends of Yamhill County v. Yamhill County*, 38 Or LUBA 62 (2006)

It is our understanding that the nearby residential development relied upon by the applicant is located in approved exception areas. Therefore, this development is not available to consider and can not be used to determine the subject property is irrevocably committed to other uses.



***Wildfire***

The applicant's material includes detailed discussions on wildfire and suggests that allowing the property to convert to a rural residential scenario would help to better manage fire risks. The notion of guarding against wildfire by introducing additional development does not seem reasonable to us. As the applicant's material points out, fire often originates from residential areas and fire events that threaten homes and property routinely receive fire fighting resources that would otherwise be devoted to protecting productive forest land. Furthermore, the position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through or spot over right-of-way areas. Taken together, introducing additional development just pushes the urban-wildland fire interface more deeply into private forests to the detriment of commercial forest management while increasing risk and costs of fire. We strongly encourage the county to reject this argument.

***Conclusion***

As our comments indicate we do not believe the subject property is either physically developed or irrevocably committed. Furthermore, we are concerned that the applicant's contentions regarding wildfire are misplaced and could lead to a dangerous precedent. We recommend that the existing plan and zone designations be retained.

Again, thank you for this opportunity to comment. We request that this letter be entered into the record of these proceedings and that we receive a copy of the decision. If additional information is provided at the hearing, we ask that the hearing be continued, pursuant to ORS 197.763(4)(b), to allow us time to review the new information and respond if necessary.

Respectfully,



Jon Jinings  
Community Services Specialist  
Community Services Division  
Dept of Land Conservation & Development



John Tokarczyk  
Policy Analyst  
Forest Resources Planning  
Oregon Dept of Forestry

Cc: Katherine Daniels, DLCD  
Scott Edelman, DLCD

- “ The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded. Uses established in accordance with the goals cannot be used to justify such an exception.” *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).
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Furthermore, the position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through or spot over right-of-way areas.

Taken together, introducing additional development just pushes the urban-wildland fire interface more deeply into private forests to the detriment of commercial forest management while increasing risk and costs of fire. We strongly encourage the county to reject this argument.

***Conclusion***

As our comments indicate we do not believe the subject property is either physically developed or irrevocably committed. Furthermore, we are concerned that the applicant's contentions regarding wildfire are misplaced and could lead to a dangerous precedent. We recommend that the existing plan and zone designations be retained.

Again, thank you for this opportunity to comment. We request that this letter be entered into the record of these proceedings and that we receive a copy of the decision. If additional information is provided at the hearing, we ask that the hearing be continued, pursuant to ORS 197.763(4)(b), to allow us time to review the new information and respond if necessary.

Respectfully,



Jon Jinings  
Community Services Specialist  
Community Services Division  
Dept of Land Conservation & Development



John Tokarczyk  
Policy Analyst  
Forest Resources Planning  
Oregon Dept of Forestry

Cc: Katherine Daniels, DLCD  
Scott Edelman, DLCD

June 3, 2019

Dear Wasco County Board of Commissioners,

RE: File # 921-18-000086-PLNG: Application for a Comprehensive Plan Amendment, Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I agree with the concerns contained in the Staff Report presented to the Planning Commission on April 2nd and the reasons for denial of the application for a rezone from Forest F-2 (80) to Forest Farm F-F (10). (Page numbers below correspond to that earlier report.)

Attachment A – Staff Recommendation and Planning Commission Options contained the 4 concerns discussed below. The staff took a neutral position.

**Staff concern 1. Conducting forestry operations are not currently impracticable (Goal 4)**

Staff report p. 37 **I was involved in the Transitional Lands Study Area (TLSA) Study** which is **referred to in the staff report**. It was an extensive long term study (1993-1997) that studied development concerns in northern Wasco County including water availability, fire hazards, conflicts with wildlife, etc. **It did not recommend further development of Seven Mile beyond the existing zoning as it would not be sustainable.** The only rezoning on Seven Mile that resulted was described as “housekeeping” by the Planning Director at the time and included 8 parcels north of Seven Mile Hill Rd. being rezoned as RR-10 from FF-10 to avoid the conditional use review requirement. Page 17 of TLSA Study, Exhibit 1, summarizes the recommendation.

**Forest land including this one was not rezoned due to its value as resource land.** The TLSA Study recommendations integrated future development with resource protection.

In **2013 there was an application to rezone this property and several adjacent parcels – the majority owned by Ken Thomas and David Wilson** (totaling 287 acres and the creation of 22 potential lots) **to F-F(10)**. p. 6 The application was **denied** by the County Commission after the Planning Department received a letter from **Department of Land Conservation and Development (DLCD) and Oregon Department of Forestry (ODF) in strong opposition to this rezone due to its value as forest land.**

**DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained.** **At** the County Commission hearing there were also **concerns expressed** by the Board of County Commissioners **regarding fire safety and water supply.**

As an **application to rezone this property has already been denied, why is this being brought up again?** Nothing has changed. A **precedent was set** when you said “no” to this rezone. **No new valid reasons** have been presented. **Conditions have only gotten worse** with the lowering water supply.

**Irrevocably Committed Exception**

The applicant hasn’t established that the nonresidential uses are impacting the residential uses nearby. Farm and Forest Act protects accepted farm and forest practices. **Adding more residences increases**



**any conflicts with accepted forest practices which are protected by Oregon law under the Farm and Forest Practices Act.** The staff report (p. 19) refers to fire risk from houses, fencing, and spraying conflicts – no one sprays for insects around here.

**On p.19 refers to the area being surrounded by existing residential development on 3 sides. There is only residential development on 2 sides.**

The DLCD letter addressed the irrevocably committed exception:

OAR 660-004-0028(6)(c) prohibits impacts from rural residential uses approved pursuant to the statewide land use goals from being used to justify a committed exception to nearby property. Where a county decision relies in part on impacts from nearby residential uses to conclude that the resource lands are irrevocably committed to nonresource use, the findings must establish that those conflicts do not arise from residential areas that were approved pursuant to statewide planning goal exceptions. *Friends of Yamhill County v. Yamhill County*, 38 Or LUBA 62 (2006).

**DLCD said** it was their understanding that **the nearby residential development relied upon by the applicant was located in approved exception areas. Therefore this development** is not available to consider and **can't be used to determine that the property is irrevocably committed** to other uses.

### **Physically Developed Exception**

**Staff report p. 11** Refers to **the two abandoned buildings** in the center of the property The old house as unusable in its current condition. It is dilapidated and missing part of an exterior wall and some windows, and has no foundation. **Using the old house as a dwelling is not an allowed use since he has a replacement dwelling.** It was abandoned when the replacement dwelling was built but was never torn down although it should have been. **There is another old metal outbuilding which is also unusable but has also never been torn down. This outbuilding is missing its roof and appears to be falling down.** There is very little physical development on the property.

Both buildings are visible from the road when you drive by the property. Neither of these buildings are in the photos submitted to the Planning Commission which would have shown their poor condition.

According to the staff report, p. 12 the land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

In its letter, DLCD said that a local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal (Physically developed exception OAR 660-004-0025 (1). According to longstanding case law from the Land Use Board of Appeals (LUBA):

### **According to LUBA:**

**"The standards for approving a physically developed exception to Statewide Planning Goals 3 and 4 are demanding. The county must find that the property has been physically developed to such an extent that all Goal 3 or 4 resource uses are precluded.** Uses established in accordance with these goals cannot be used to justify such an exception" *Sandgren v. Clackamas County*, 29 Or LUBA 454 (1995).

A local government may not assume that the entire parcel or ownership occupied by an existing dwelling or road is physically developed so that it is not available for uses allowed under the goals, *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 5-8 (1994).

The staff report, p. 23 also does not support a physically developed exception:

p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.

This property has a long history of agricultural use and just because he doesn't use most of it as forest land is irrelevant. He could have planted trees. Once forest land is gone, it's gone forever.

**84% of wildfires are human caused** (Proceedings of the National Academy of Sciences, February 2017).

**According to ODF, introducing more development as a way to guard against wildfire (residential buffer argument) doesn't make sense.** Fire often originates from residential areas and **fires that threaten homes** and property routinely **receive fire fighting resources that would otherwise be used to protect forest land**. The position that the BPA corridor would provide a buffer from fire is specious at best, a fast moving fire can easily burn through and spot over right-of-way areas. Introducing additional development just **pushes the urban-wildland fire interface more deeply into private forests** to the **detriment of commercial forest management** while **increasing the risk and costs of fire**. They strongly encouraged the county to reject this argument.

DLCD said they did not believe that the subject property was either physically developed or irrevocably committed. They were concerned that the applicant's contentions regarding wildfire were misplaced and could lead to a dangerous precedent. They recommended that the existing plan and zone designations be retained.

**Residential buffer idea is absurd. All forest land is bordered by something, which makes the argument that there is already development moot. If you are allowing development because it is next to development, where does it end? Using the residential buffer argument logic would eliminate all forest land.**

**The conversion of this property would result in further encroachment of residential use into resource zones. The next property owner will want to do the same thing and how do you deny that?** You could be setting a precedent. Could the same applicant use this rezone as a reason to rezone his other 69 acres? **p. 12 The applicant owns 69 adjoining acres of forest land for a total of 109 acres. He could use the exact same arguments to rezone that if you allow this. How could you deny it if you allow this?**

Why hasn't Ken Thomas weighed in on this? As adjacent property owner, is he planning to apply for a rezone next if this is approved?

Everyone should have understood their zoning when they bought their property, including the applicant.

More residences mean more fire risk, less water supply, less forest land, and less wildlife habitat.

The soils, slope and other information indicate this property is capable of being used for commercial forest uses. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

p.42 The Comprehensive Plan definition of the purpose of the Farm Forest designation is that it is limited to Class 6 or 7 soils, which are not on this parcel at all.

**P. 42 The soil types (Class 4) on this property support commercial timber.** At 57.2 cubic feet per acre/per year it significantly exceeds the requirement for forestry use lands to exceed 20 cubic feet per acre per year.

The surrounding properties are tree covered. **The fact that the current owner is not using most of this property for forest purposes and hasn't replanted the open field (or let it grow back naturally) doesn't make it less valuable as forest land.**

The area is not irrevocably committed to residential use. At the April 2<sup>nd</sup> meeting of the Planning Commission it was stated that this is the only surrounding F-2 property on the road and is surrounded on 3 sides by residential or potentially residential development. This is a misleading statement as the most of the west side and all of the south side are zoned F-2.

There is a 16 acre lot to the west that has split zoning with the upper north part FF-10 and the rest F-2. To the west of that lot is commercial forest land that stretches almost a mile west. To the south of the Wilson property is a 1,100 acre tract of timberland under one ownership with more forest land beyond that.

According to the staff report, p. 12 The land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

The staff report, p. 23 also does not support a physically developed exception:

p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.

**Staff concern 2. More residences would result in the loss of more wildlife habitat (Goal 5)**

There would be the loss of pine oak habitat. This is sensitive wildlife habitat and low elevation big game winter range. The winter range used to extend all the way to the Columbia River.

**Staff concern 3. The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7)**

If a fire starts in this area, it will spread to the adjoining forest lands. It takes 60 to 80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Dept. of Forestry. Response time is slow due to terrain and distance. Fire risk and intensity have increased.

If a fire from this property headed towards our property (which is not in a fire district) it would be potentially unstoppable due to the terrain and lack of road access. The last time there was a fire near us

it took an hour for the Department of Forestry to arrive (without water). We and the neighbors put out the fire with shovels and the help of a couple of Mosier fire volunteers. It was a human caused fire.

p. 37 and 43 Due to concerns related to public safety and welfare in this area, the request should be denied. New residences increase fire risk and Seven Mile Hill Rd. serves as a buffer.

**Staff concern 4. The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11)**

Water issues are increasing in the area. The neighbors (Morgans) just up the road (about 780 feet away) had their well drop 50 feet between January and March and go dry.

p. 42 There is a concern with lowering water supply and general fire risk.

p.43 There has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years (2 foot per year decline, p.30) according to Robert Wood, Watermaster.

In regards to housing, on the County GIS map you can see property ownership. Many houses and property are purchased as second homes, vacation homes, and investment properties by well-off people living out of the area. **The demand is unlimited.** The Wasco County 2040 survey shows that county residents would like development to occur near areas with services. The choice is higher density vs. sprawl onto resource lands. Higher density is the better solution.

As an **application to rezone this property has already been denied, why is this being brought up again?** Nothing has changed. A **precedent was set** when you said “no” to this rezone. **No new valid reasons** have been presented. **Conditions have only gotten worse** with the lowering water supply.

As it only takes one criterion not being met to recommend denial of the request, this request should be denied.

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040





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**BEFORE THE LAND USE BOARD OF APPEALS  
OF THE STATE OF OREGON**

**WASCO COUNTY  
PLANNING DEPARTMENT  
JUN 28 2019  
RECEIVED**

SHEILA DOOLEY, an individual,  
AND JILL BARKER, an individual

Petitioner,

vs.

WASCO COUNTY

Respondent.

LUBA No. \_\_\_\_\_

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**NOTICE OF INTENT TO APPEAL**

**I.**

Notice is hereby given that petitioner intends to appeal the land use decision of respondent entitled File # 921-18-000086-PLNG, which became final on June 6, 2019, and which involved a parcel located along and south of Seven Mile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; Tax Lot number 2N 12E 22 4400, Account number 664, 40.16 acres. The decision approved: Comprehensive Plan Map Amendment Changing a designated "Forest" to "Forest Farm;" Exception to Statewide Planning Goal 4; and, Zone Change: change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10) Forest-Farm.

**II.**

Petitioners Sheila Dooley and Jill Barker are represented by Mike Sargetakis, Oxbow Law Group, LLC, PO Box 14685, Portland, OR 97293, Telephone: 503-694-9362.

Respondent, Wasco County, has its mailing address and telephone number: 2705 East Second Street, The Dalles, OR 97058, Telephone: 541-506-2560, and has, as its legal counsel: Brad Timmons, 3591 Klindt Drive #220, The Dalles, OR 97058 and Telephone: 541-296-9900 .

### III.

Applicant, David Wilson, was represented in the proceeding below by: William H. Sumerfield, Phillips Reynier Sumerfield & Cline LLP, 718 State Street, PO Box 758, Hood River, OR 97031, Telephone 541-386-4264.


### IV.

Other persons mailed written notice of the land use decision by Wasco County, as indicated by its records in this matter, include: Cynthia Bakos, 6925 Seven Mile Hill Road, The Dalles, OR 97058; Steven Bleiler 3719 SE Franklin St, Portland OR 97202; Dennis and Mary Davis, 422 W 16<sup>th</sup> St, The Dalles, OR 97058; Larry and Janet Duarte 6935 Seven Mile Hill Road, The Dalles, OR 97058; Robert Dys 6910 Seven Mile Hill Road, The Dalles, OR 97058; James and Susan Forsman, 2305 Richard Road, The Dalles, OR 97058; Alan and Bonnie Hare 2435 Seven Mile Hill Road, The Dalles, OR 97058; Heidi and James Juenger 2290 Richard Road, The Dalles, OR 97058; Bradford Lynch 7061 Seven Mile Hill Road, The Dalles, OR 97058; Donald Mc Mullen 2240 Richard Road, The Dalles, OR 97058; Richard Murray 2175 Ridge Road, The Dalles, OR 97058; John Olmstead 2817 NE 20<sup>th</sup> Street, Portland, OR 97212; David Rogers 6855 Seven Mile Hill Road, The Dalles, OR 97058; Larry and Lucille Sohler 1767 12<sup>th</sup> St #372, Hood River, OR 97031; Kenneth Thomas 436 Mc Kinley St SE, Salem, OR 97302; Peter Vanek 6885 Seven Mile Hill Road, The Dalles, OR 97058; Richard and Elizabeth Wagner 5104 SW 42<sup>nd</sup> Ave, Portland, OR 97221; Jolene Wilson 7100 Seven Mile Hill Road, The Dalles, OR 97058; and, Dawn Baird 950 Pomona W #169, The Dalles, OR 97058.

NOTICE:

Anyone designated in paragraph III of this Notice who desires to participate as a party in this case before the Land Use Board of Appeals must file with the Board a Motion to Intervene in this proceeding as required by OAR 661-010-0050.

Dated this 25<sup>th</sup> day of June, 2019


  
Mike J. Sargetakis, OSB# 174607  
Of Attorneys for Petitioners



## CERTIFICATE OF SERVICE

I hereby certify that on June 25, 2019, I served a true and correct copy of this Notice of Intent to Appeal on all persons listed in Paragraphs II-IV of this Notice pursuant to OAR 661-010-0015(2) by first class mail.

Dated this 25<sup>th</sup> day of June, 2019



---

Mike J. Sargetakis, OSB# 174607  
Of Attorneys for Petitioners



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

**BOARD OF COMMISSIONERS  
NOTICE OF DECISION**

FILE # 921-18-000086-PLNG

**DECISION DATE:** June 5, 2019

**NOTIFICATION DATE:** June 6, 2019

**APPEAL DEADLINE:** June 27, 2019, 4:00 PM

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**DECISION:**

Approval

**APPLICANT/OWNER:**

David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY  
LOCATION:**

The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:**

F-2(80), Forest Zone

**ENVIRONMENTAL**

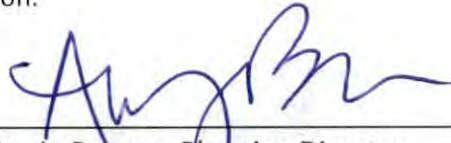
**PROTECTION DISTRICT:**

EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Time Limits and Appeal Information
- B. Maps
- C. Staff Report
- D. Exhibits

SIGNED THIS June 6, 2019 at The Dalles, Oregon.



Angie Brewer, Planning Director  
Wasco County Planning

State of Oregon  
County of Wasco

Signed or attested before me on June 6, 2019, by Angie Brewer, Planning Director.



Jensi Jo Smith  
Notary Public - State of Oregon



## ATTACHMENT A – TIME LIMITS AND APPEAL INFORMATION

NOTE: Any new land uses or structural development such as residences; garages, workshops or other accessory structures; or additions or alterations not included in the approved application or site plan will require a new application and review.

**NOTICE TO MORTGAGEE, LIENHOLDER, VENDOR OR SELLER:** Oregon Revised Statutes, Chapter 215, requires that if you receive this notice, it must promptly be forwarded to the purchaser.

### APPEAL PROCESS:

The decision date for this land use review was **June 5, 2019** and the decision was mailed on **June 6, 2019**. The decision of the *Board of Commissioners* shall be final unless an appeal from an aggrieved party is received by the Land Use Board of Appeals within *twenty one (21) days* of the mailing date of this decision, or by **June 27, 2019, at 4:00 p.m.** *If the deadline is missed, LUBA will dismiss the appeal.*

An appeal is started when a Petitioner files a "Notice of Intent to Appeal" a land use decision or a limited land use decision. Under LUBA's rules (OAR 661-010-0015(1)(b)), the date of filing a Notice of Intent to Appeal is either the date the Notice is received by LUBA or the date the Notice is mailed, if it is mailed by registered or certified mail and the party filing the Notice obtains a receipt stamped by the U.S. Postal Service showing the date mailed and the certified or registered number.

ORS 197.830(3), (4) and (8) contain provisions that affect the deadline for filing a Notice of Intent to Appeal in certain circumstances where decisions are made without required hearings, required notices of hearings are not provided or do not reasonably describe the final action taken, or required notice of the final decision is not provided to the person filing the Notice of Intent to Appeal.

A complete record of the matter is available for review upon request during regular business hours or copies can be ordered at a reasonable price at the Wasco County Planning Department. Notice of Intent to Appeal forms may also be obtained at the Wasco County Planning Department. **The filing fee for an appeal is \$400.00. Fees are partially refunded if appellant prevails.**

### FINDINGS OF FACT:

Findings of fact approving this request may be reviewed at the Wasco County Planning Department, 2705 East Second Street, The Dalles, Oregon, 97058, or are available on the Wasco County Planning Department website:

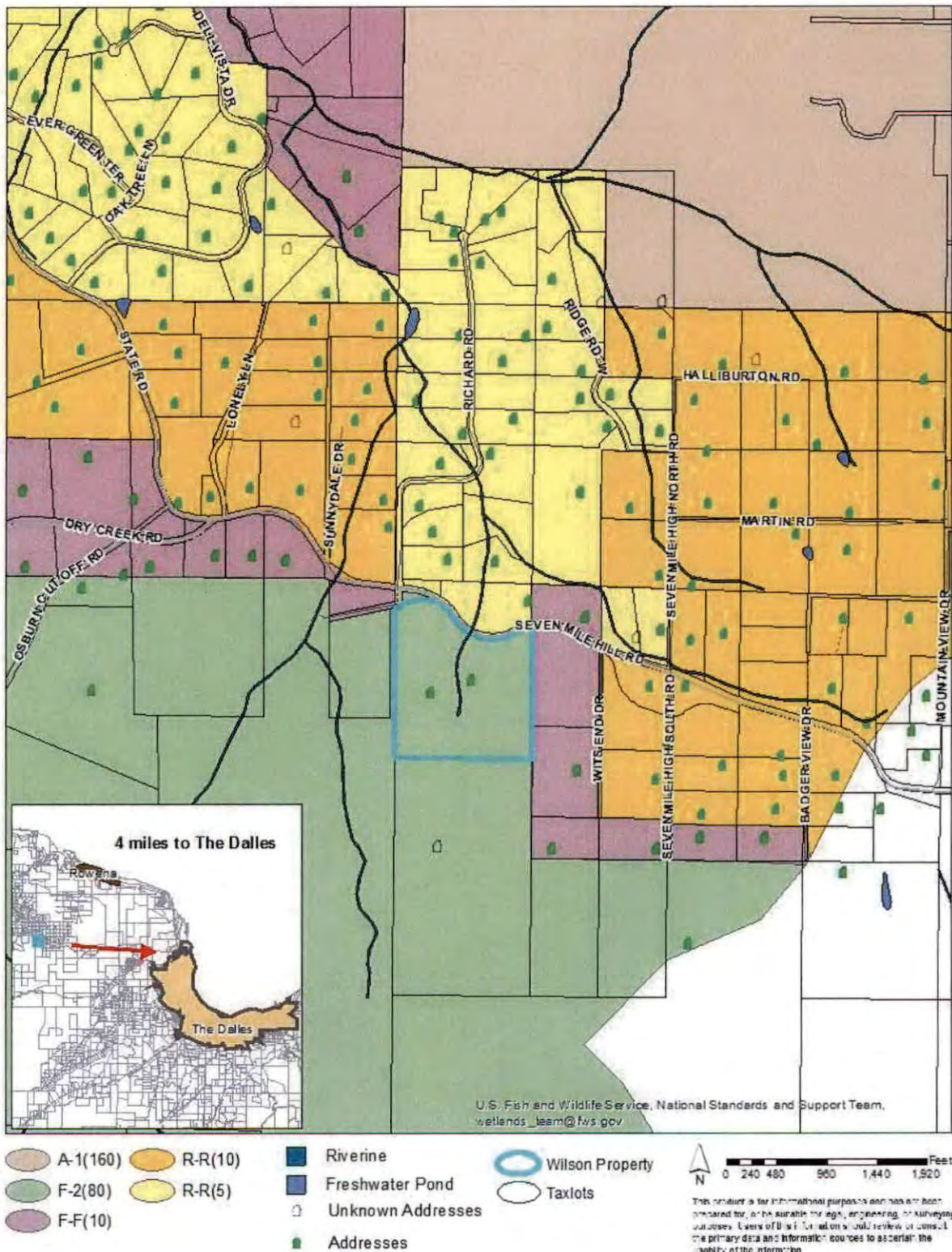
[http://www.co.wasco.or.us/departments/planning/active\\_landuse\\_applications.php](http://www.co.wasco.or.us/departments/planning/active_landuse_applications.php)

The table is sorted alphabetically by the name of the application. The information will be available until the end of the appeal period.



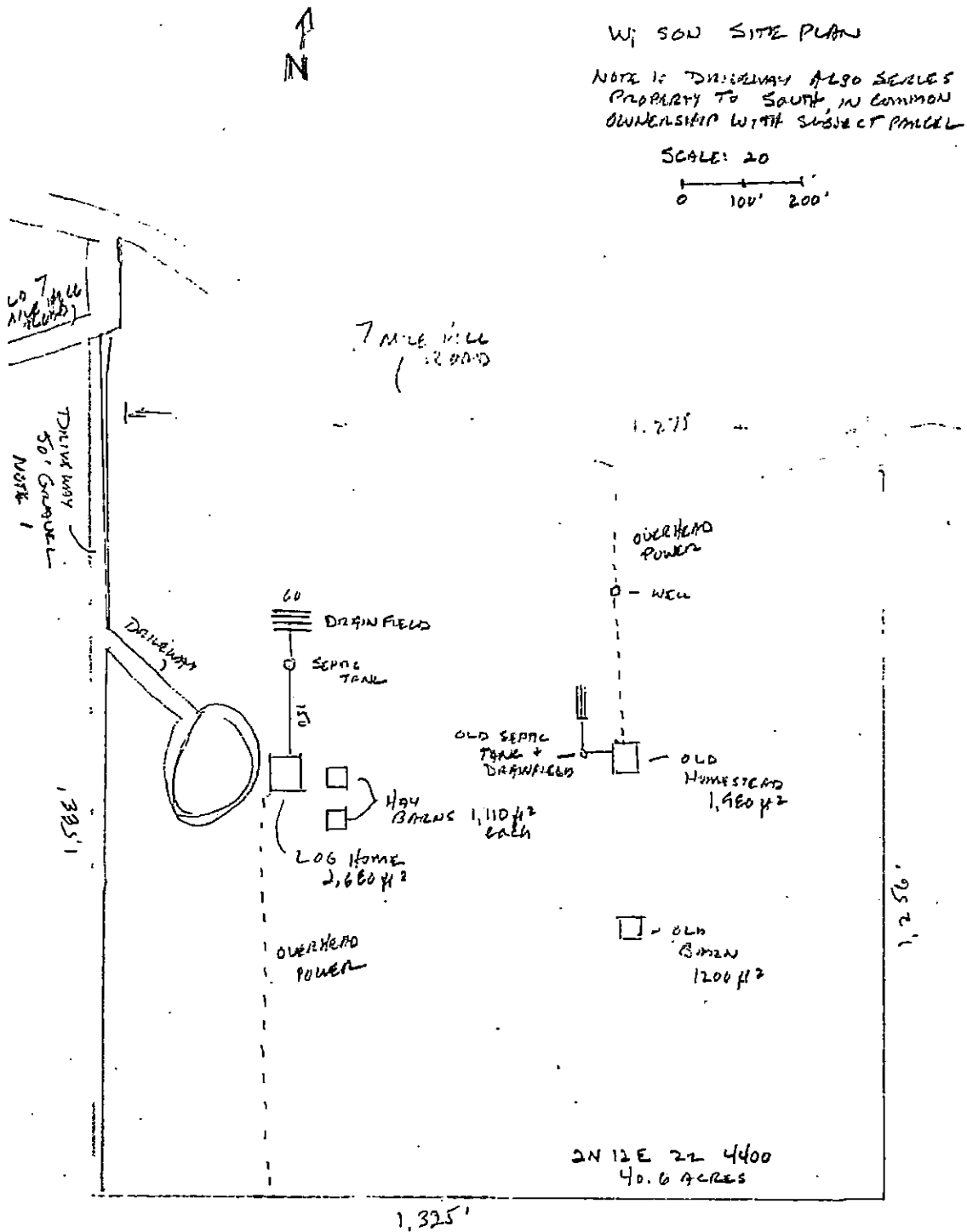
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan



## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Planning Commission Recommendation:** Approval

**Board of Commissioners Hearing Date:** June 5, 2019

**Board of Commissioners Decision:** Approval, with recommended findings

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

PLALEG-13-08-0002 (Rezone)  
PLAPRE-14-06-0003 (Pre-Application Conference for PLAQR-15-09-0002)  
CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)  
PLAQR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)  
PLAPAR-17-05-0002 (Partition and Agricultural Structure)  
PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road. The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):



	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osborn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA study. According to an October 12, 2018 email between staff and Watermaster Robert

Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that “dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost.” (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The

BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.



### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

*ORS 197.732(2) states, in relevant part:*

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*\* \* \**

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*\* \* \**

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*

*(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of*

*the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.*

**FINDING:** The subject parcel has several features that lead it to be “Physically Developed.” A driveway runs along the western property line, accessing the single family dwelling and accessory structure on the western portion of the parcel, as well as providing access to the single family dwelling located on the parcel directly to the south (also owned by the applicant). In the center of a property, an old farm house stands (no longer used as a dwelling), with an additional driveway feature bisecting the property. In this area there are further accessory structures including a pump house and an old barn. The property is served by two wells. Two wells would be capable of serving four dwellings as each well is permitted to serve two dwellings each. The applicant submitted well records for these to demonstrate their capacity. To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



**Figure 1: Development**

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or

forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.



- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. The property is also serviced by two wells, and a pump house located in the north central portion of the parcel, approximately 190 feet south of the road. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**b. OAR 660-004-0028(2):** *“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-

1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

The immediately adjacent lands on both sides of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Seven Mile Hill Road are already F-F (10), or are Rural Residential zoning, with 5 or 10 acre minimum parcel sizes. This demonstrates how irrevocably committed the area is to residential use.

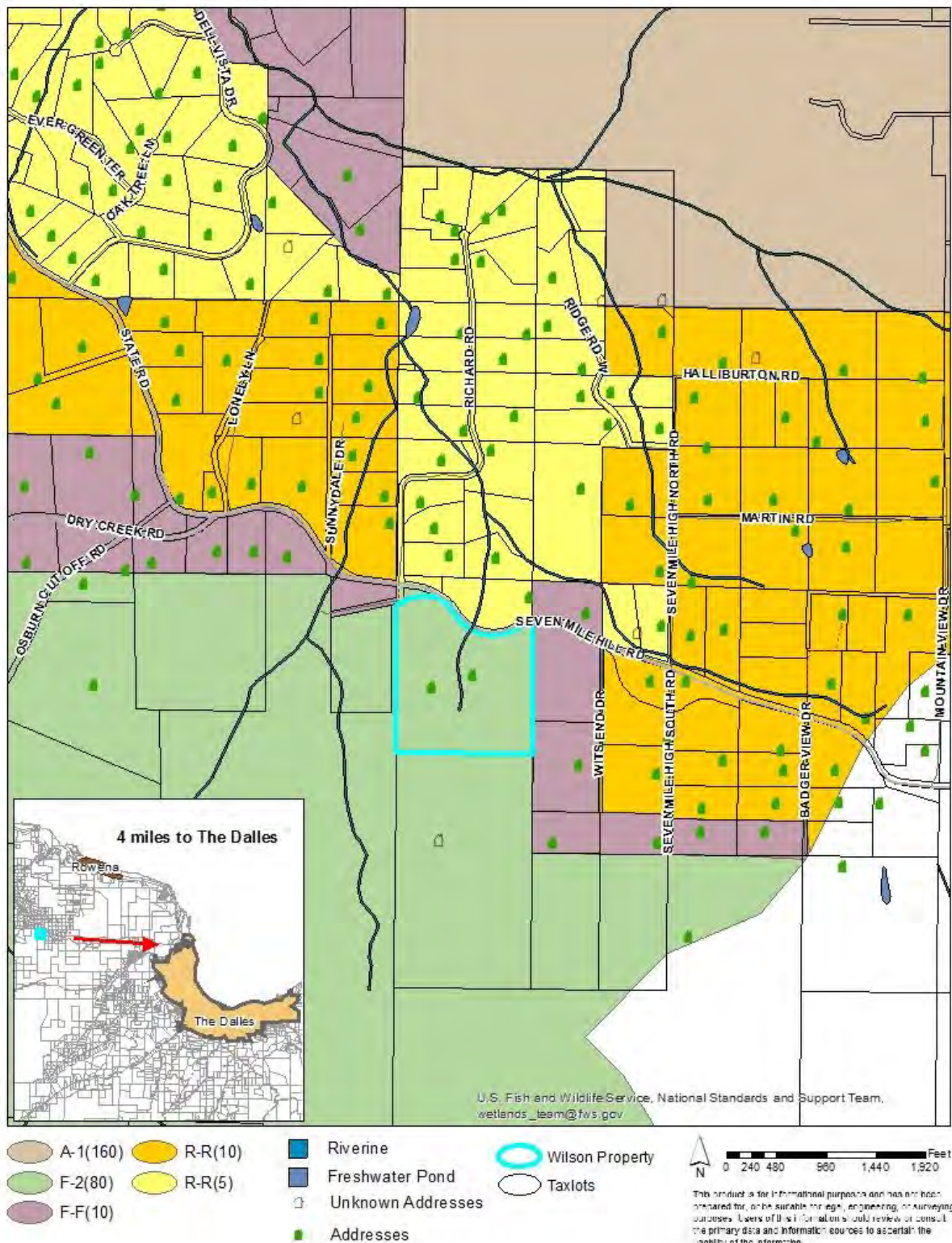


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots about the eastern



boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across

Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and south west are resource zones while those to the north, north west, and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along its western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it, however, it is unique in its zoning. It is the only parcel on all of Seven Mile Hill Road that is zoned F-2 (80), Forest. All other parcels are either already the non-resource zone, F-F (10), or else are zoned Rural-Residential with five and 10 acre minimum lot sizes. This creates a unique situation where the subject parcel is enclosed on three of its sides by residentially zoned properties, most of which are used for residential purposes. If the subject parcel was used for a forestry operation it could be potentially disruptive to this residential community. This area is irrevocably committed to a residential use, and changing the zoning of the subject parcel to the same would enable this status quo to continue, limiting potential conflict with any future resource use at this location.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The “forest products” definition can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.” An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine “*the relationship between the exception area and the lands adjacent to it*” when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those “Uses Authorized in Forest Zones”. An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- “(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.



(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- d. OAR 660-004-0028(4):** *“A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the*

*conclusion that uses allowed by the applicable goal are impracticable in the exception area.”*

**FINDING:** All applicable factors of section (6) are addressed below. The applicant’s statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

- e. OAR 660-004-0028(5): *“Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the “exception area”. This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): *Findings of fact for a committed exception shall address the following factors:*

- (a) *Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

- (b) *Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

- (c) *Parcel size and ownership patterns of the exception area and adjacent lands:*

- (A) *Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an*

*exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land’s actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six

miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

- (e) *Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

- (f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*
- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and



supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g. OAR 660-004-0028(7):*** *The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h. OAR 660-004-0040:*** *Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

***OAR 660-004-0040 (5) and (6):***

- (5)*** *The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a)*** *A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except*

*as is required by section(8) of this rule*

- (6)(b) *A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

- (7) *After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

- (8)(a) *The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

- (b) *Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

- (c) *If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

- (d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

- (e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

- (A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

- (B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

- (C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

- (D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

- (E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

- (F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco Count LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners' Association formed to maintain common open space and other common improvements." Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

*(f) Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where*



*one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

*(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

*(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

*(A) The parcel to be divided has two or more permanent habitable dwellings on it;*

*(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*

*(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*

*(D) The partition would not create any vacant parcels on which a new dwelling could be established.*

*(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

*(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:*

*(A) Require that any new lot or parcel have an area of at least ten acres, or*

*(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"*

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

OAR 660-004-0118 Planning and Zoning for Exception Areas

*(2) For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

*(a) That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

*(b) That meet the following requirements:*

*(A) The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

*(B) The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

“I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done.”

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group

domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### **A. Intent and Purpose**

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

#### **B. A Comprehensive Plan Amendment May Take the Following Forms:**

*(\*\*\*)*

##### **5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)**

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use



forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.” This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:  
Comprehensive Plan Revision may be initiated by:*

*(\*\*\*)*

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

*(\*\*\*)*

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission “Rules and Regulations”. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

*(\*\*\*)*

*H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance is achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the *“opportunity for citizens to be involved in all phases of the planning process.”* Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is *“to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.”* The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is *“To maintain and improve the quality of the air, water and land resources of the state.”* The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air

pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is *“To protect people and property from natural hazards.”* Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is *“To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.”* Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is *“To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.”* The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation. The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

Goal 10 – Housing. Goal 10 is *“To provide for the housing needs of citizens of the state.”* The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water

nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is “*To provide and encourage a safe, convenient and economic transportation system.*” Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is “*To conserve energy.*” In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “*To provide for an orderly and efficient transition from rural to urban land use...*” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.



Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster's least recriminatory definition of "mistake," most appropriate here, is "a misunderstanding of the meaning or implication of something." (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TSLA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TSLA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TSLA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County's rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TSLA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also recognizes that the character of the neighborhood south of Sevenmile Hill Road has changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

5. *Proof of change in the inventories originally developed.*

The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as

proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County’s Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **I. Transportation Planning Rule Compliance**

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*
  - c. *As measured at the end of the planning period identified in the adopted transportation system plan:*
    - (1) *Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
    - (2) *Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*

- (3) *Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
2. *Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
  - a. *Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. *Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. *Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. *Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
3. *Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance."*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

#### **J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

(\*\*\*)

3. *Notification of Hearing:*

- (1) *Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) *Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*

- (3) *A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) *After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) *Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with the requirements in (1). This was submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing, meeting the requirements of (2). At that hearing, five Planning Commissioners were present for the vote, greater than the four needed to form a quorum, which meets the requirements of (3). They voted 4-1 to recommend approval of the proposal, meeting the requirements of (4). Notice of this recommendation was mailed out on May 9, and scheduled to be posted in The Dalles Chronicle on May 15. The Board of Commissioners hearing is scheduled for June 5, which is 21 days after May 15, within the 20-40 day requirement of newspaper notification noted in (2). It is also at least twenty (20) days after notice was mailed, as required in (5). Staff finds that Criteria (1)-(5) were met and are being met for both the Planning Commission hearing and the Board of Commissioners hearing.

### **C. Wasco County Land Use and Development Ordinance (LUDO)**

#### **Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

##### **Section 9.010 – Application for Zone Change**

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.



*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

*A. The original zoning was the product of a mistake; or*

**FINDING:** As discussed above in the Comprehensive Plan Chapter 11 Section H.3., the application materials assert that it was a mistake, stating that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads, leaving the subject property as the sole F-2 zoned property along the length of Seven Mile Hill Road, with the rest being Forest-Farm or Rural-Residential. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change. This land was zoned for Forestry initially, but has not been used for that purpose. Staff finds that the subject parcel is physically developed with residential uses, and irrevocably committed to that use, indicating that the zoning of this land to be used for Forestry, as determined by the Comprehensive Plan, was a mistake.

*B. It is established that*

*1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found to be in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including “the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area,” all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The “specific zoning” includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”).*

*“Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

Capacity for State Rd/7-Mile Hill Rd      1,500/day

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area’s traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are*

*consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as “Significantly affecting” that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a “significant impact” under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

- A. Special yards and spaces;*
- B. Fences and walls;*
- C. Special parking and/or loading provisions;*
- D. Street dedication and improvements or bonds in lieu of improvements;*
- E. Control of points of vehicular ingress and egress;*
- F. Special provisions for signs;*
- G. Lighting, landscaping and maintenance of grounds;*
- H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance  
Amendments to this Ordinance may be initiated as follows:*



*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

*Section 9.080 - Action by County Governing Body*

*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** The Planning Commission met on April 2, 2019 and recommended Approval. Due to a procedural oversight by staff, notification was not distributed to interested parties within ten (10) days of the hearing. However, this notification (which included a statement of the facts and reasons upon which it was based) was distributed to all interested parties, agencies, and those that signed in and spoke at the Planning Commission Hearing as required by mailing and/or email on May 9, 2019. A hearing that had been scheduled for May 15 was postponed to June 5 to meet the requirements of Section 9.080 to ensure the County Governing Body would not act for at least twenty (20) days from the date the Notice of Planning Commission Recommendation was mailed. The County Governing Body is the Board of Commissioners, who will meet to take action that they deem appropriate on this request on June 5, 2019, more than twenty (20) days after the Planning Commission Recommendation was mailed. Despite missing the ten day window, all individuals and agencies that needed to be notified were, and action was not taken by the Governing Body until sufficient time had passed. Staff finds that Sections 9.060, 9.070, and 9.080 were met.

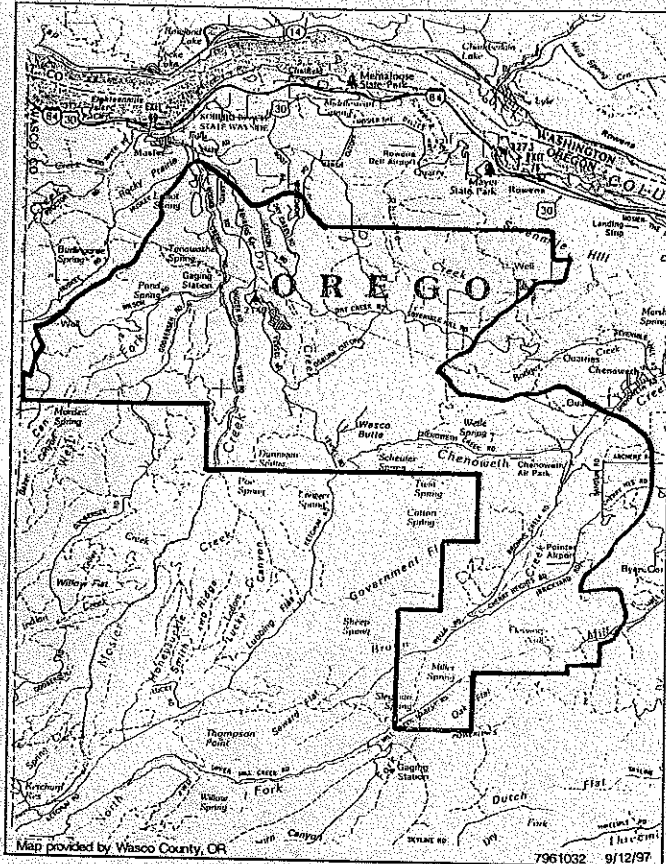
**EXHIBIT 1**

**Transition Lands Study Area**

**(Full Report)**

2044

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
2705 East 2<sup>nd</sup> Street  
The Dalles, Oregon 97058

**Prepared by**

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**In cooperation with**

Suzanne Rock  
**Northwest Economic Associates**

**September 12, 1997**



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- Appendix 1. Background Materials and Standards Related to Action Items Identified in Section 2.0 (Policy Recommendations and Action Items)
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- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites

## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.



## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

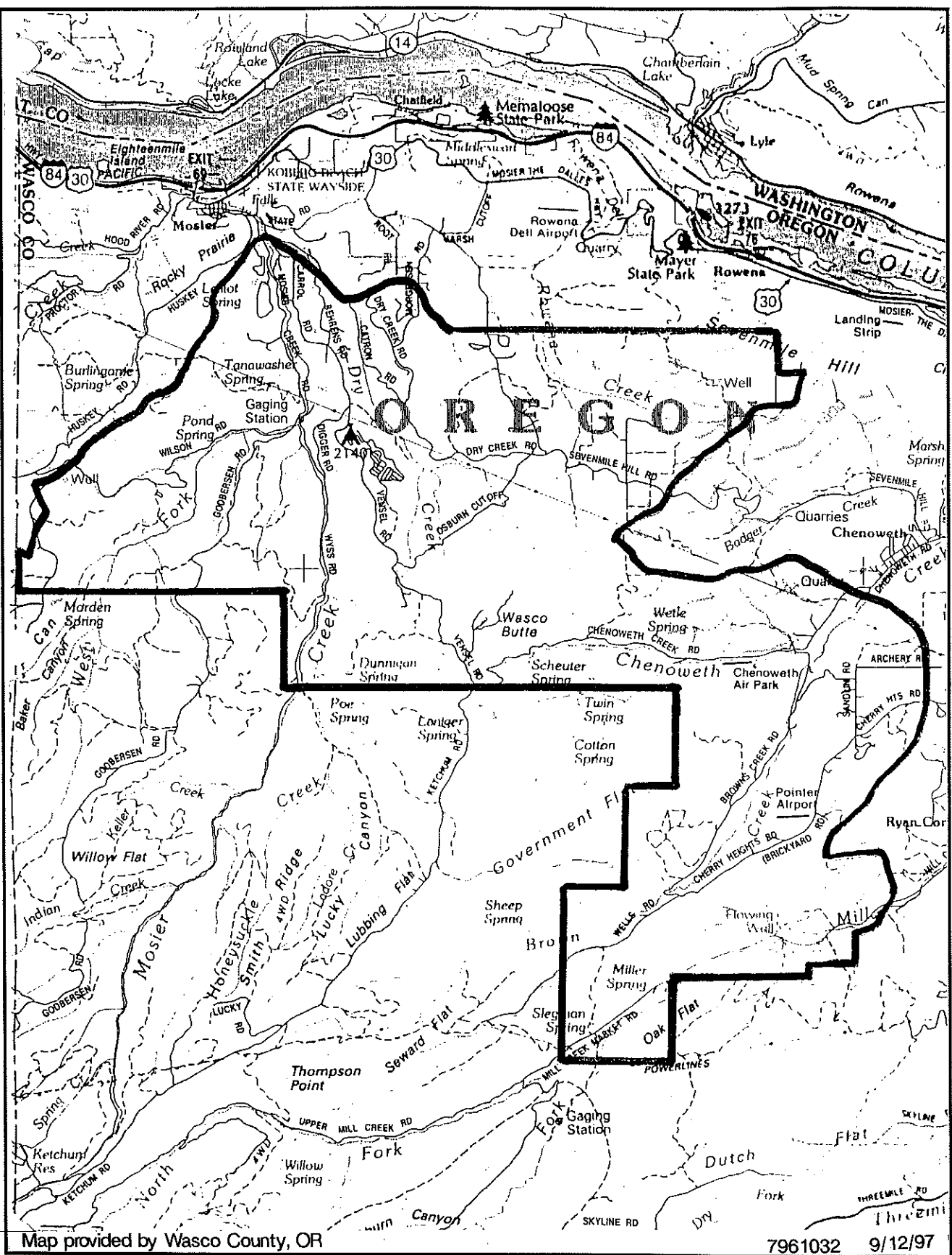
### **1.2 Purpose**

#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



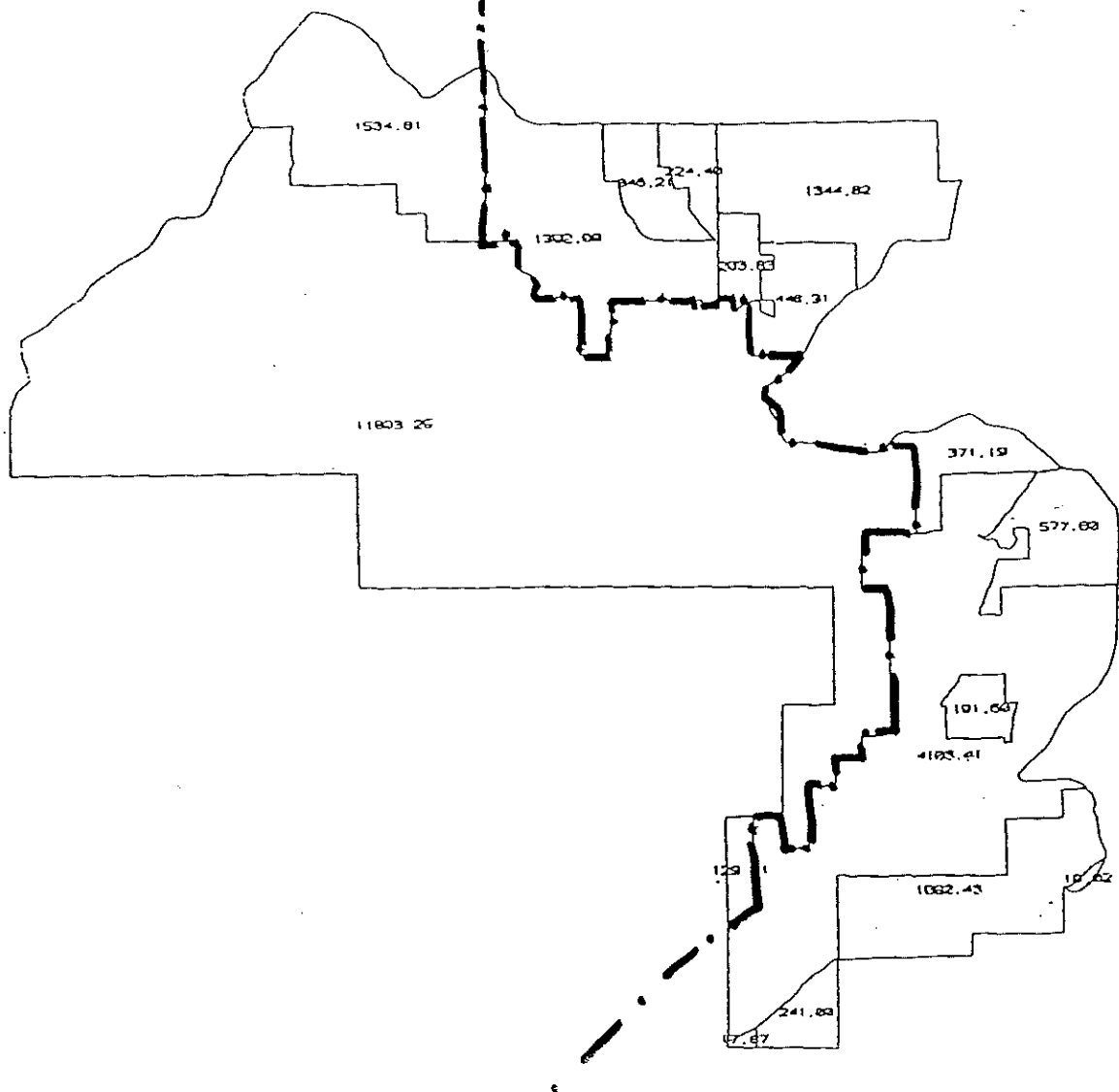
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.Z. & ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. & RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?  
What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.



9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

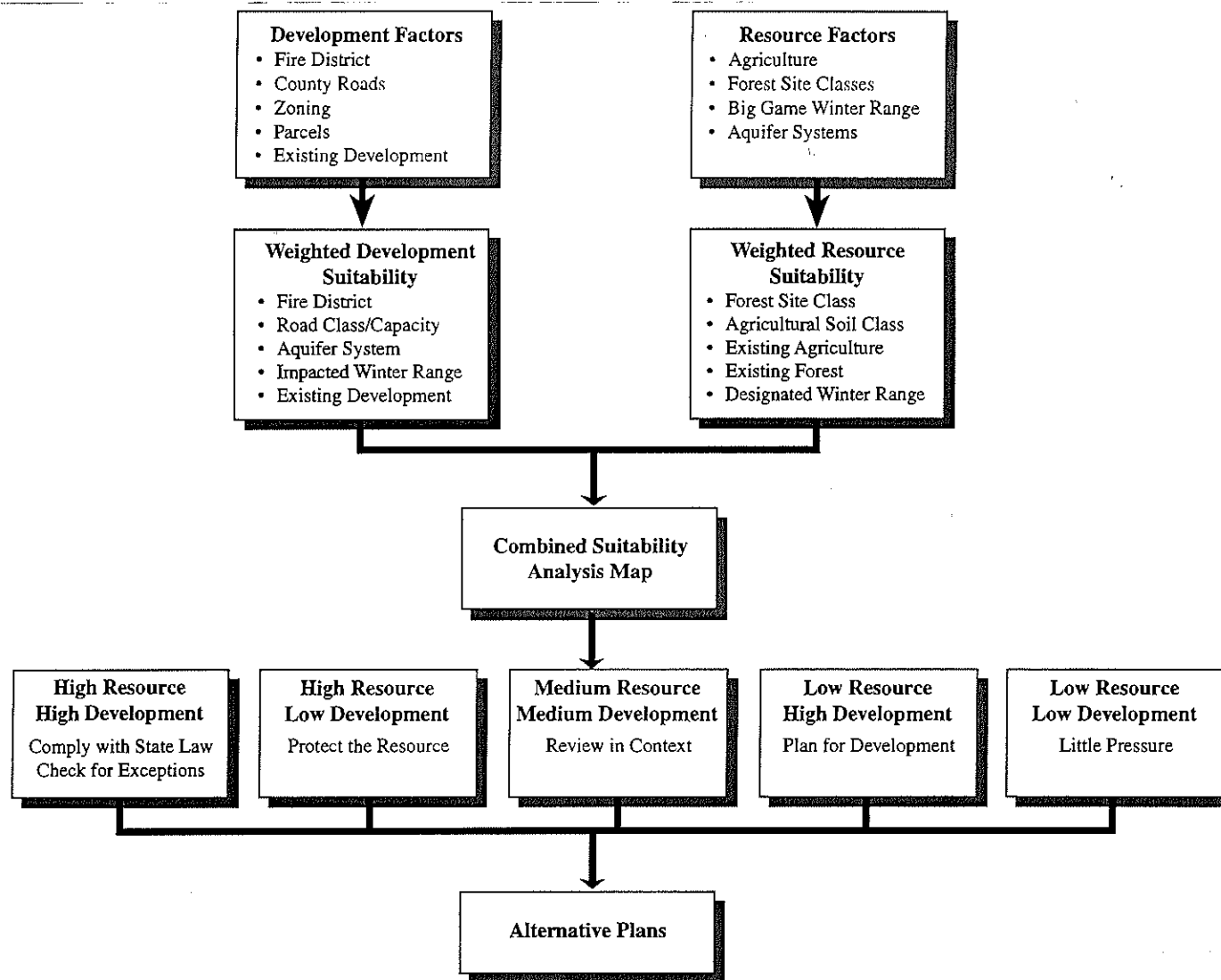
The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems





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Wasco County Transition Lands Study Area  
 Simplified Flow Diagram

FIGURE  
 4

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
High Value (Class 1-2) = 2 pt.  
Class 3 - 6 = 2 pt.  
Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
Class 6 = 1 pt.  
Class 5 = 2 pt.  
Class 4 = 3 pt.  
Existing Forest Use  
≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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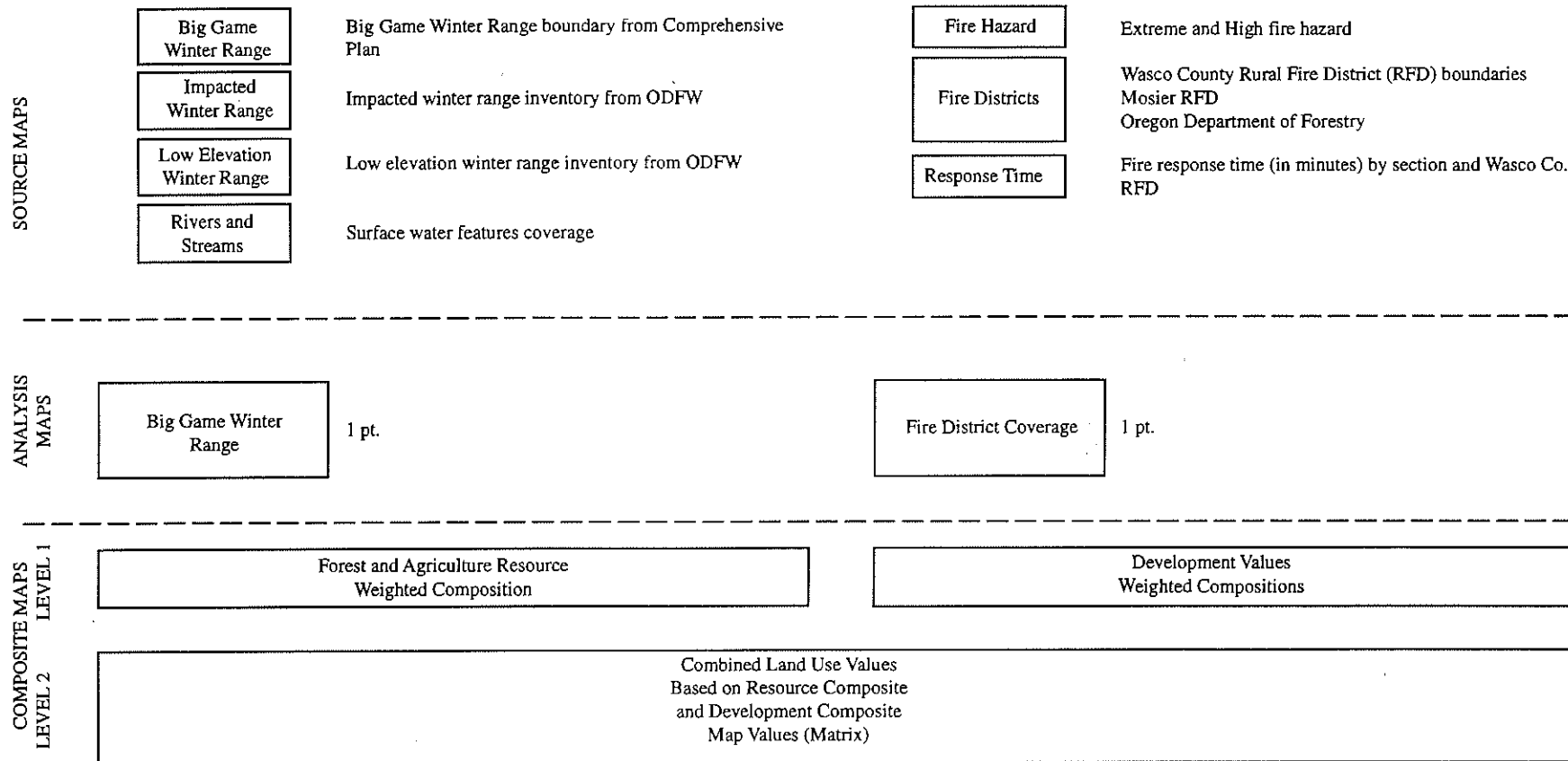
Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a

## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 3: Big Game Winter Range Availability

### 4: Fire Districts/Response Time



CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5b



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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads  
Road Capacity

Roads in TLSA  
Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning  
Developed  
Parcels  
Aquifer Units

Zoning  
Existing Developed (house)

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions  
Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.  
†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

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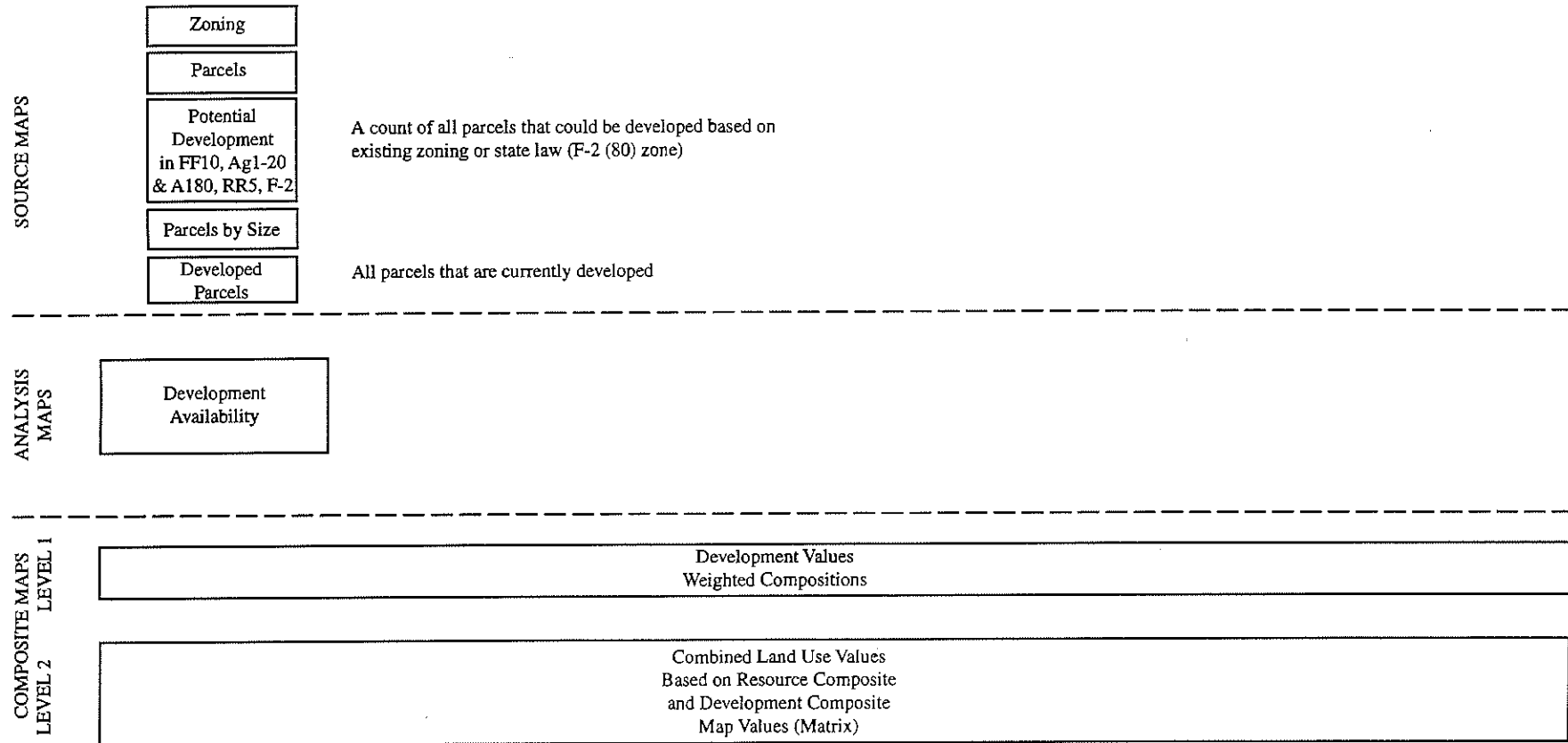
Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C



## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

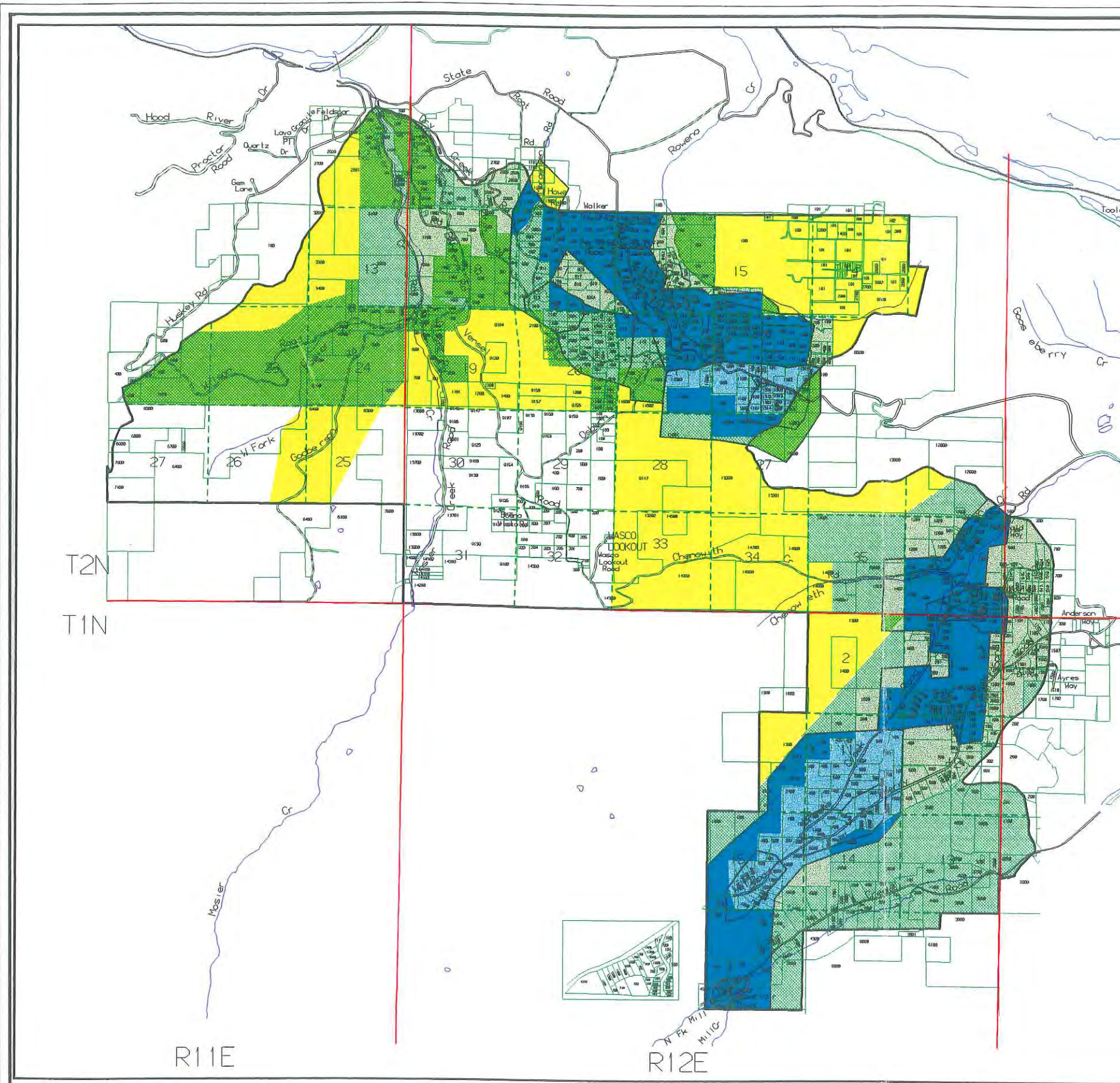
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

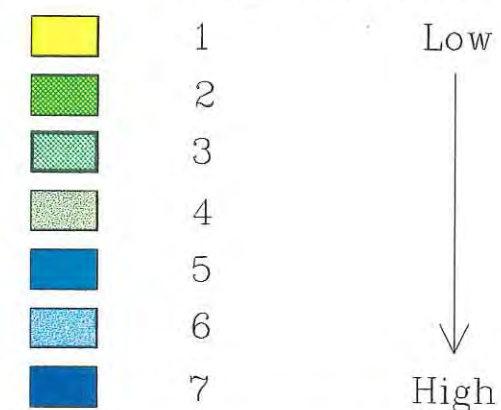




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



SRI/SHAPRO, Inc.  
Portland, Oregon

WASCO COUNTY  
Planning and Economic Development



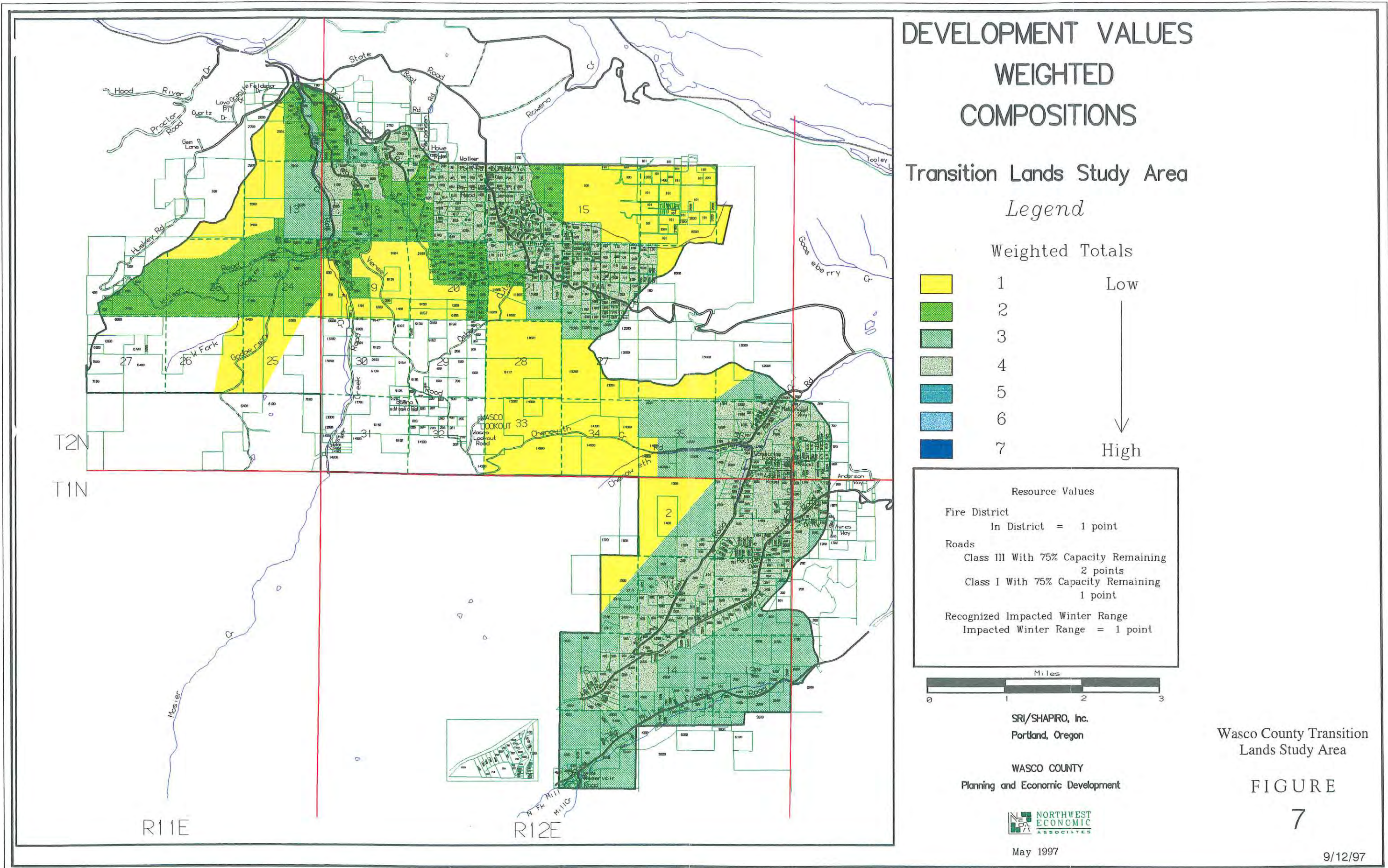
May 1997

Wasco County Transition  
Lands Study Area

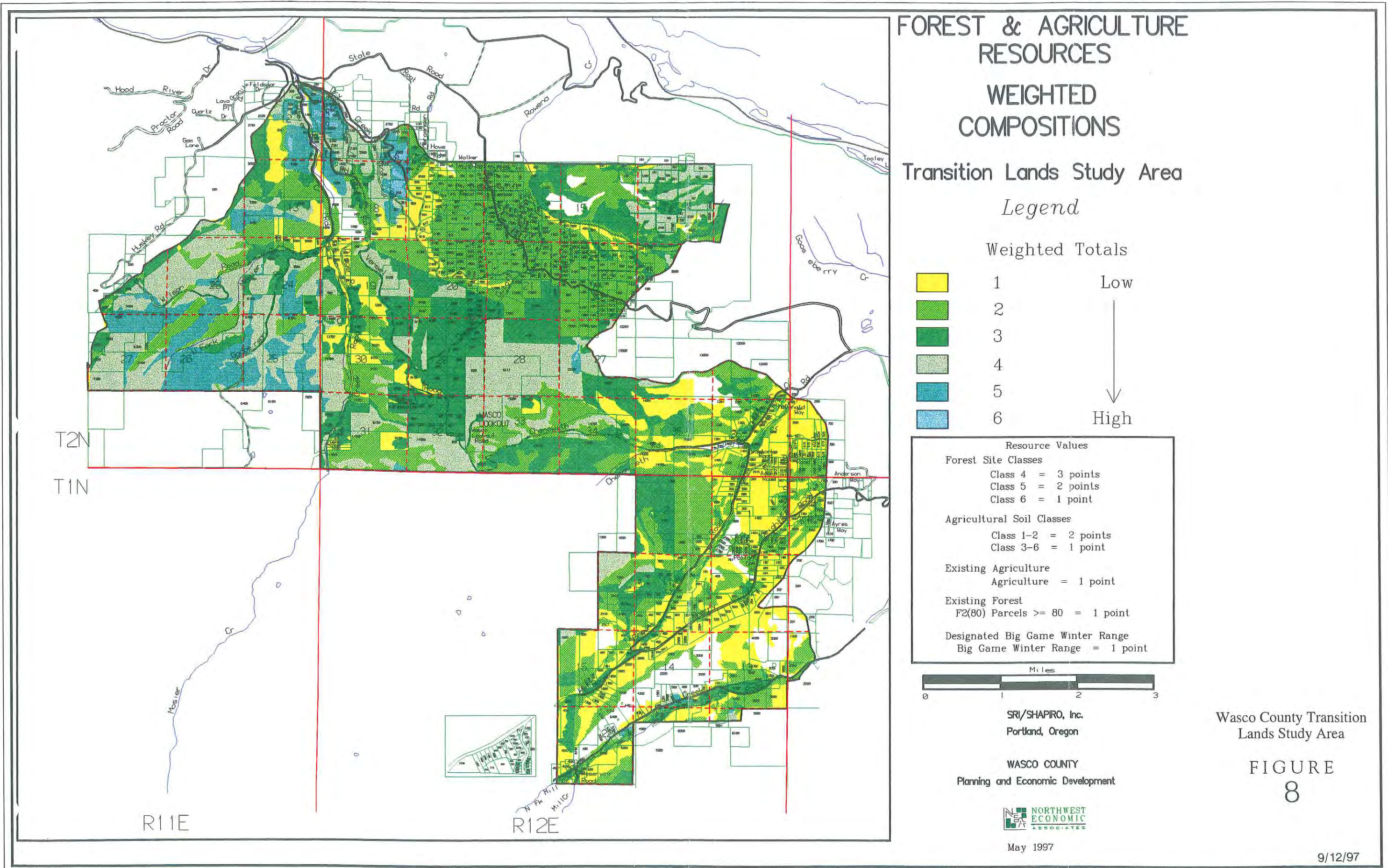
FIGURE  
6

9/12/97











# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill	Mill Creek-Cherry Heights
FF-10 = 125	FF-10 = 256
RR-5 = 52	RR-5 = 50
Ag = 8	Ag = 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

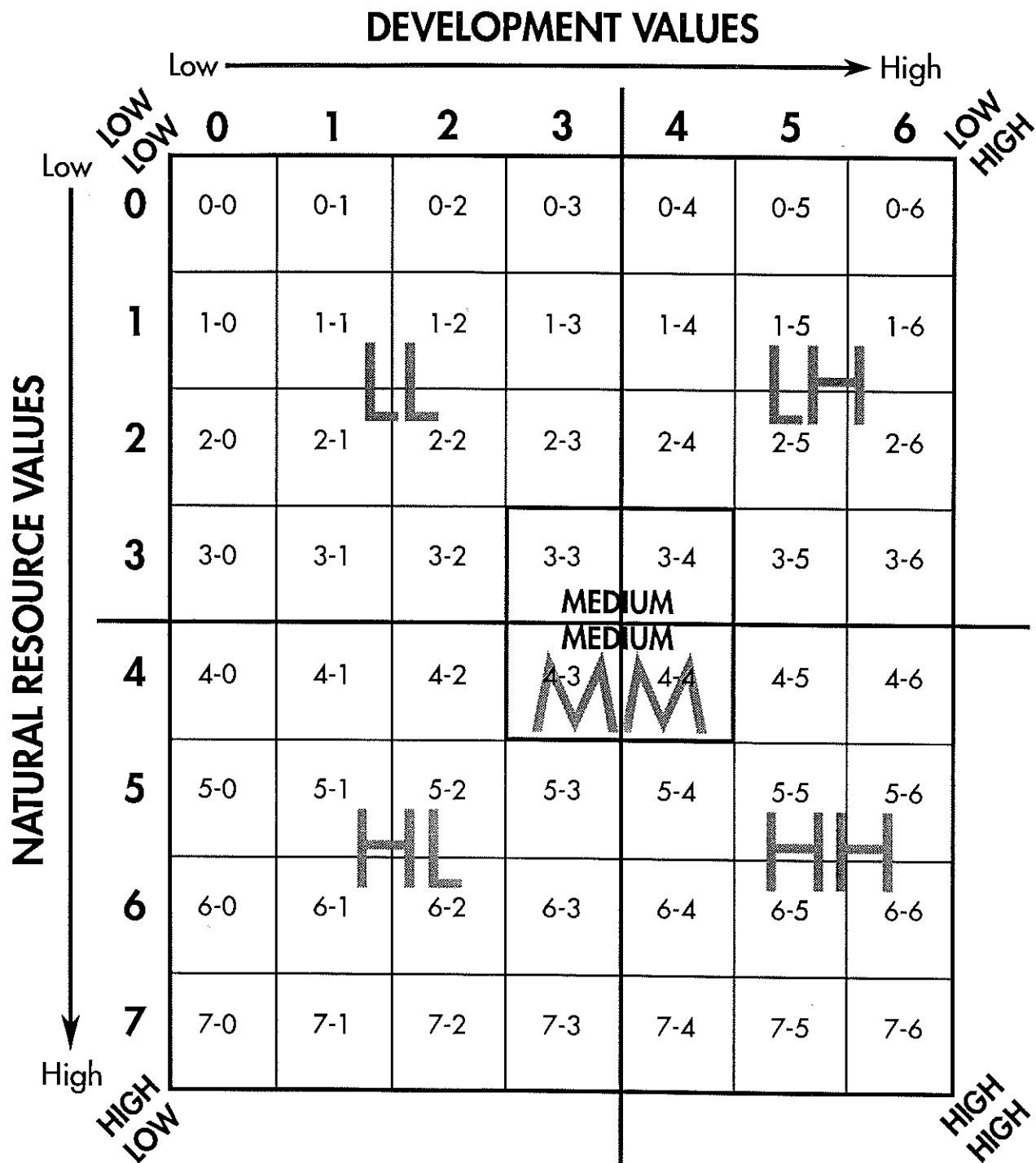
Tables from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

 SRI/SHAPIRO/AGCO  
INCORPORATED



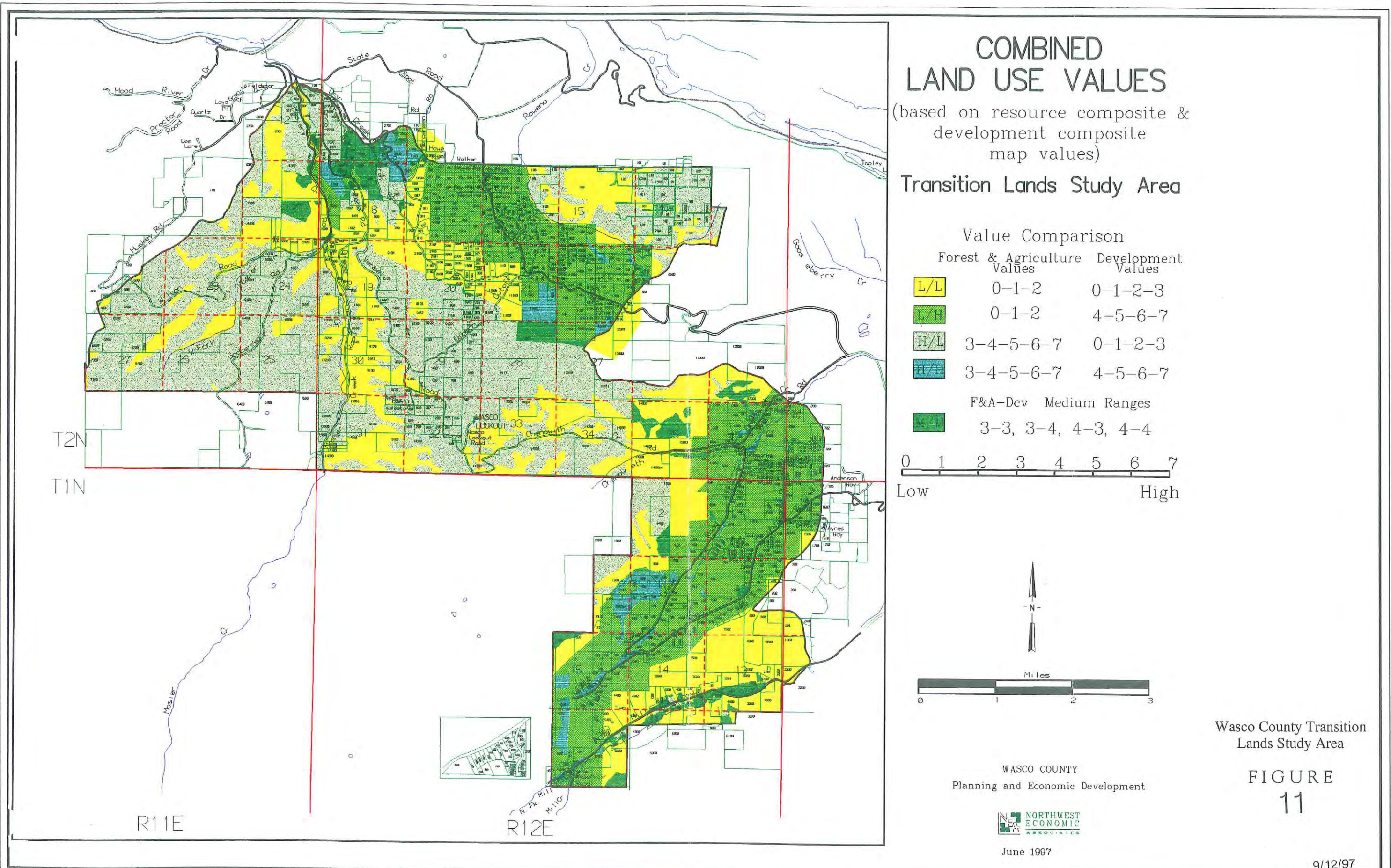
7961032 9/12/97

Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

**FIGURE  
10**

 **SRI/SHAPIRO/AGCO**  
INCORPORATED







- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

#### 5.1.1 Seven Mile Hill Area

In the Seven Mile Hill Area, Alternative 1 would:


- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

FIGURE  
12

# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend

 IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

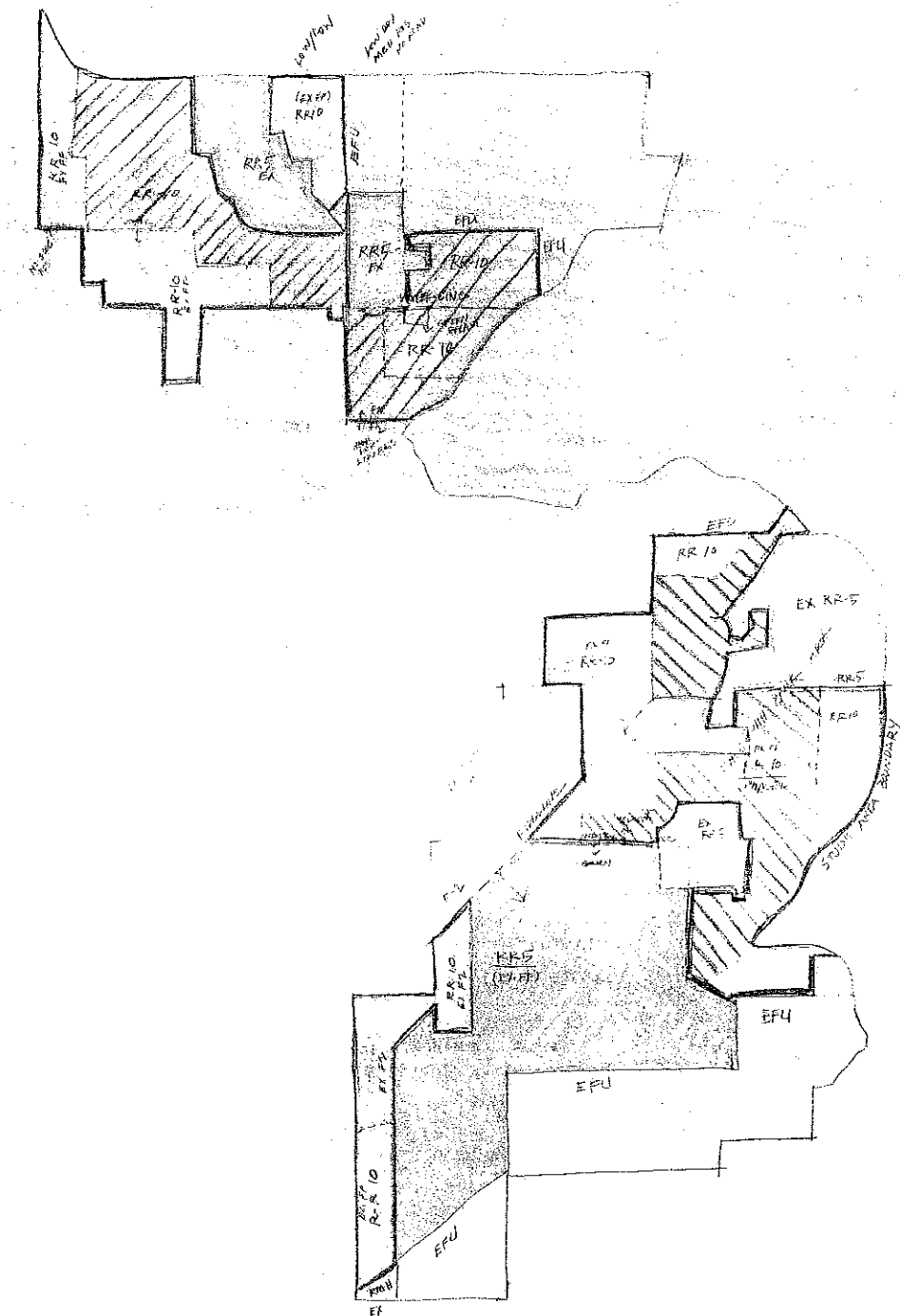
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



Map from Wasco County, OR, 1997

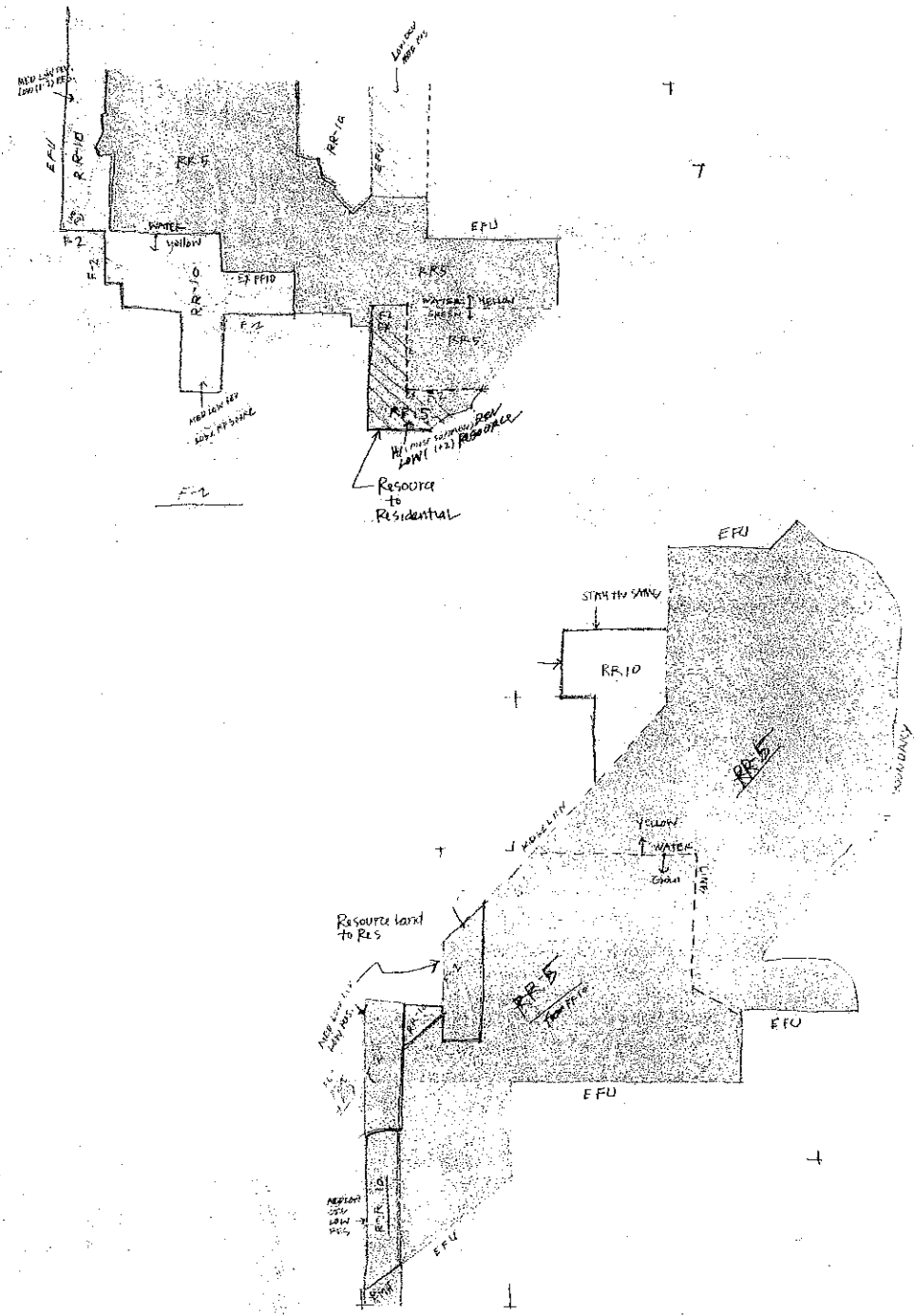
Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

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FIGURE 13



# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
  - Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat- quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).



### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

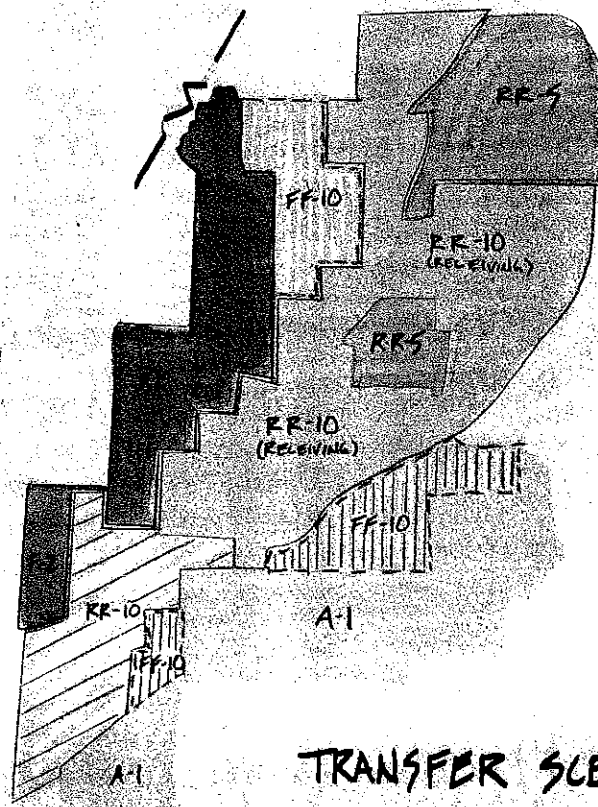
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



TRANSFER SCENARIO

Map from Wasco County, OR, 1997

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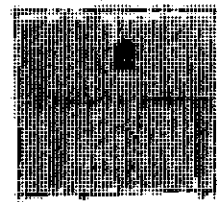
Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

FIGURE  
15

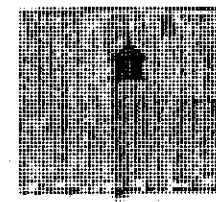


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INCORPORATED

VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

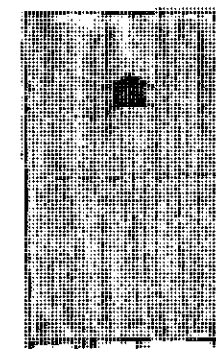
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 20 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

BROWN'S CREEK  
CHERRY HT'S

20AL WITH HOUSE (160,000<sup>00</sup>)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)  
MOSEY  
7 MILE  
HILL

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSEY  
7 MILE HILL)

(170,000<sup>00</sup>)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16



### **6.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### **6.1.3 Intent and Impacts of the TDR Alternative**

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

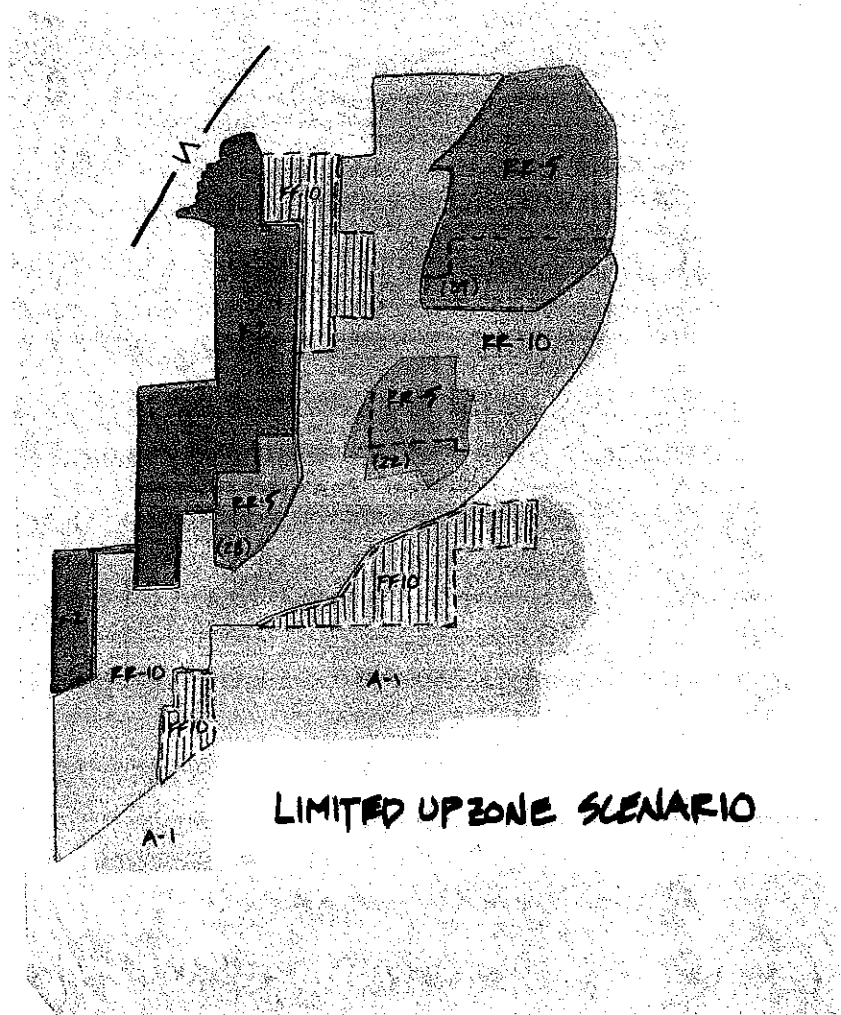
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### **6.2 Limited Upzone Alternative**

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### **6.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

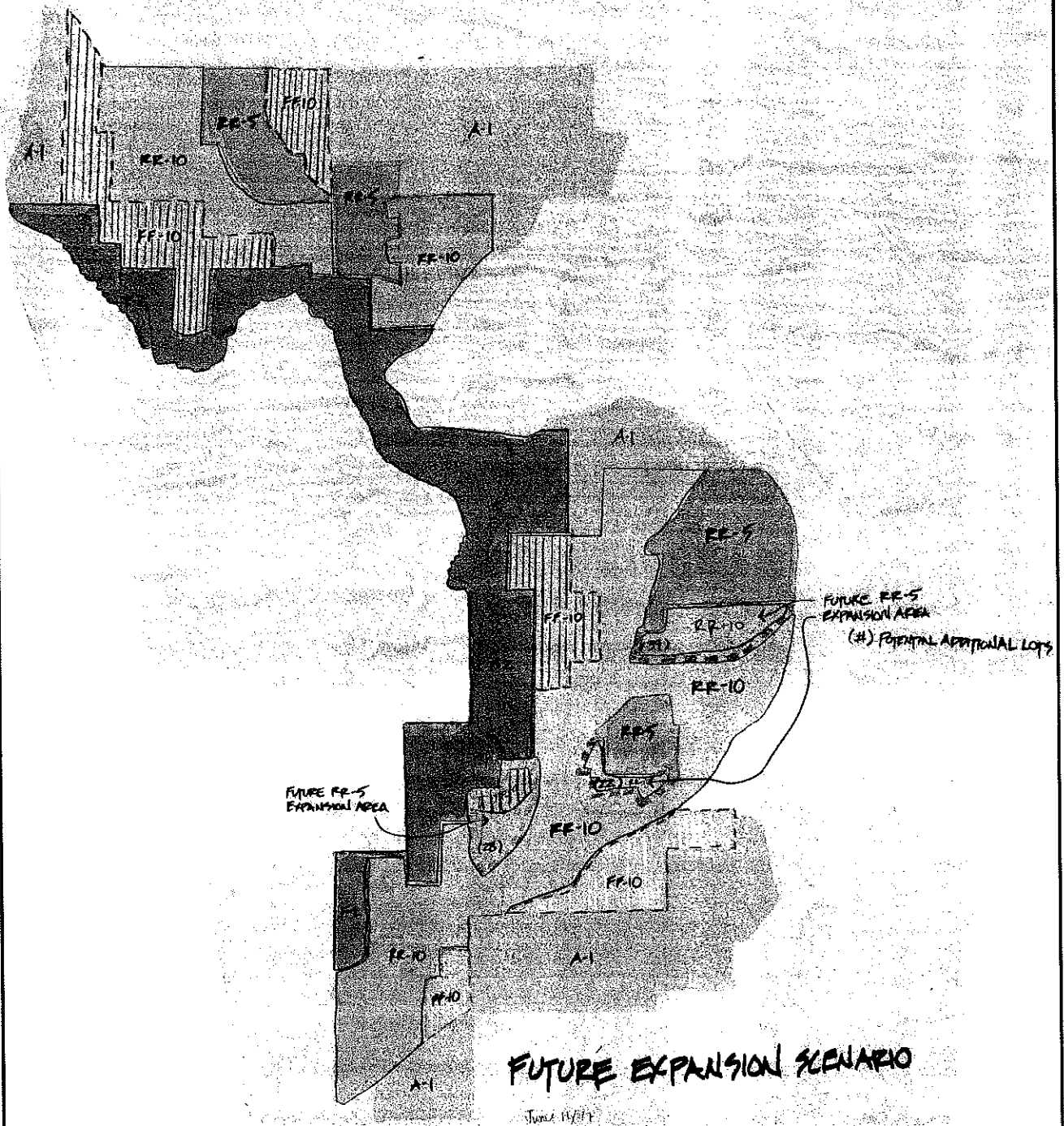
## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.



Map from Wasco County, OR, 1997

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# Wasco County Transition Lands Study Area Future Expansion Alternative

FIGURE  
18



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## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.

**EXHIBIT 2**

**Transition Lands Study Area**

**(Memo)**

## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

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### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

## EXHIBIT 2

**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR)  
Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

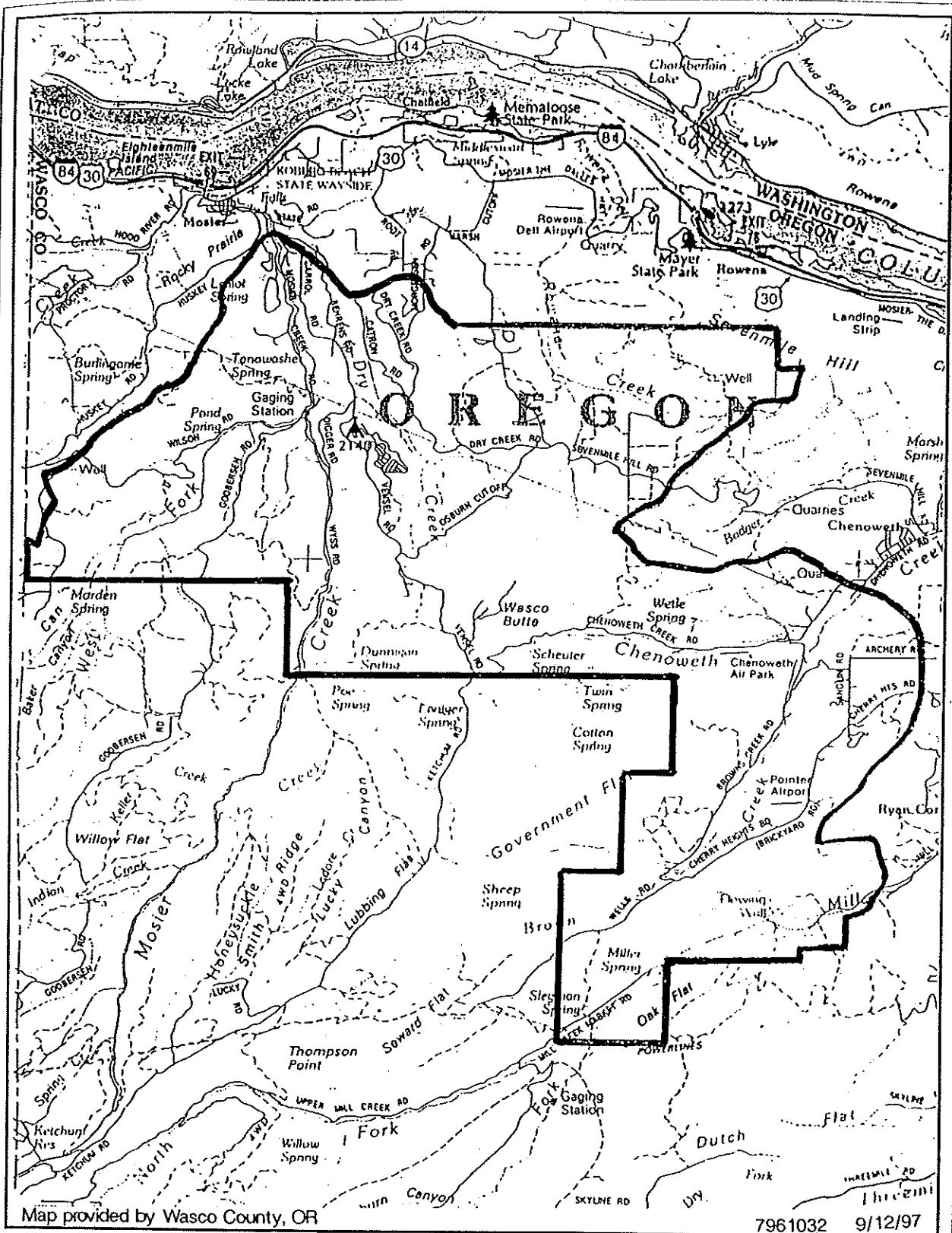


issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**



Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

**SRI/SHAPIRO/AGCO**  
INCORPORATED

# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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page 1

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below.

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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**EXHIBIT 3**

**2000 Settlement Agreement**

## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not



approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.

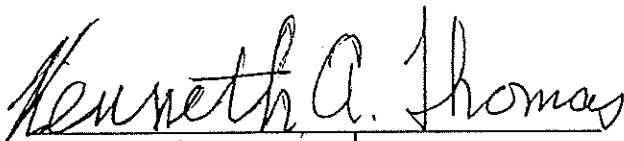
15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

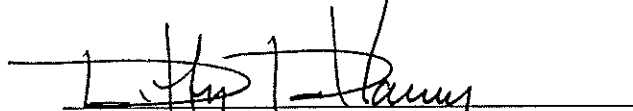
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

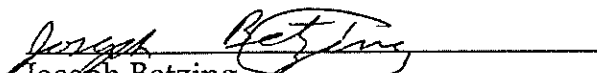
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing



**EXHIBIT 4**

**Transition Lands Study Area**

**Groundwater Study**





**JERVEY** Geological  
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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervey

**EXHIBIT 4**



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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervy

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

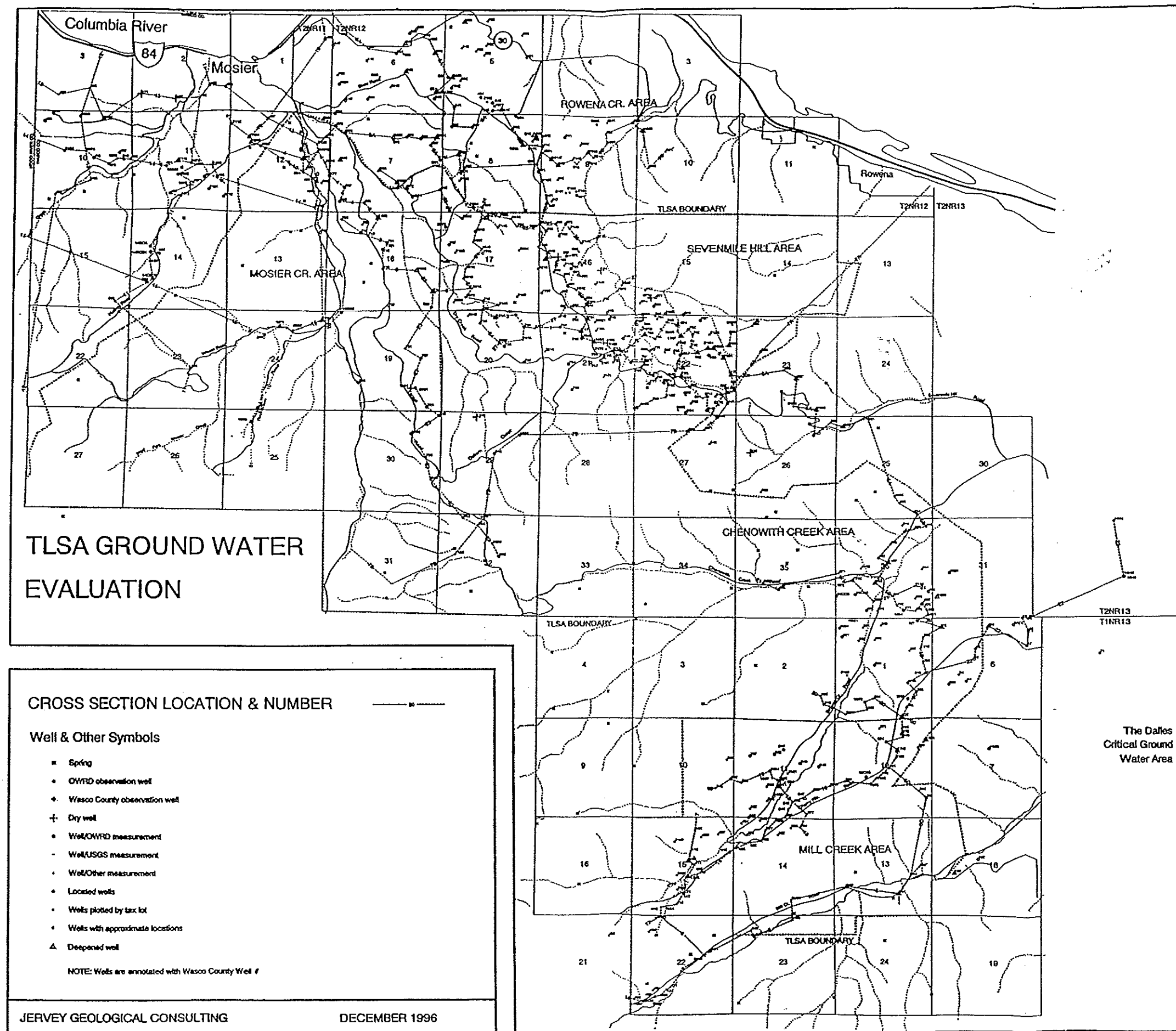
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceeding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year



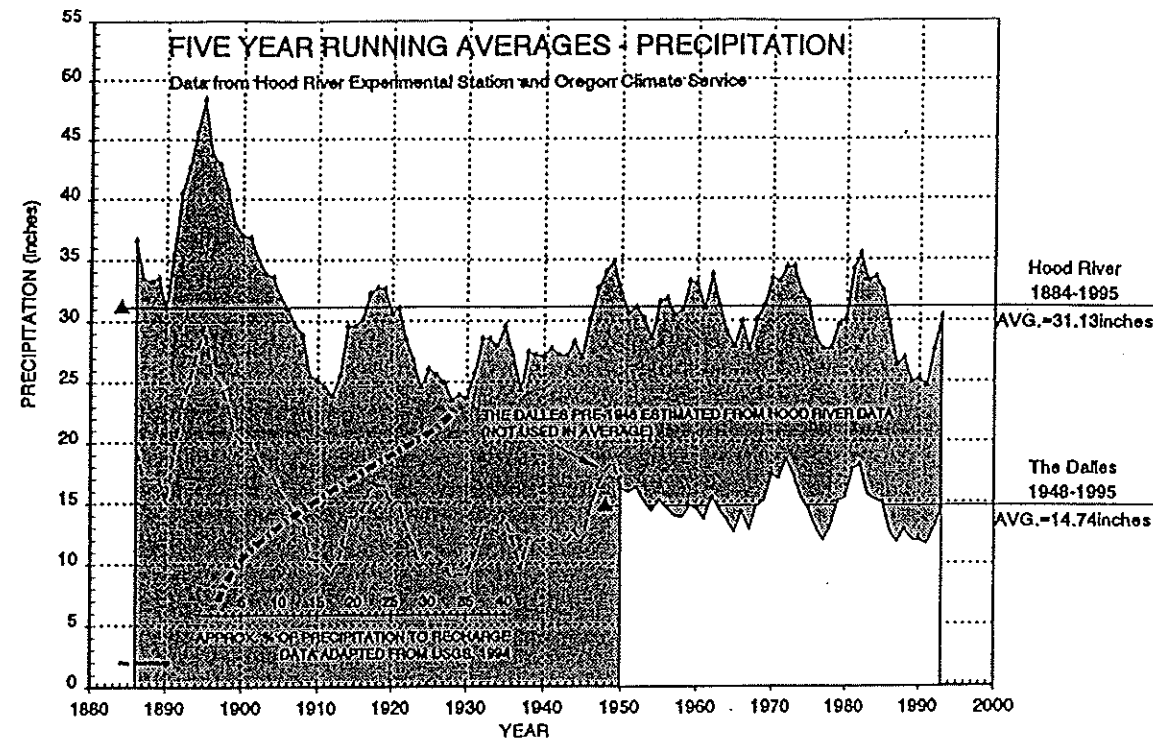


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

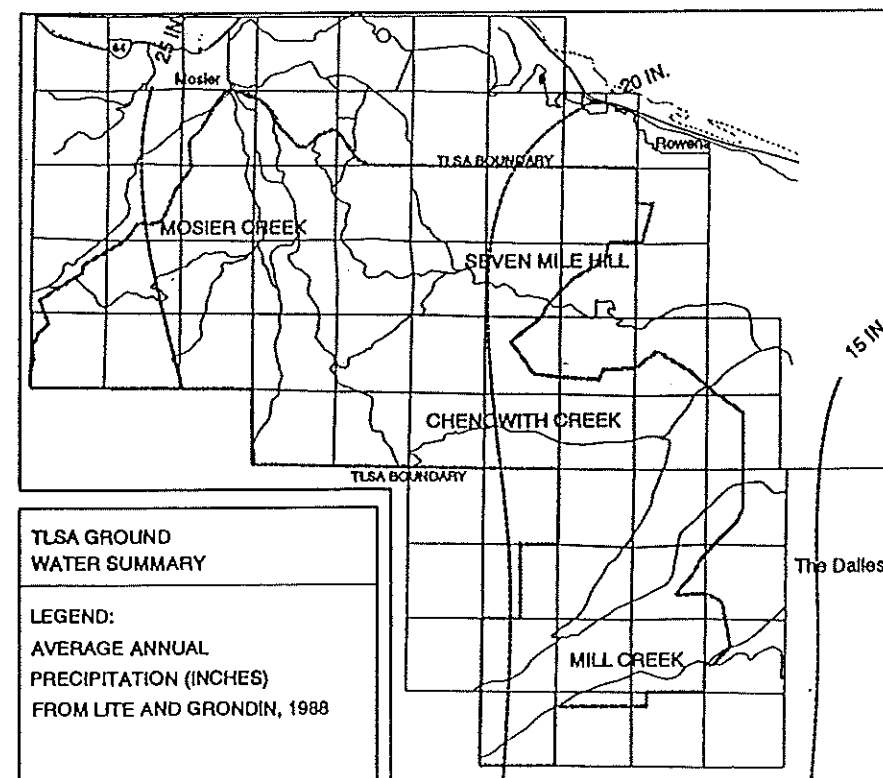


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				89,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

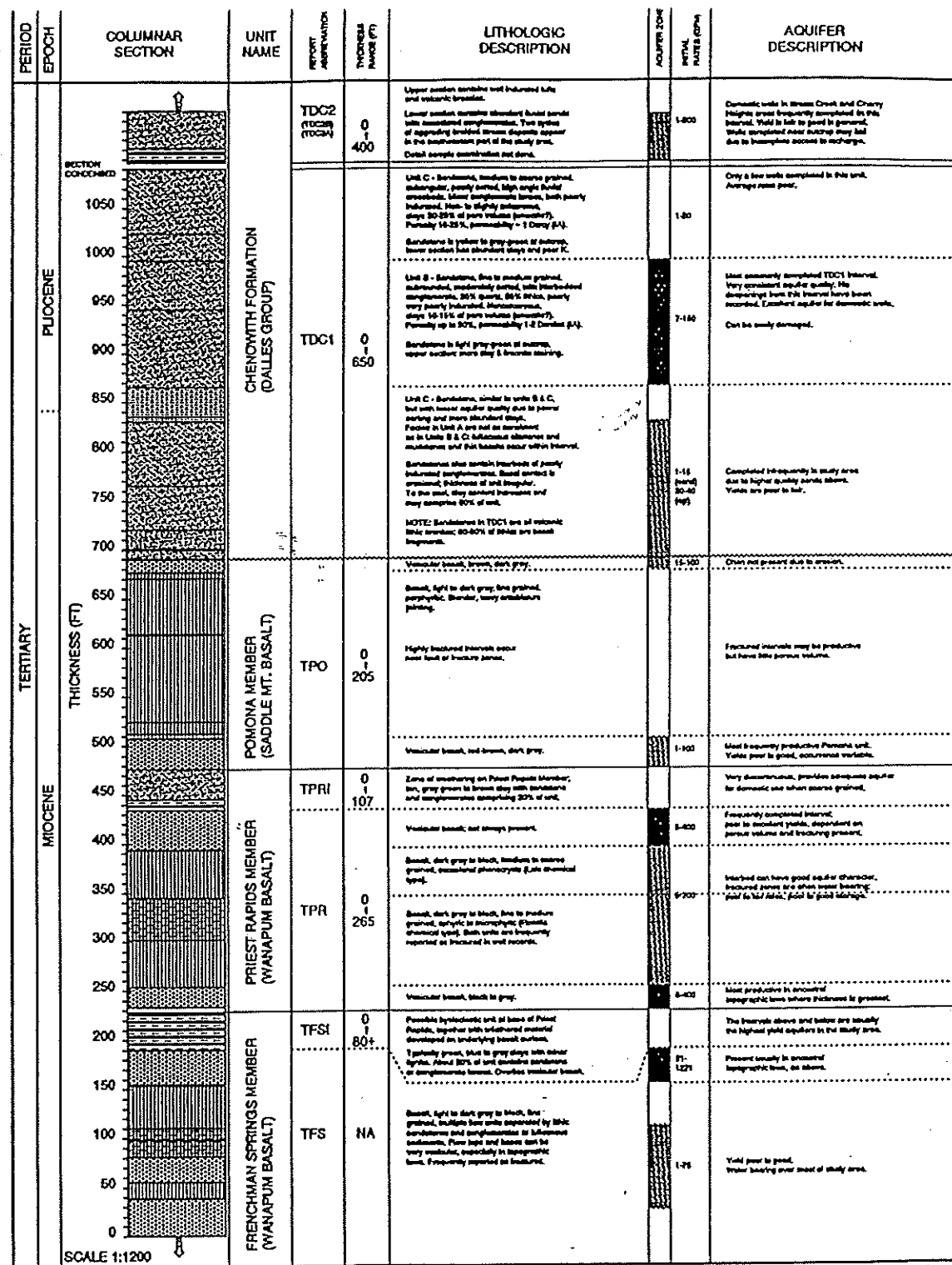
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

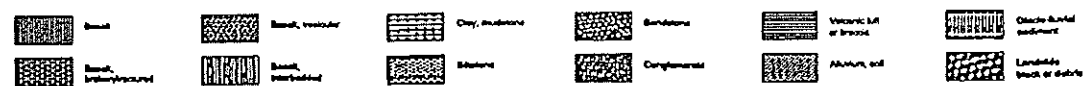


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).



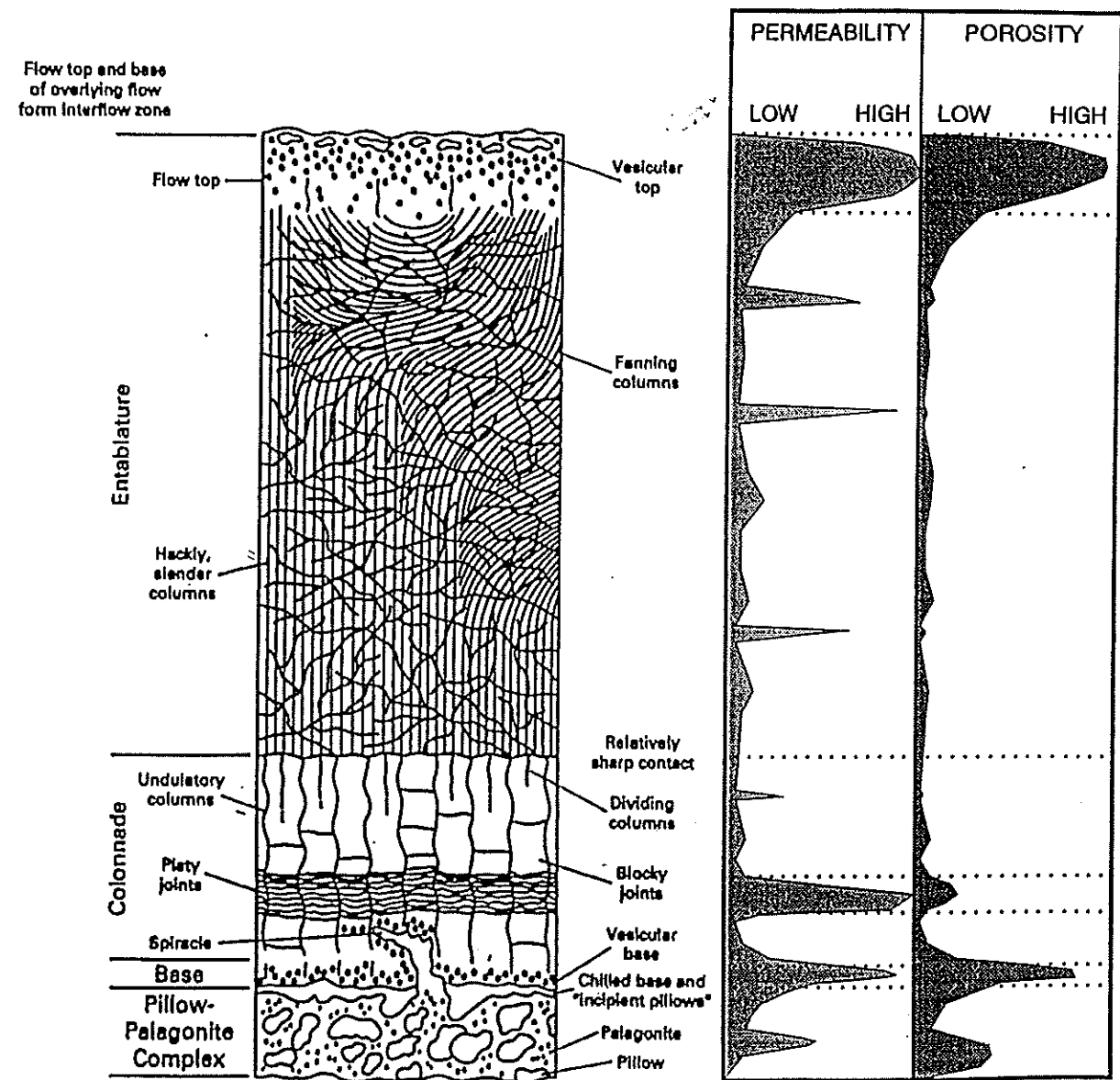


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).

general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

#### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

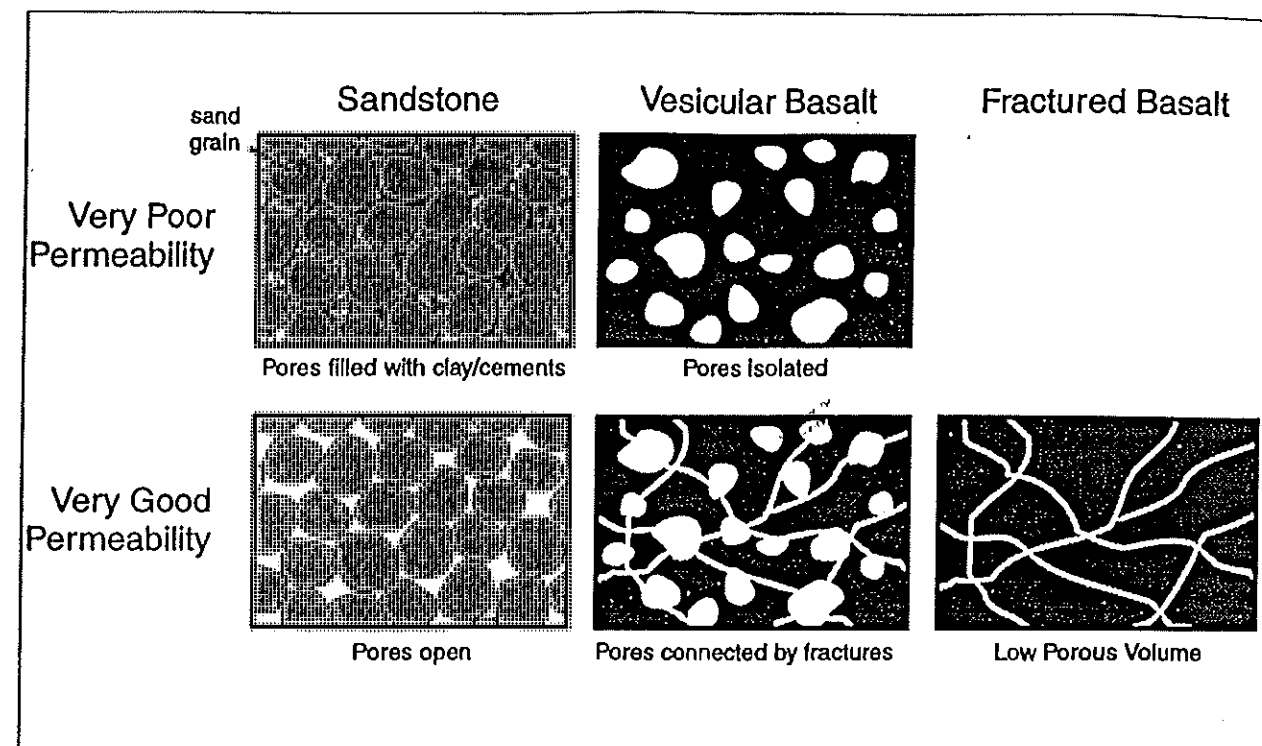


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

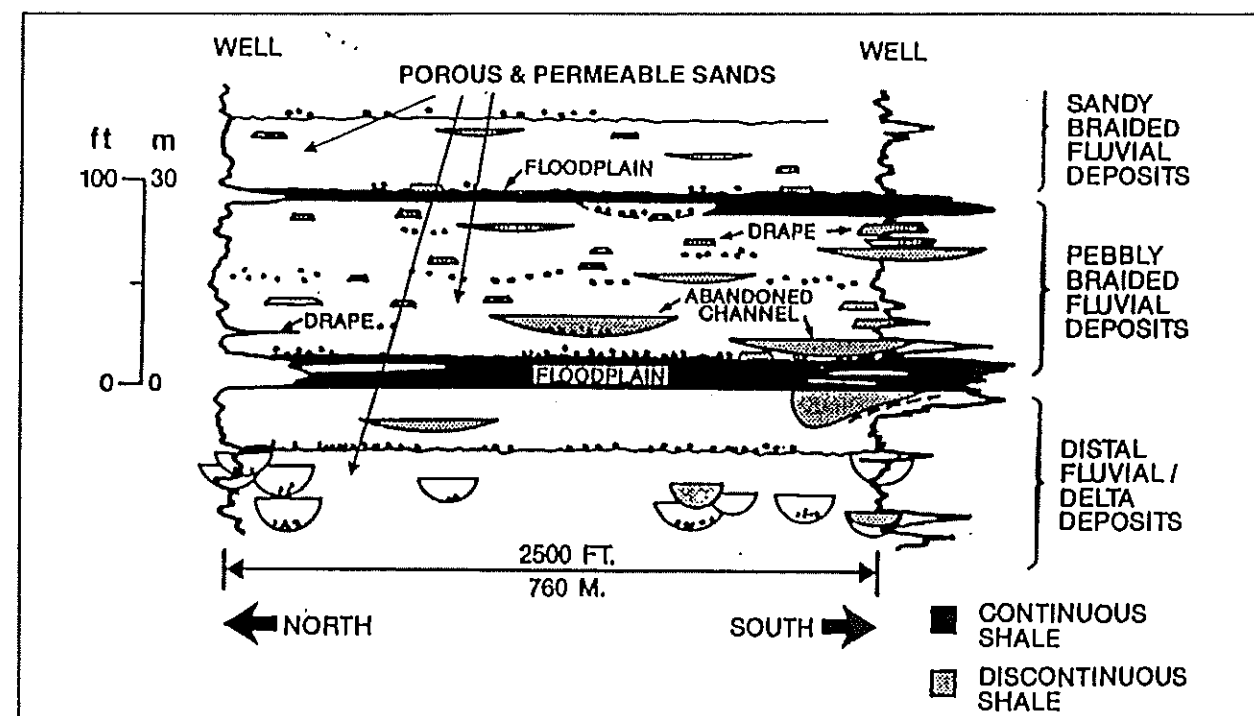


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

### TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

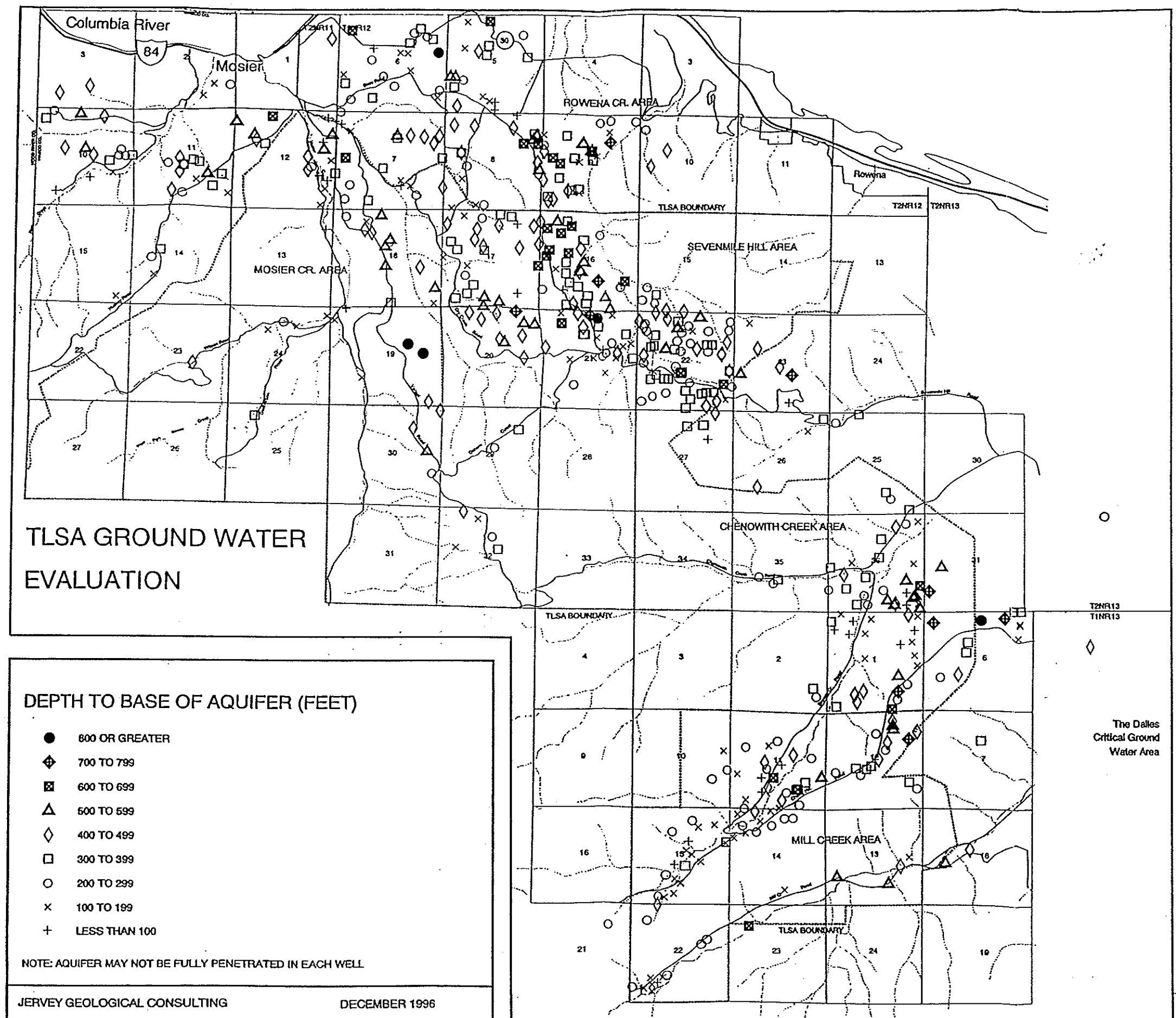
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

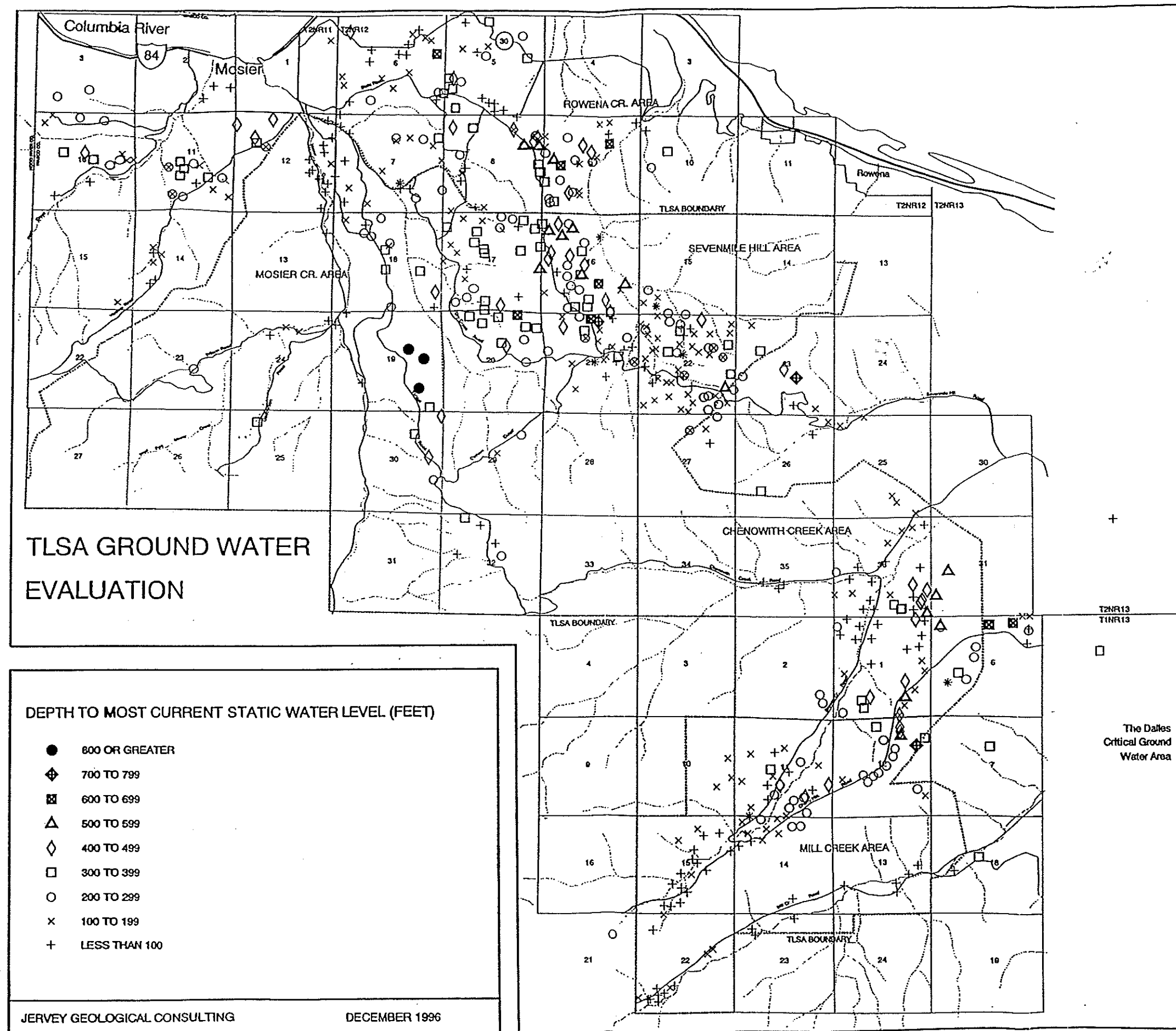
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

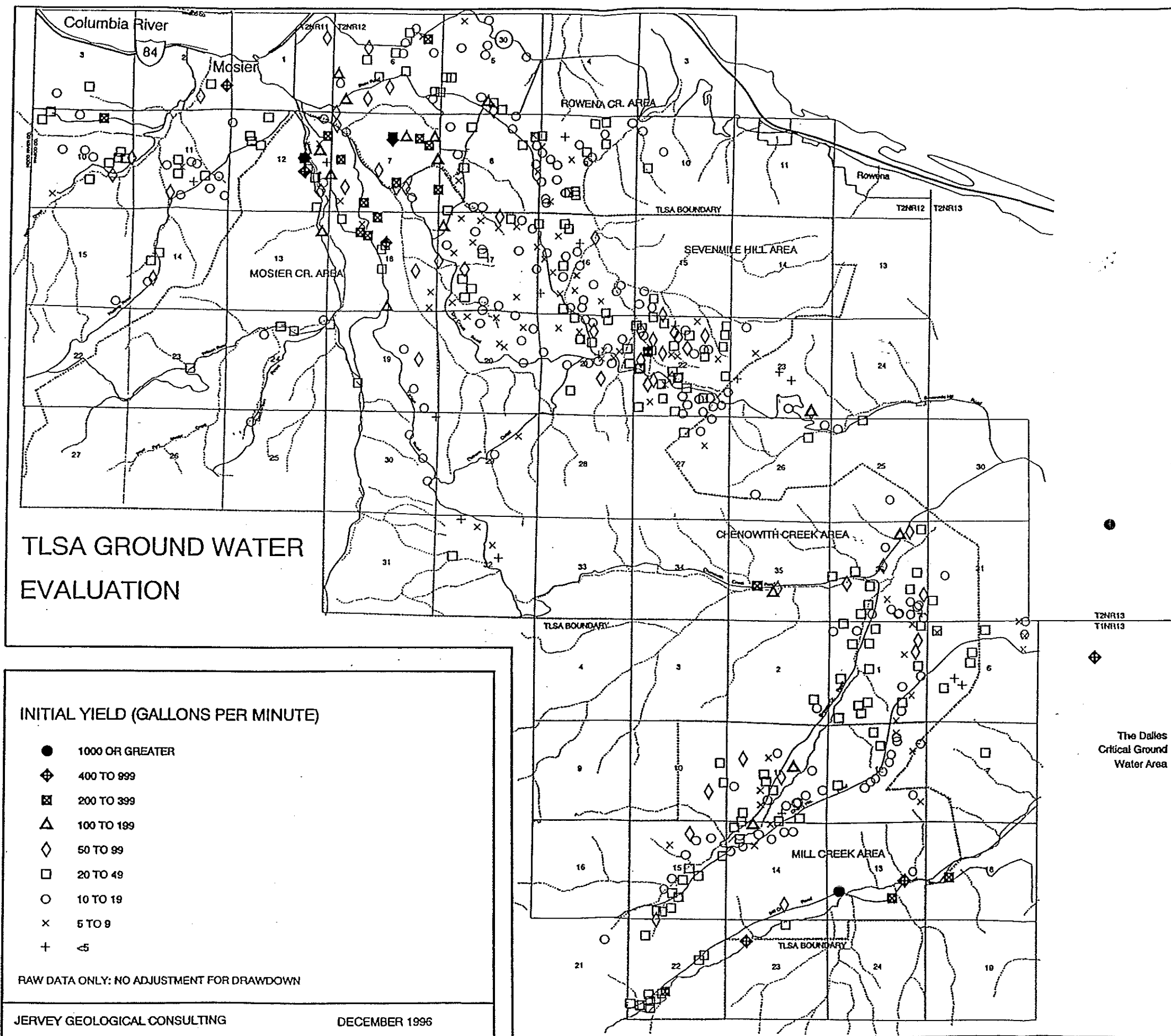
The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

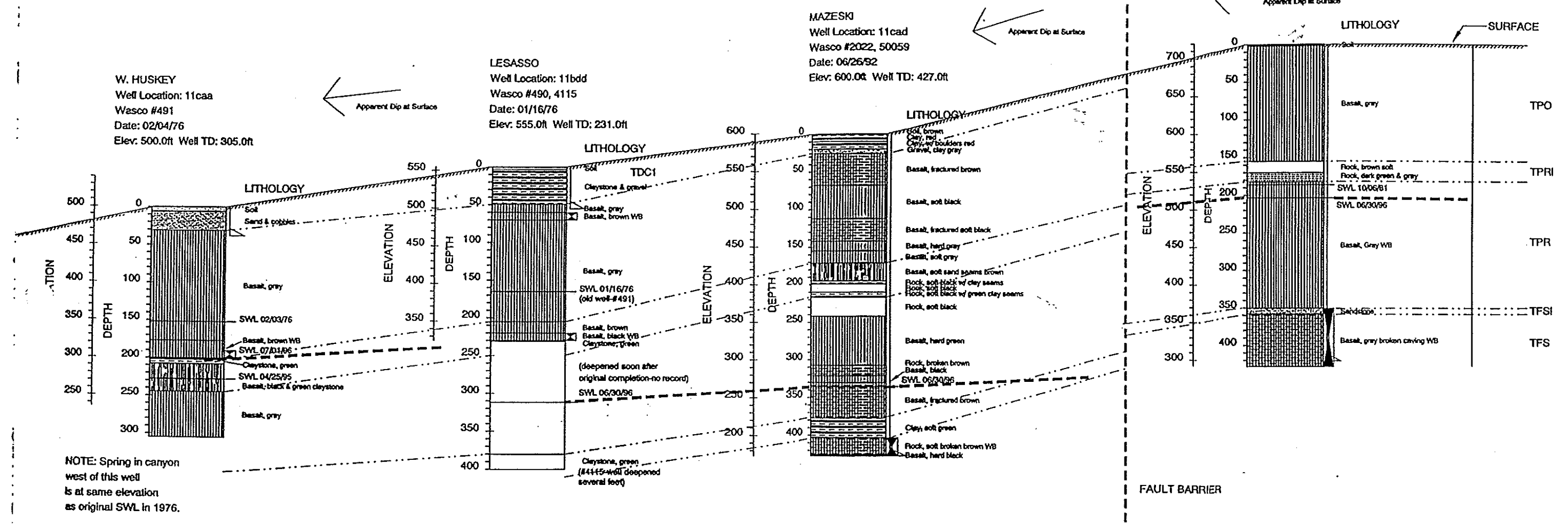
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



NOTE: Spring in canyon west of this well is at same elevation as original SWL in 1976.

TLSA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt



as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepenings (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

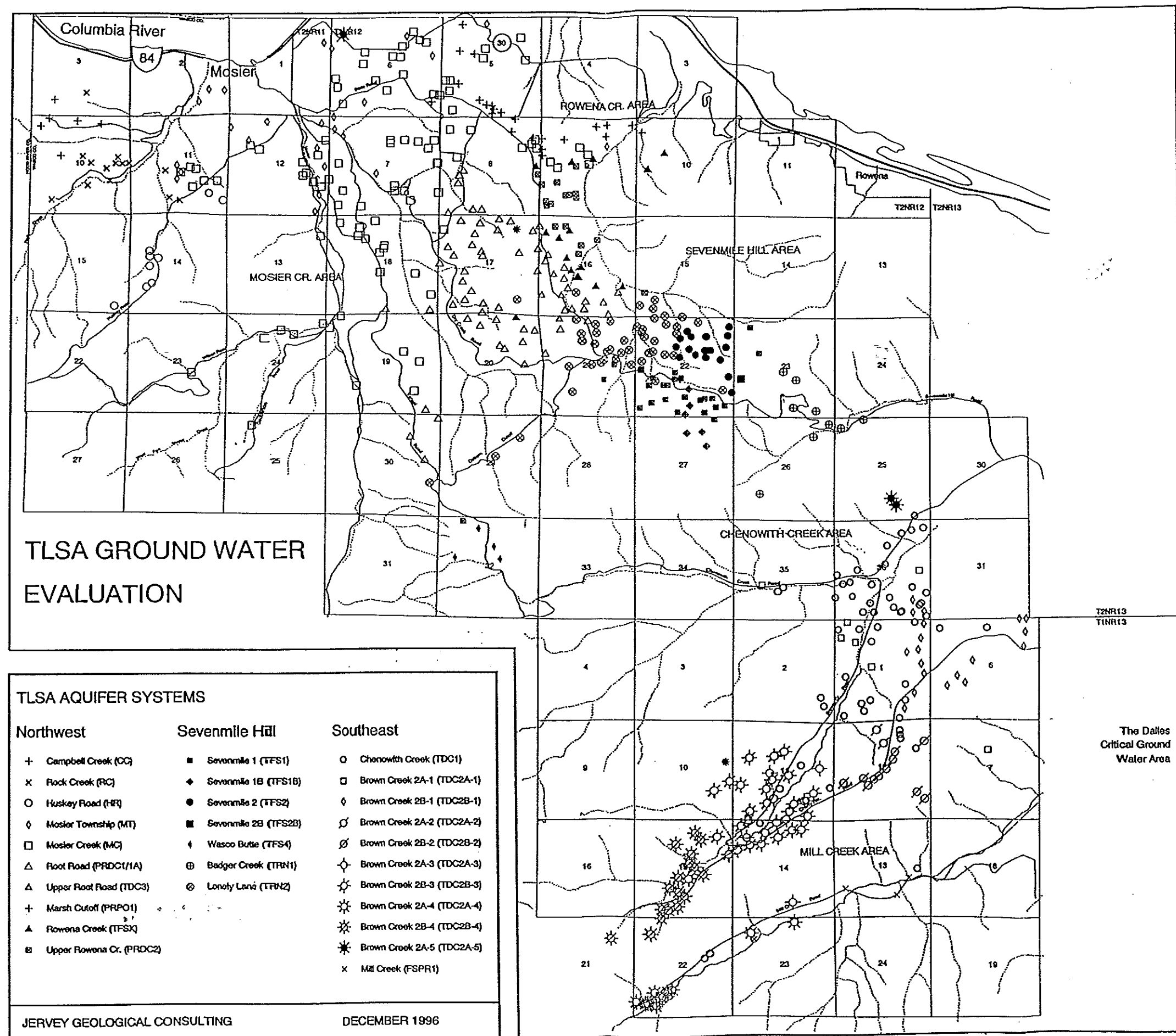
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DEPTH	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH H2O	# OF DEEPEENINGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	F	COMMENT
NORTHWEST TLSA														
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61 1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TFR	14	719	286	30	545	174	113	0	1	0	4	-26	56
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0	* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58 HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61 HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60 2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60 SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56 SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59
SEVENMILE HILL														
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57 HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53 ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52 SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*	* SIMILAR TO TRN2?
SOUTHEAST TLSA														
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56 1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.



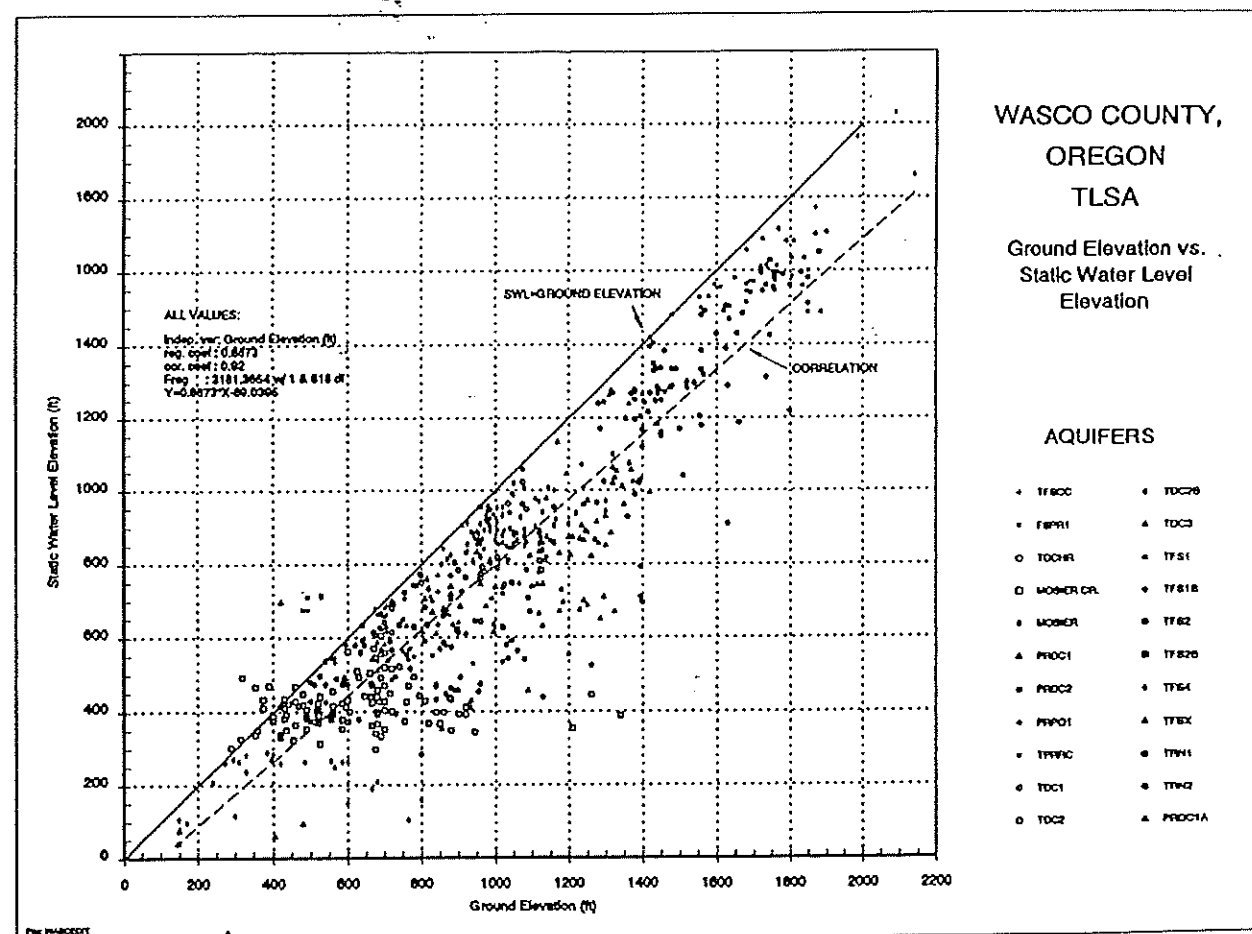


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.



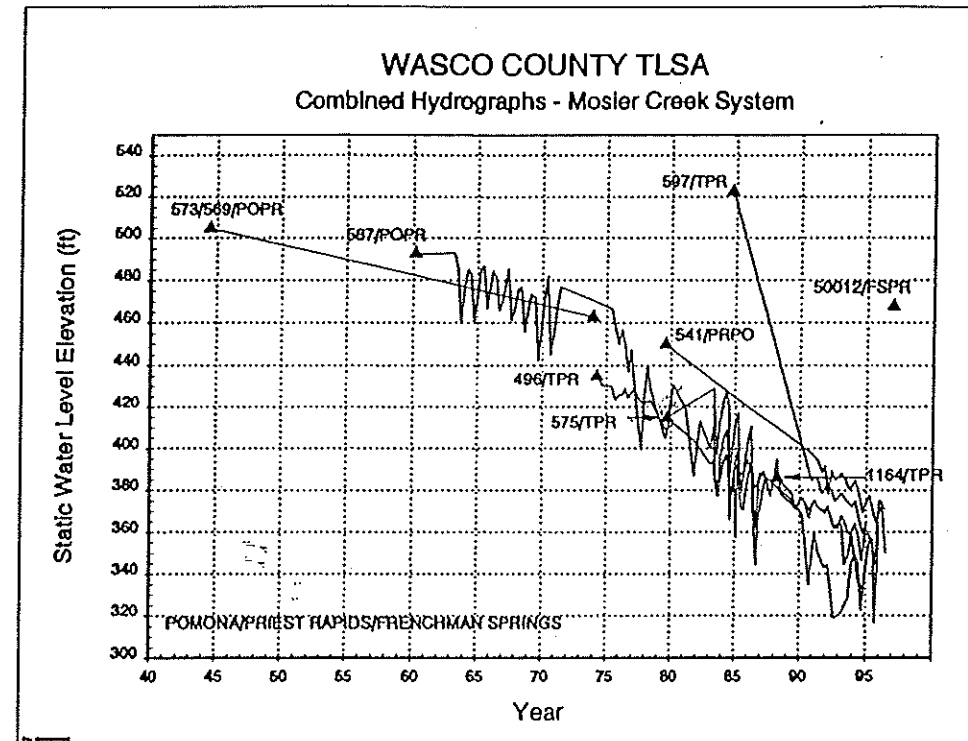


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

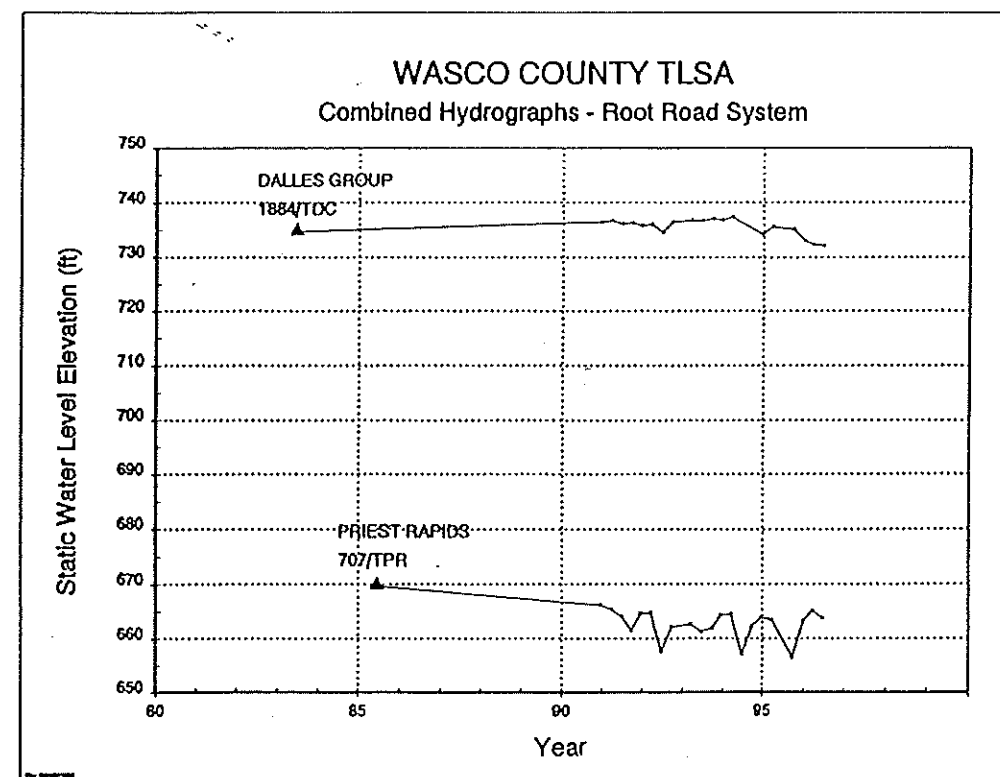


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

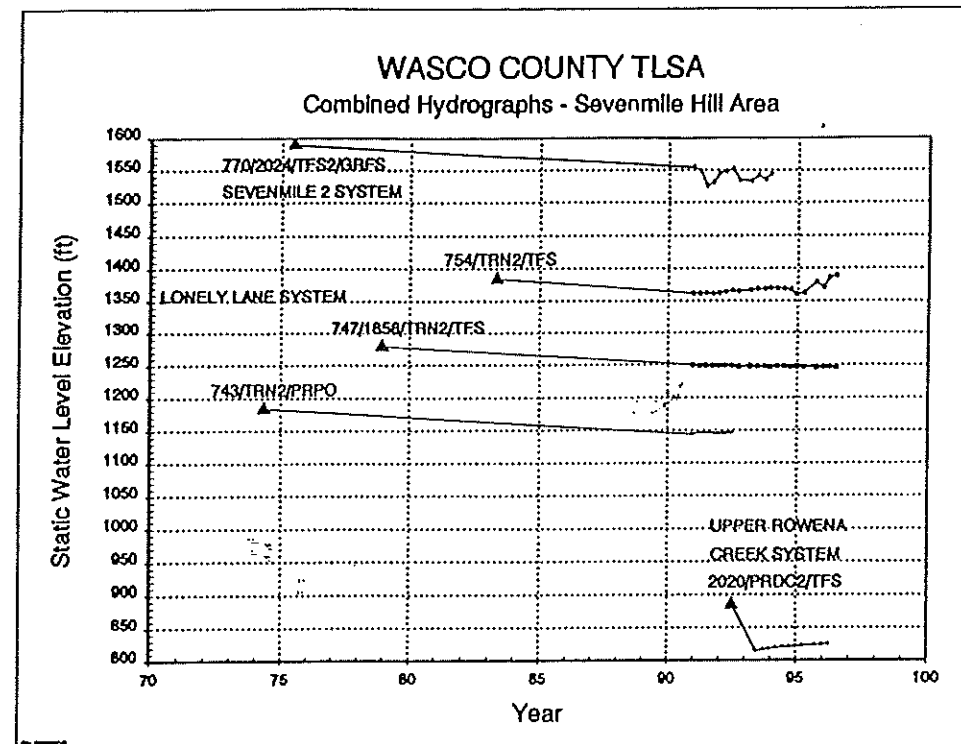


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

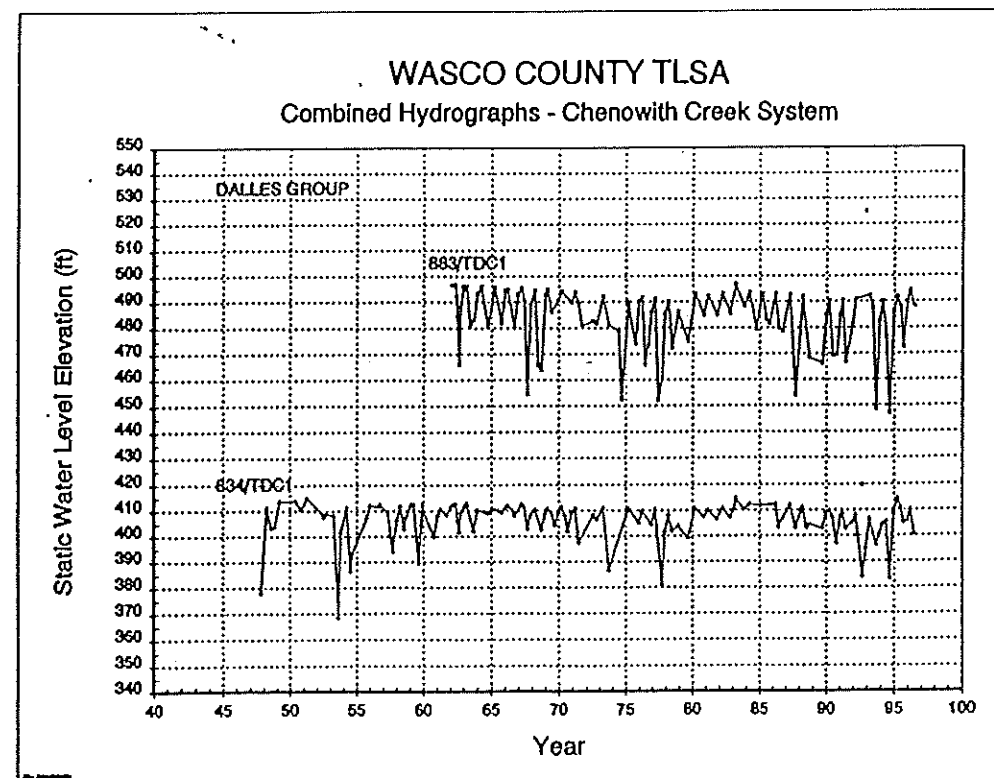


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

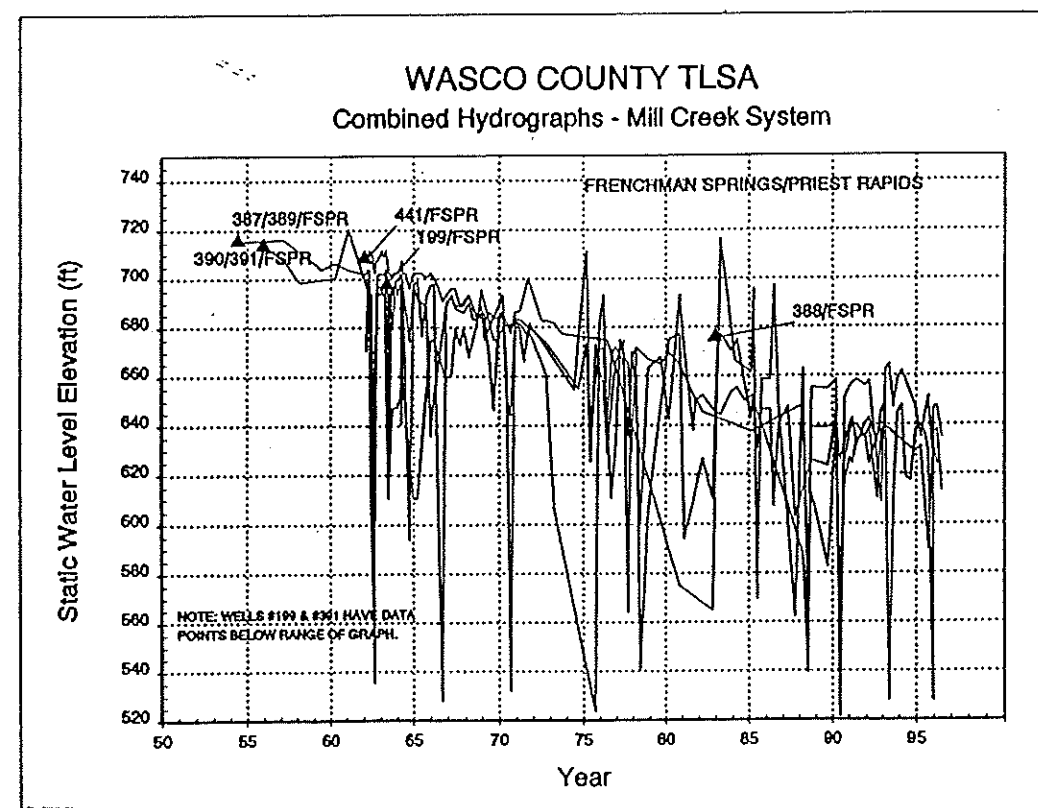


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no



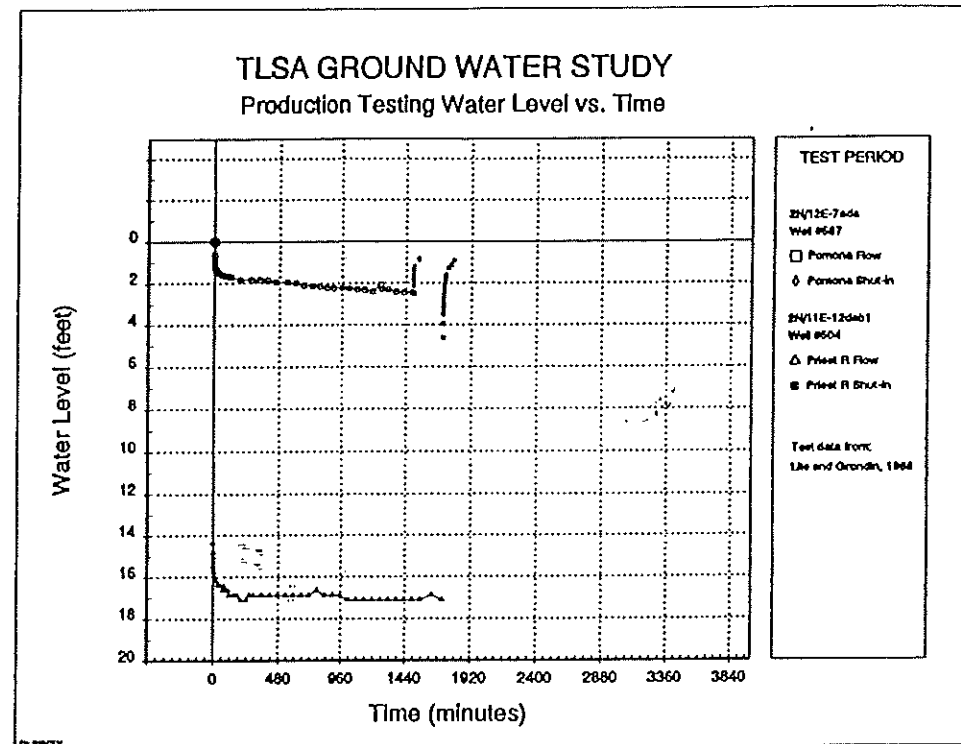


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

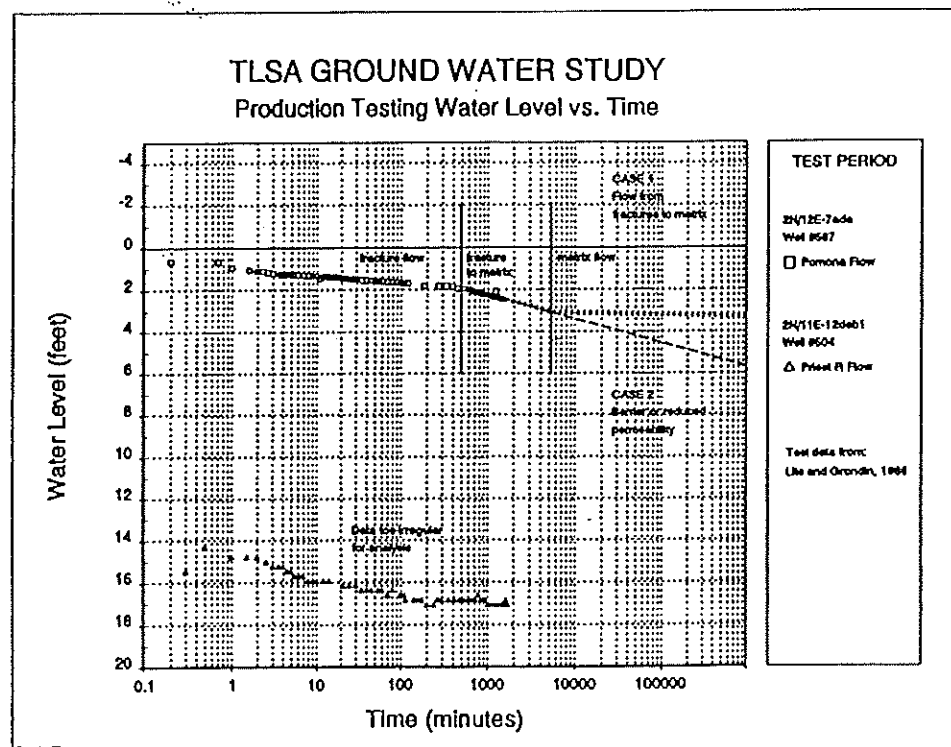


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

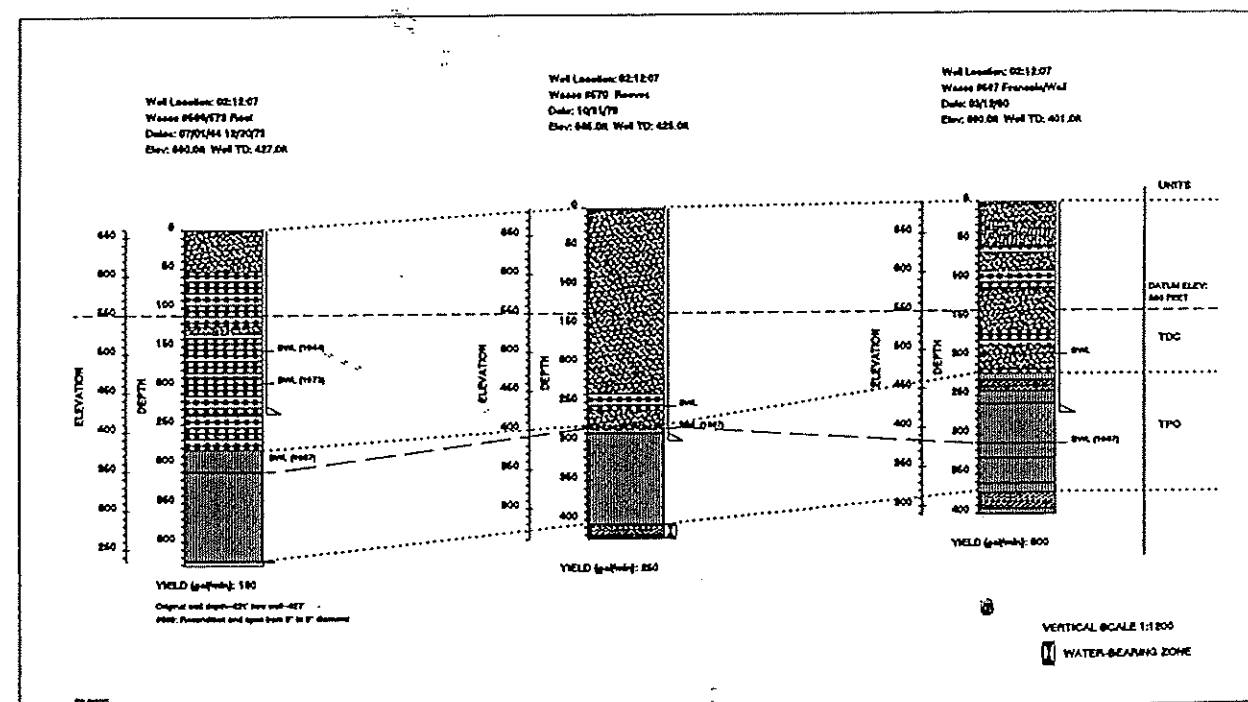


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

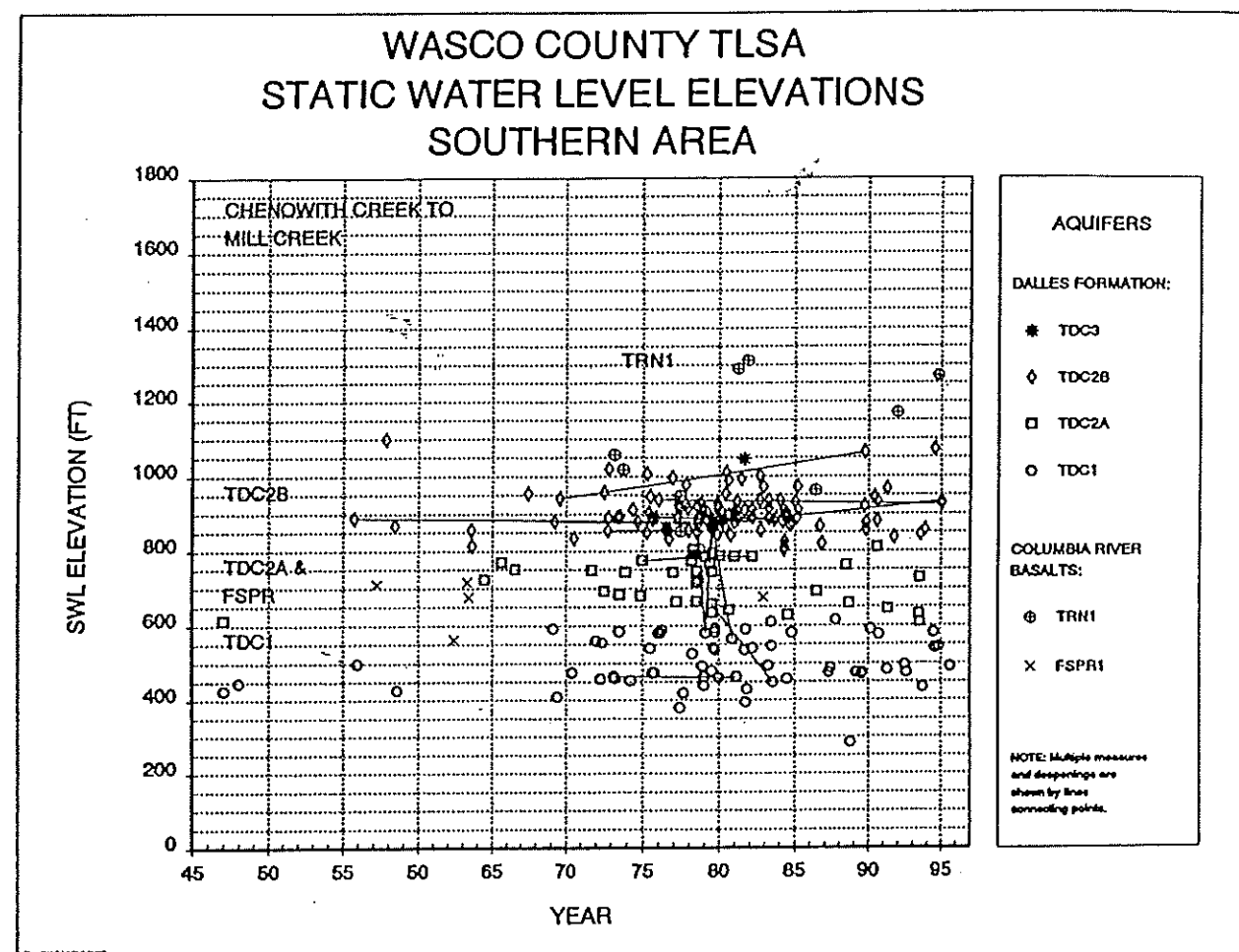


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

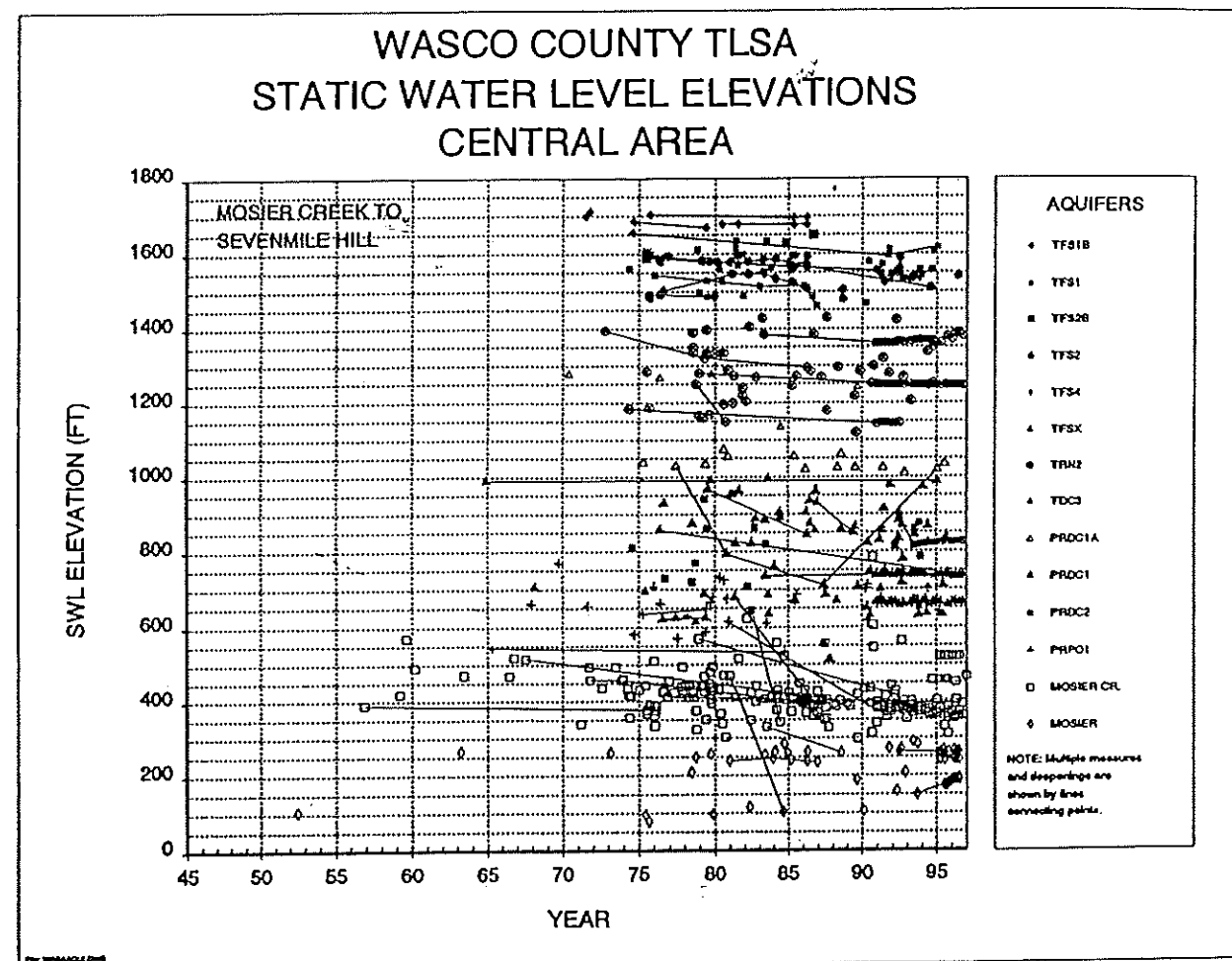


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.



significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPEMED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A

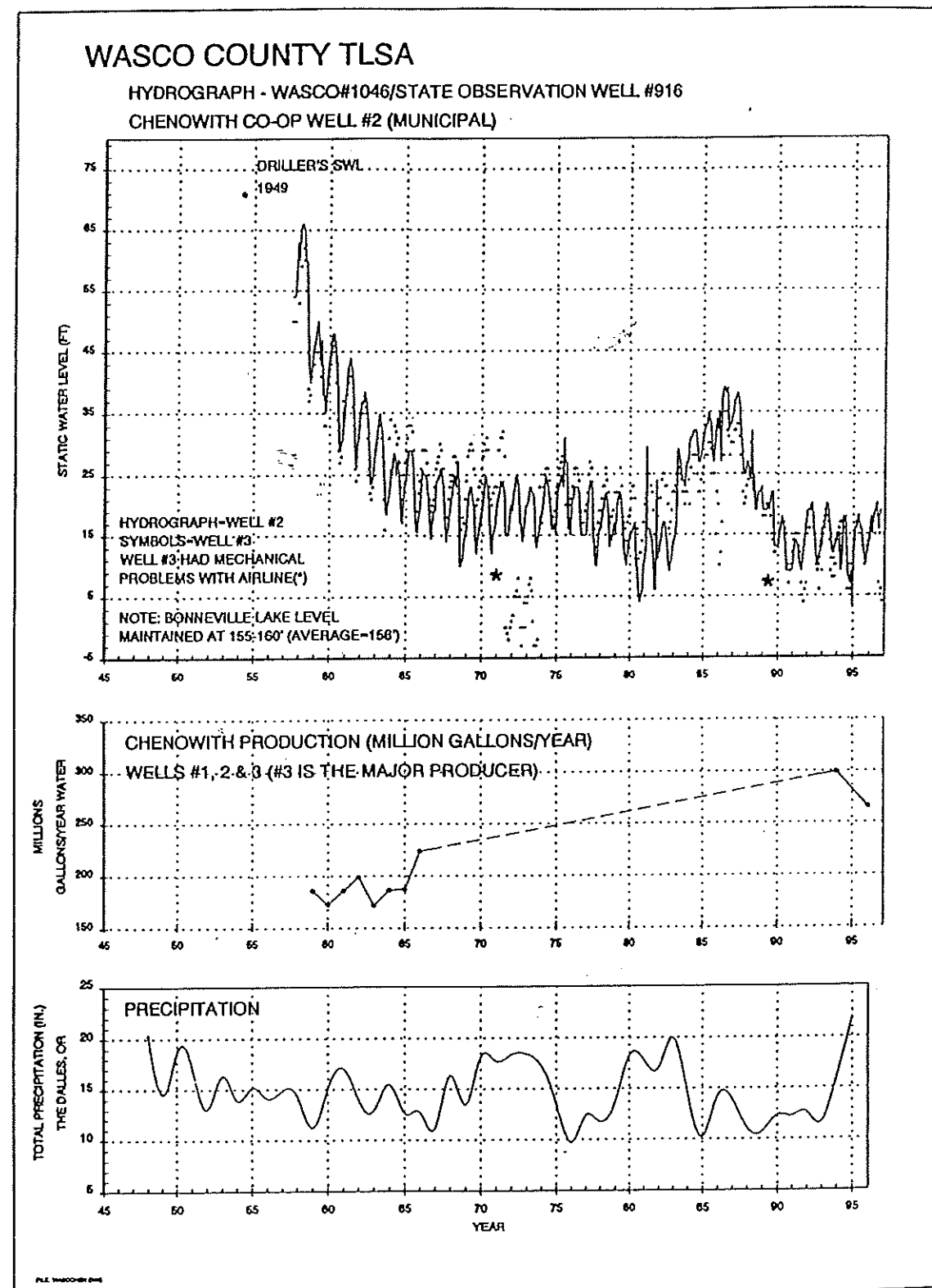


Figure 14. Chenowith Co-op water well data, 1949-1996.

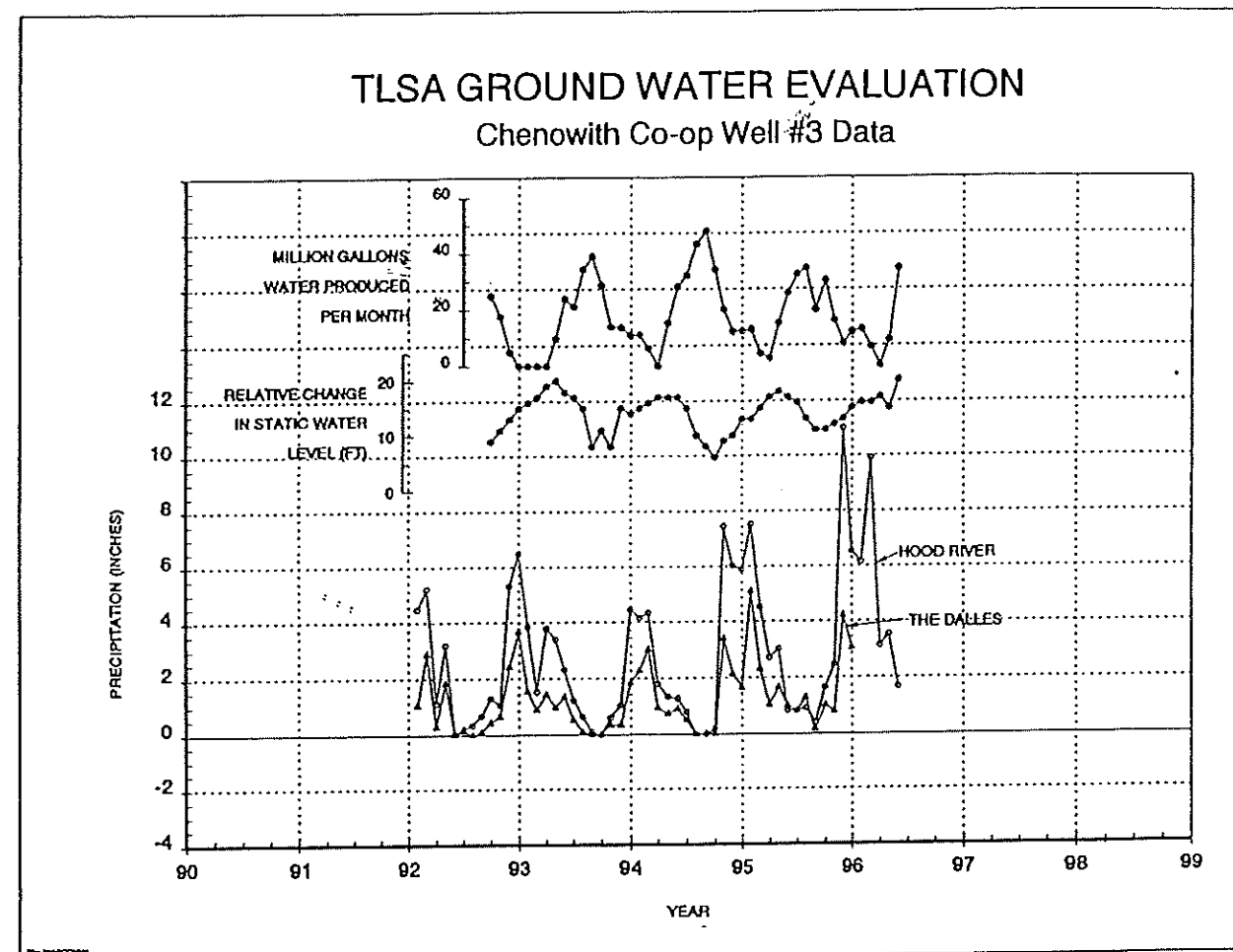


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepening may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepening in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepening is of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepening within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.



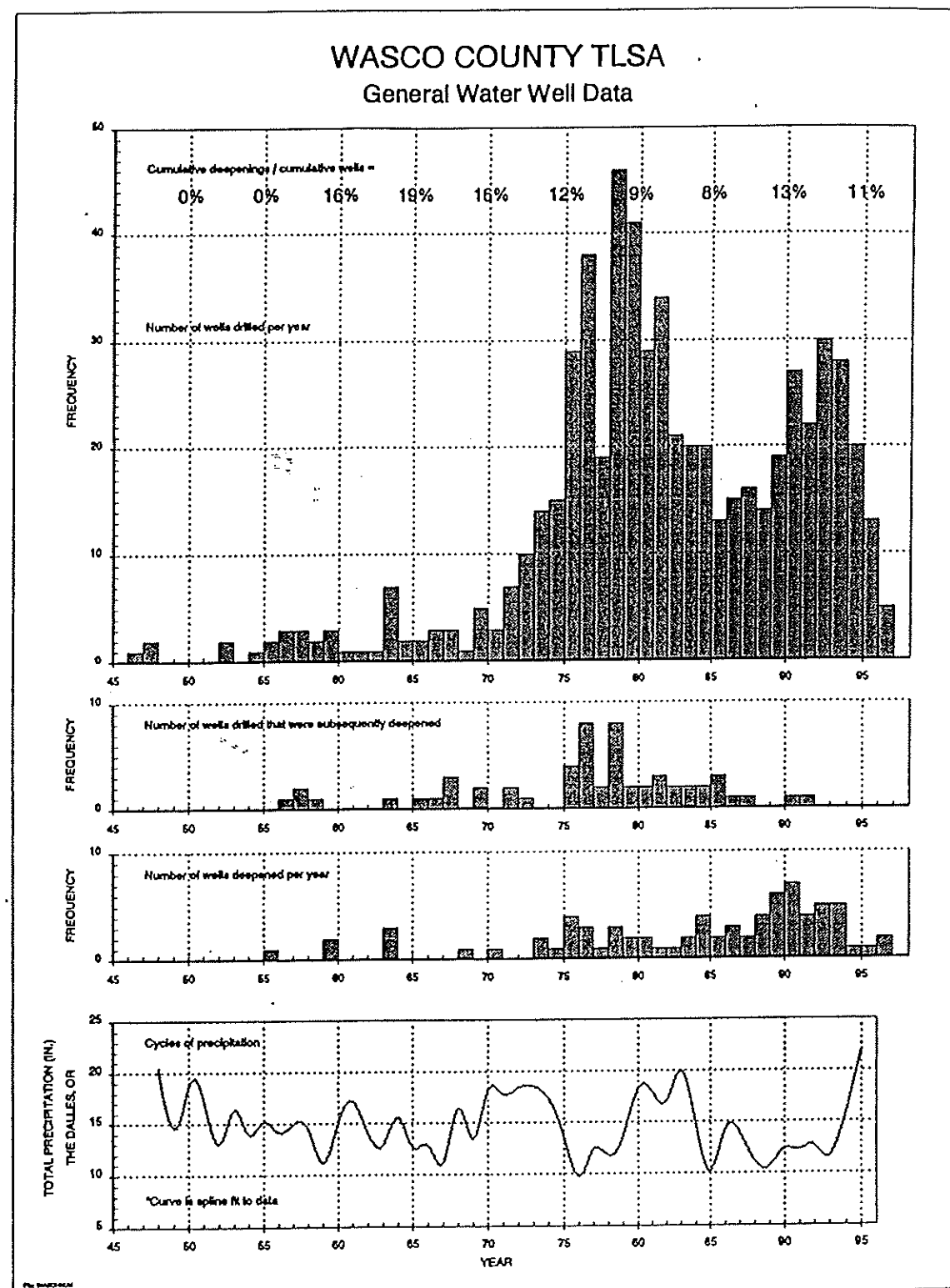


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

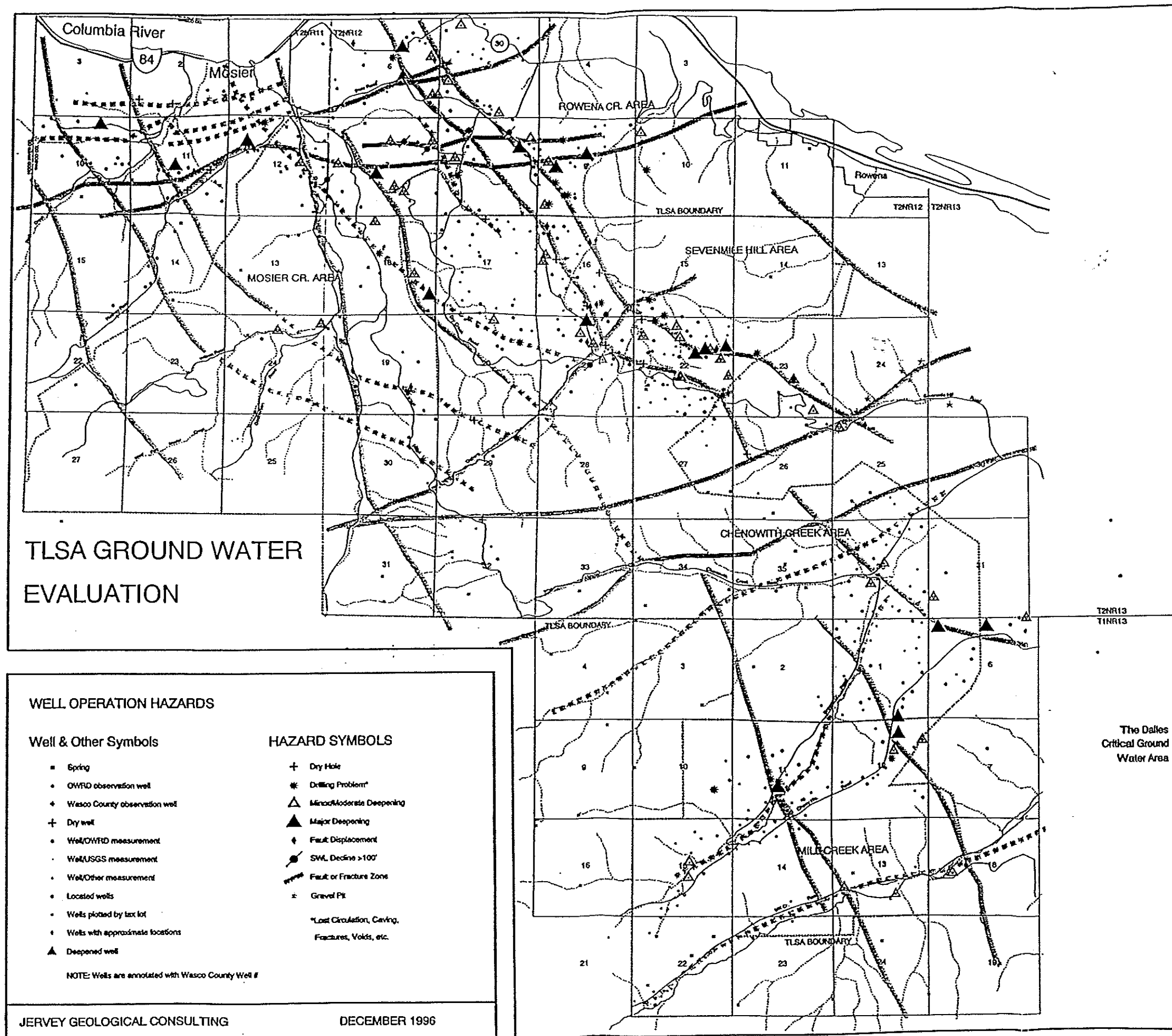




Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

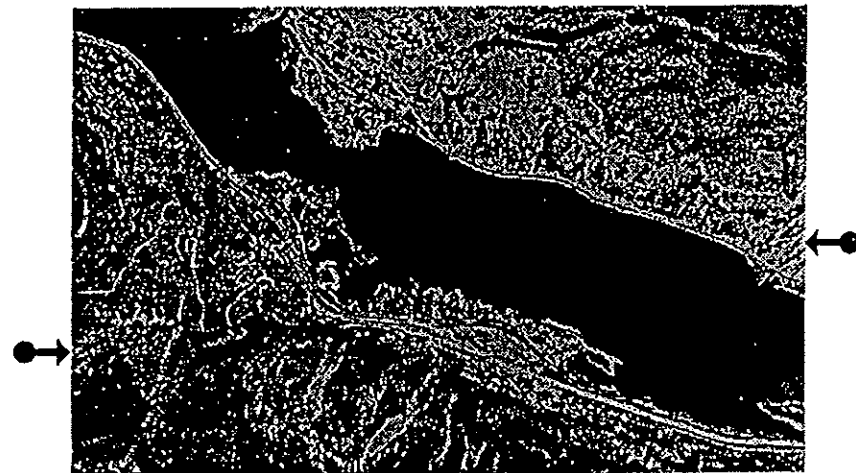


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

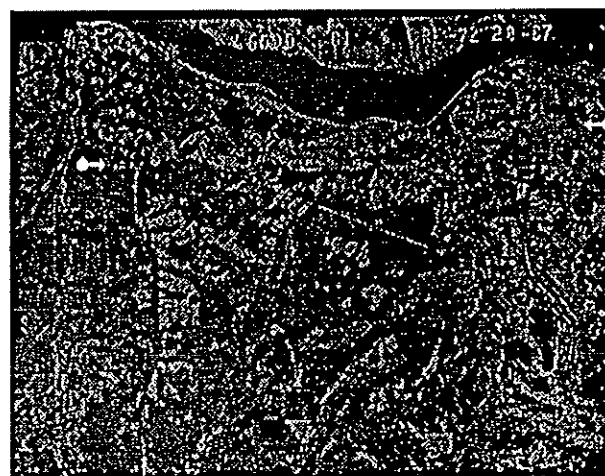


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.



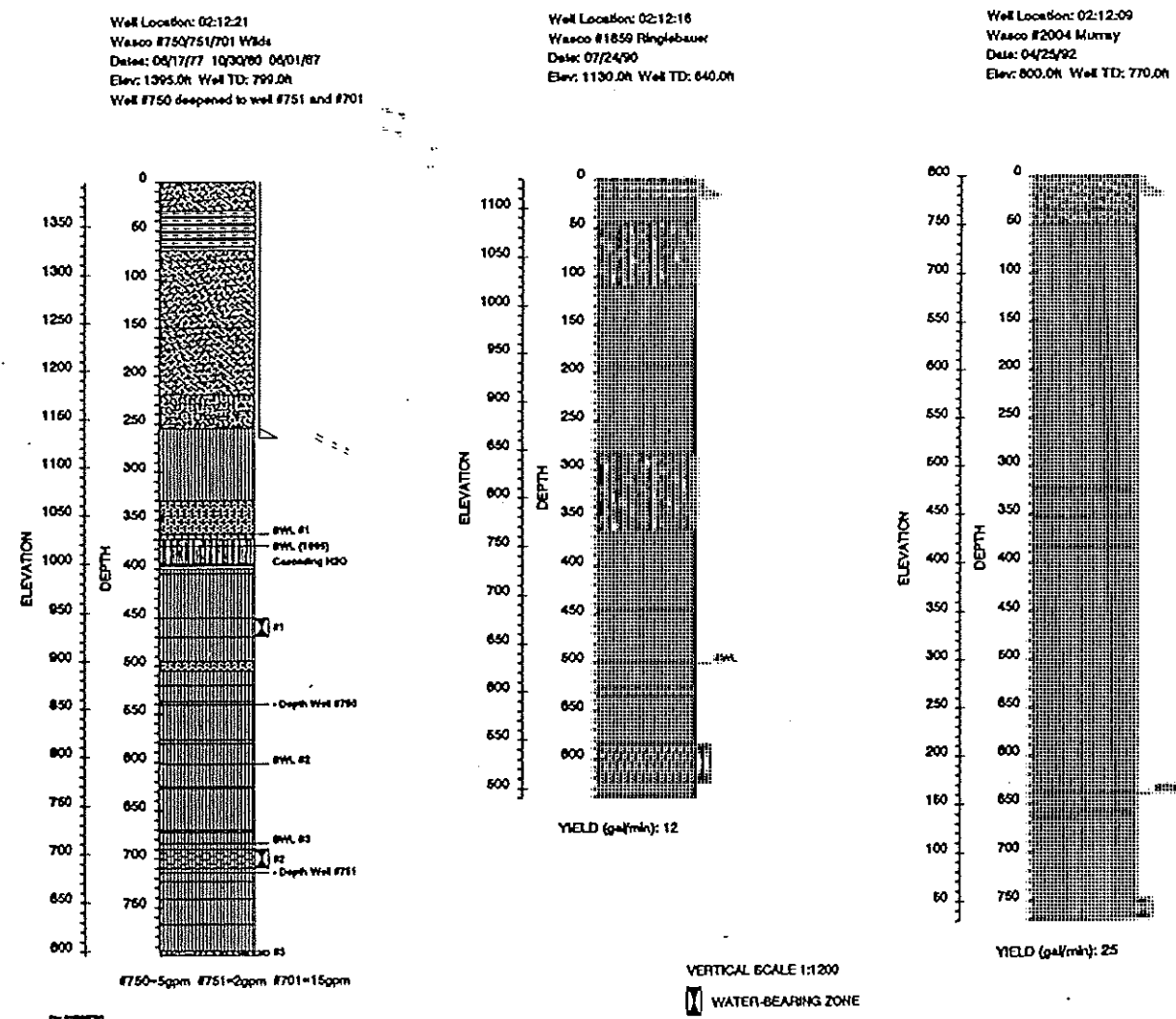


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

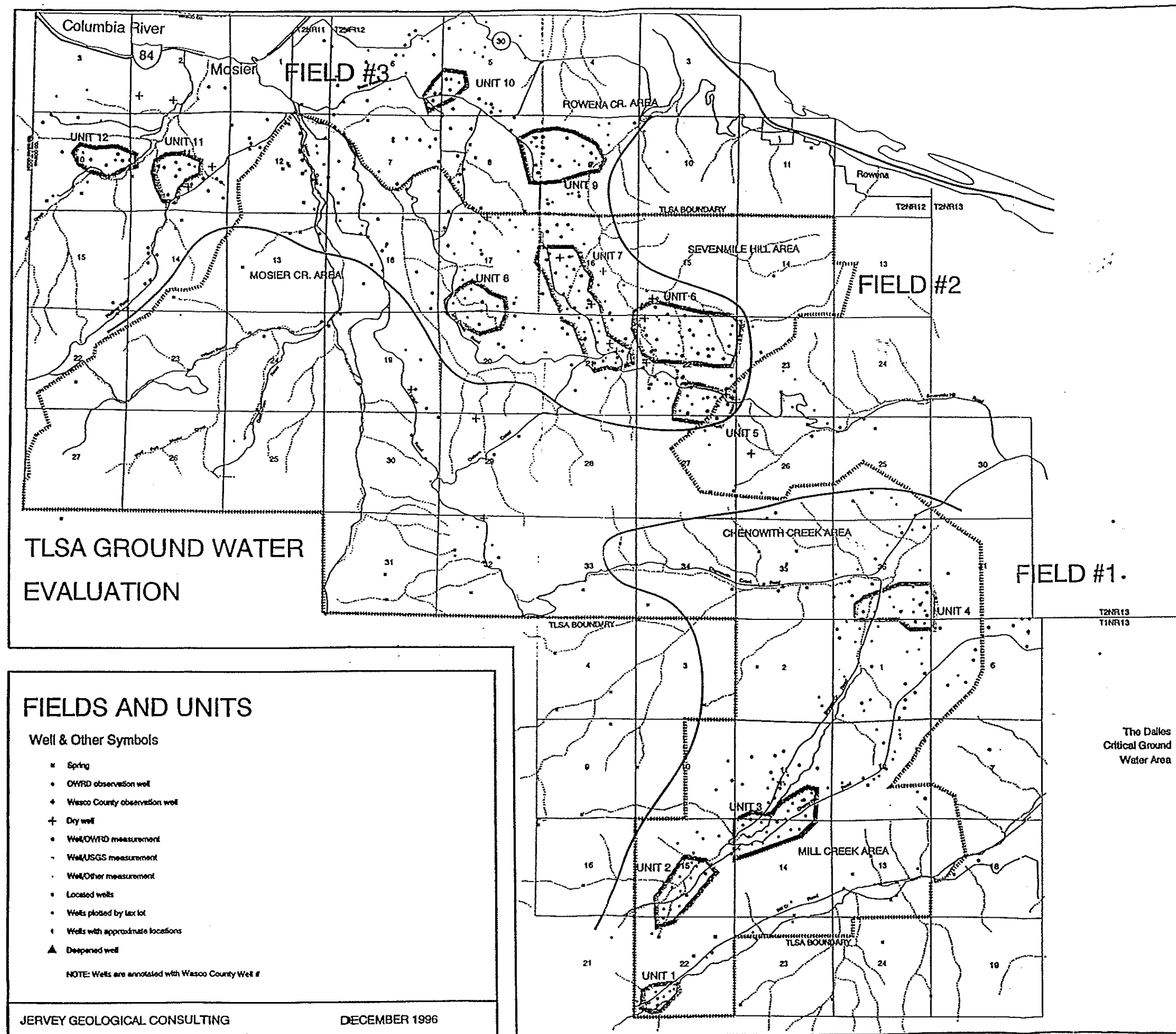
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.



REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by landowners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		AVERAGE	LOWER 1/3	DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	PER ACRES WELL	WELL DISTANCE FEET	WELL DISTANCE FEET		
1	TDC2A	8	49	6	388	318	3
2	TDC2A&D	12	142	12	604	416	4
3	TDC2B	19	212	11	653	478	5
4	TDC1&2B	17	177	10	708	491	5 HIGH
5	TPS1&1B	12	123	10	602	393	4
6	TPS2/TRN2	33	342	10	599	386	3 HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3 HIGH
8	PRDC1	9	138	15	798	580	8
9	PRPO1 HC TPSX	18	216	12	-	-	- HIGH
10	HC	7	68	10	-	-	-
11	MT/RC	7	97	14	-	-	-
12	RC	7	91	13	-	-	-

Table 3. Summary of well spacing in TLISA units.



than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

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Staff Wasco County Planning Office	Jim Johns/Staff Chenoweth Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.



**EXHIBIT 5**

**Soil Information – 49C and 50D**

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY					
				(PCT)	4	10	40	200		INDEX				
0-7 IL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		IML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 IWB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS K	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	TOTAL (IN)	GRP	FROST ACTION
NONE			>6.0							10-60	HARD			MODERATE

SANITARY FACILITIES					CONSTRUCTION MATERIAL				
SEPTIC TANK	SEVERE-PERCS SLOWLY				FAIR-AREA RECLAIM, THIN LAYER				
ABSORPTION FIELDS					ROADFILL				
SEWAGE LAGOON AREAS	SEVERE-SLOPE				SAND				IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK				GRAVEL				IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE				TOPSOIL				FAIR-SLOPE
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER								
BUILDING SITE DEVELOPMENT					WATER MANAGEMENT				
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE				POND RESERVOIR AREA				SEVERE-SLOPE
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE				EMBANKMENTS, DIKES AND LEVEES				SEVERE-PIPING
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE				EXCAVATED PONDS, AQUIFER FED				SEVERE-NO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE				DRAINAGE				DEEP TO WATER
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION				IRRIGATION				SLOPE, ERODES EASILY
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE				TERRACES AND DIVERSIONS				SLOPE, ERODES EASILY
					GRASSED WATERWAYS				SLOPE, ERODES EASILY



RECREATIONAL DEVELOPMENT			
CAMP AREAS	MODERATE-SLOPE, DUSTY	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	MODERATE-SLOPE, DUSTY	PATHS AND TRAILS	SEVERE-ERODES EASILY

[illegible]

ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY COMMON TREES	SITE INDEX	TREES TO PLANT
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	170	PONDEROSA PINE

Index of potential productivity @ avg. total ht. and 100yrs.

74 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac.  $\triangleleft$

A = slight or no limitations.

U.S. Avg. = 41 ft<sup>3</sup>/ac/yr.

[illegible][illegible]

POTENTIAL NATIVE PLANT	COMMONITY	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	
IDAHO FESCUE	FEID	45
BLUEBUNCH WHEATGRASS	AGSP	10
SANDBERG BLUEGRASS	POSE	5
ARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	QUGA4	5
PONDEROSA PINE	PIPO	5

950  
800  
450

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

50D WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY			
				(PCT)	4	10	40	200		INDEX			
0-7	1L	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28	1L, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44	1L, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	1UWB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY		
											STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE		ROADFILL	FAIR-AREA RECLAIM	THIN LAYER	SLOPE
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE		GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			DIKES AND LEVEES			
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS	SEVERE-NO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			AQUIFER FED	DEEP TO WATER		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			DRAINAGE	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
				TERRACES AND DIVERSIONS			
				GRASSED WATERWAYS	SLOPE, ERODES EASILY		



## RECREATIONAL DEVELOPMENT

SEVERE-SLOPE		SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS	
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

[illegible]

WOODLAND SUITABILITY

[illegible]

## WINDBREAKS

[illegible]

## WILDLIFE HABITAT SUITABILITY

[illegible]

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)
IDAHO FESCUE	FEID	45
SANDBERG BLUEGRASS	POSE	5
BLUEBUNCH WHEATGRASS	AGSP	10
NARROWLEAF BALSAMROOT	BASA3	2
SANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	OUGA4	5
PONDEROSA PINE	PIPO	5
POTENTIAL PRODUCTION (LBS./AC. DRY WT):		
FAVORABLE YEARS	950	
NORMAL YEARS	800	
UNFAVORABLE YEARS	450	

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## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

## **EXHIBIT 6**

### **Guide for Using Soil Surveys**



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**

GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.



## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty

Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.



Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:

<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0



Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.

A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	



Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.

These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.



#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.

Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.

The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.



Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.

Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.



Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.



## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.

selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other



important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

#### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.

XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.



FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.

## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.



TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

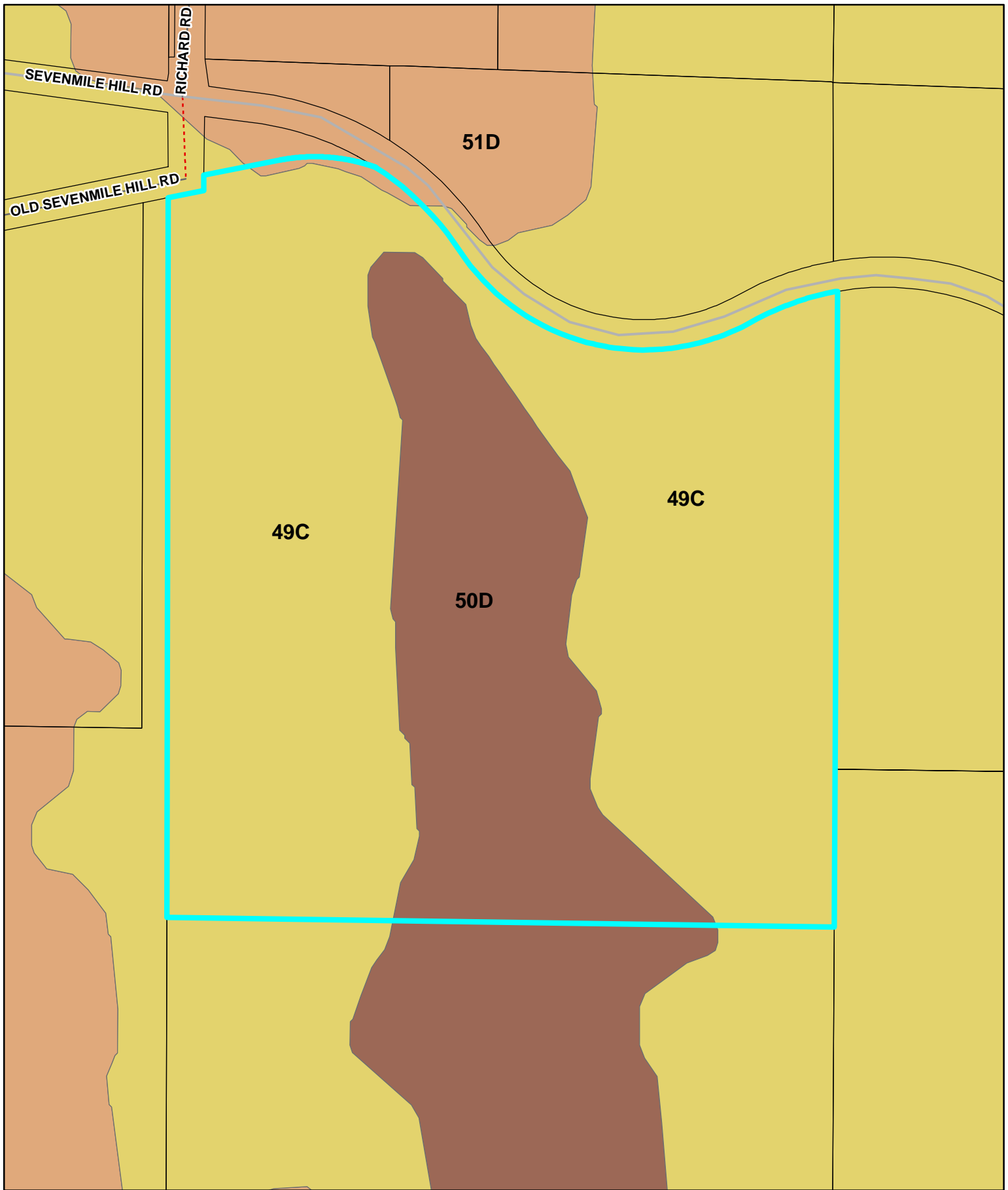
Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982


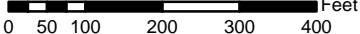
## **EXHIBIT 7**

### **Soil Map**



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

# Soil Map

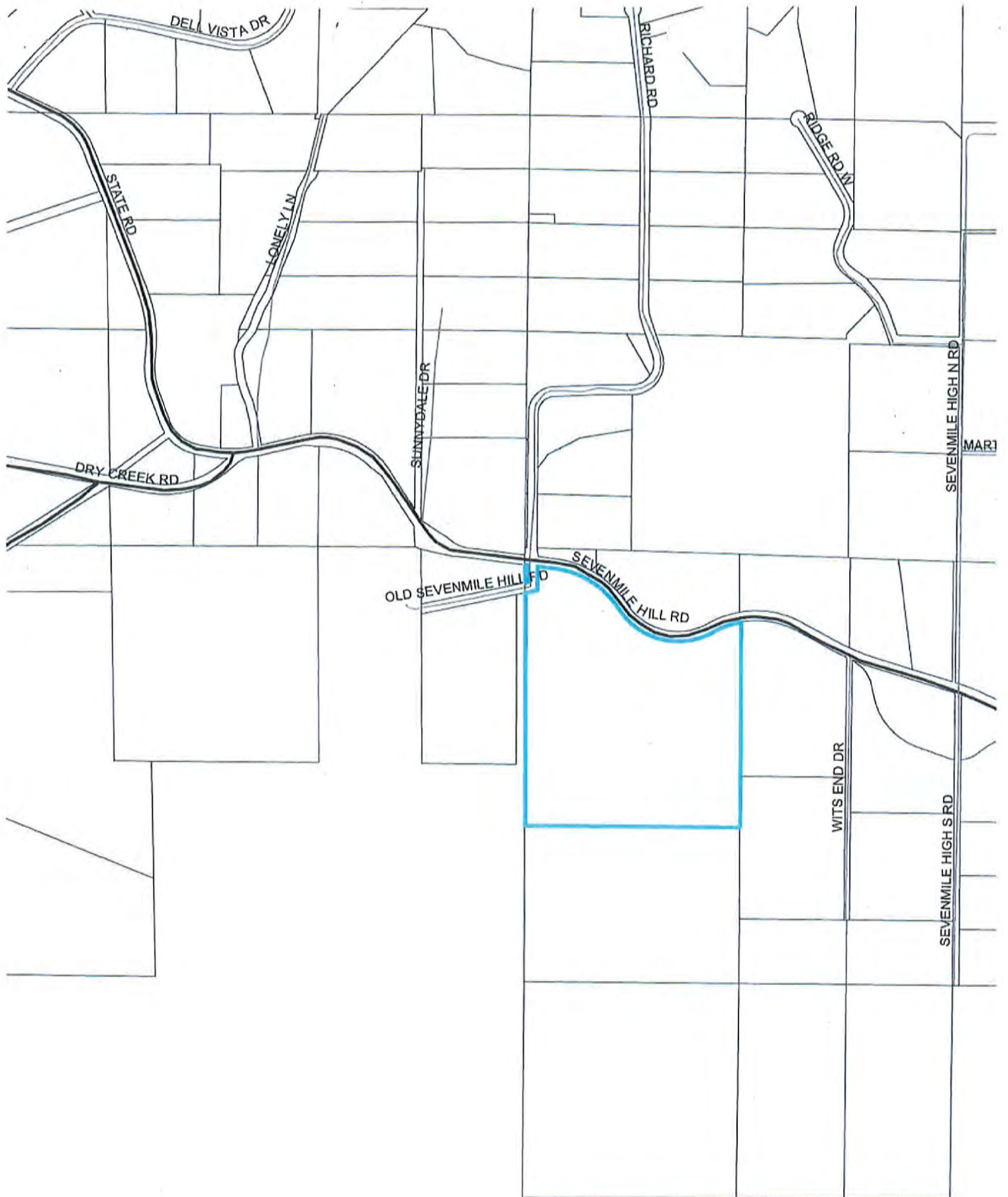



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

## **EXHIBIT 8**

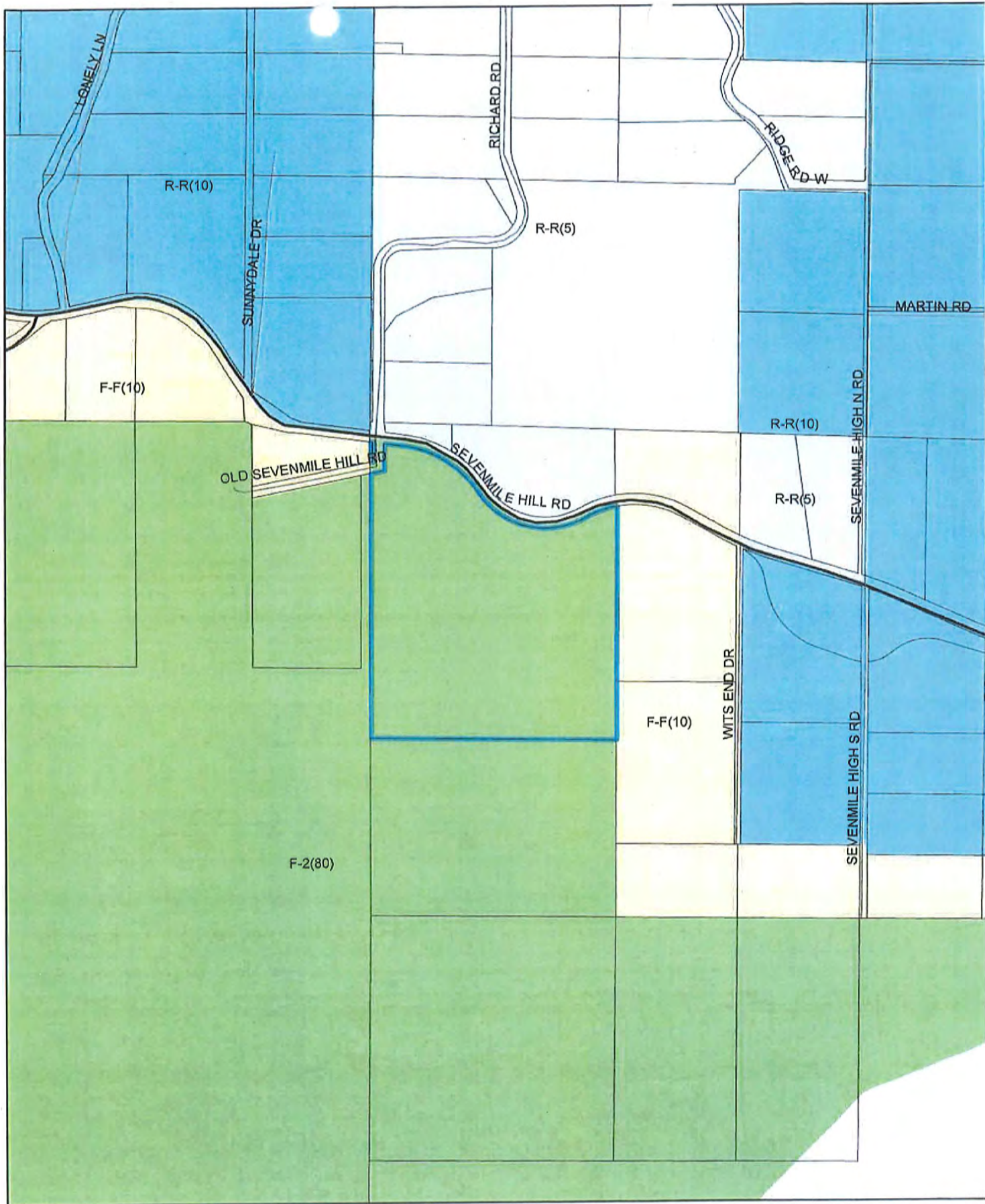
### **Submitted Maps**











N

Board of County Commissioners  
March 16, 2022

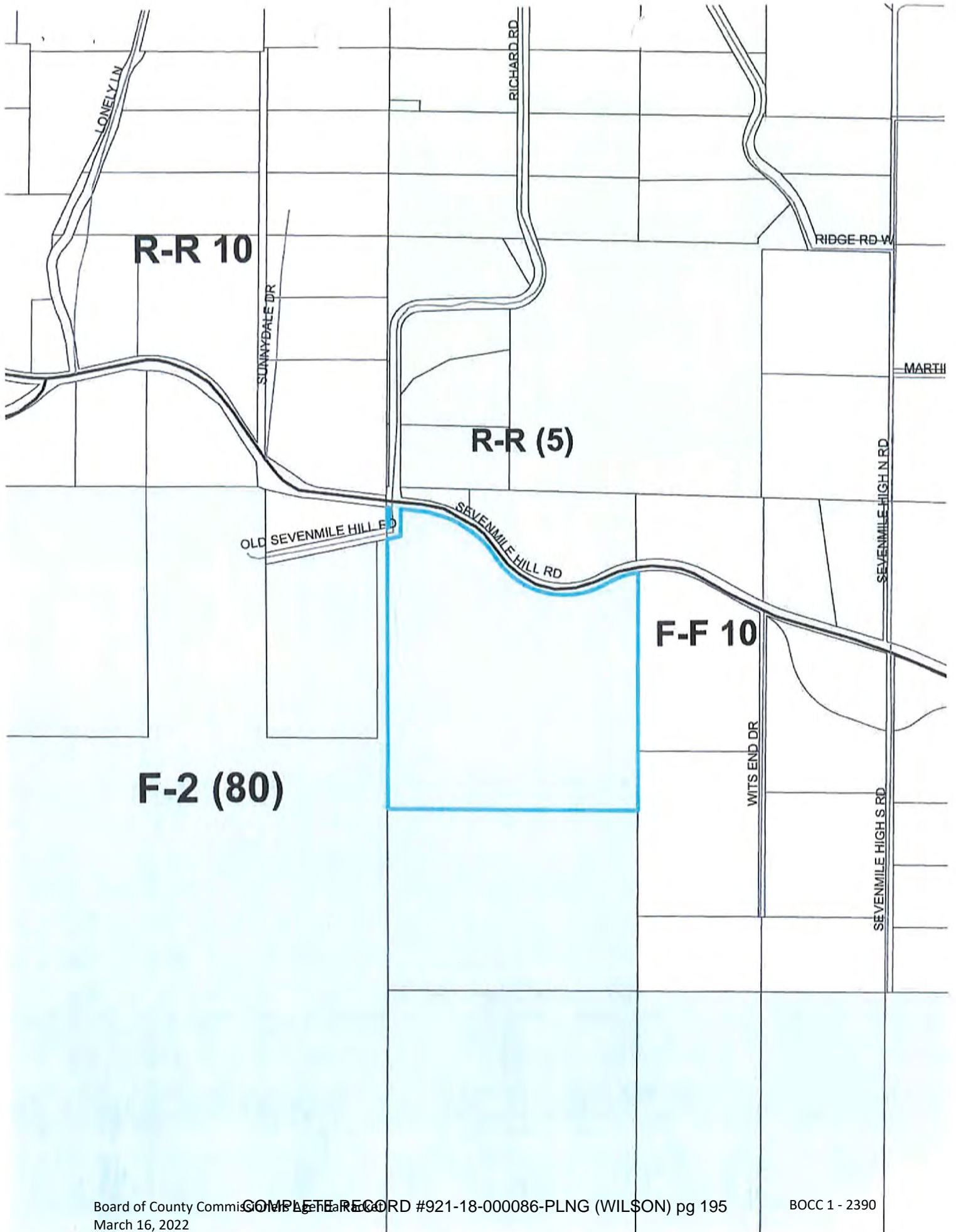
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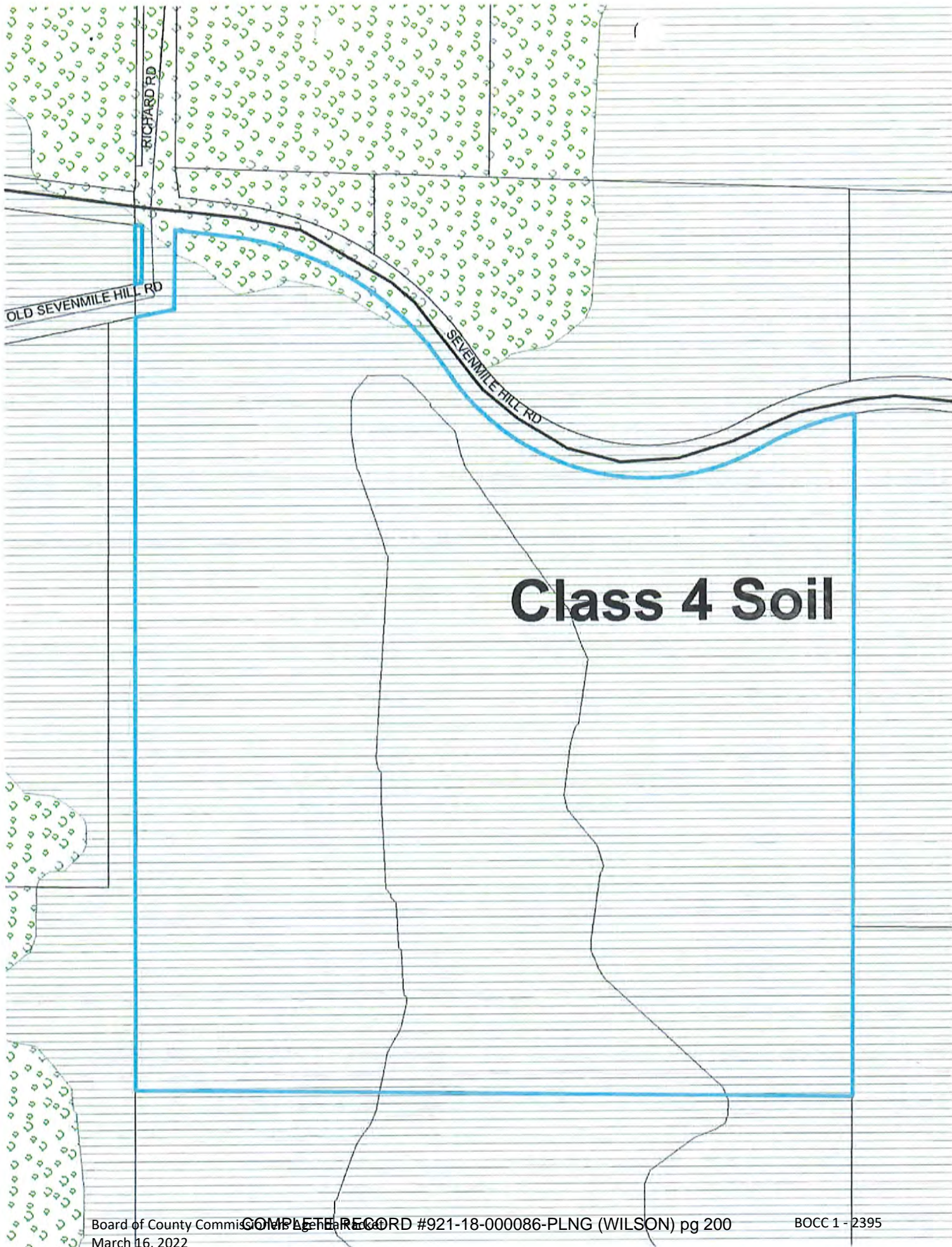




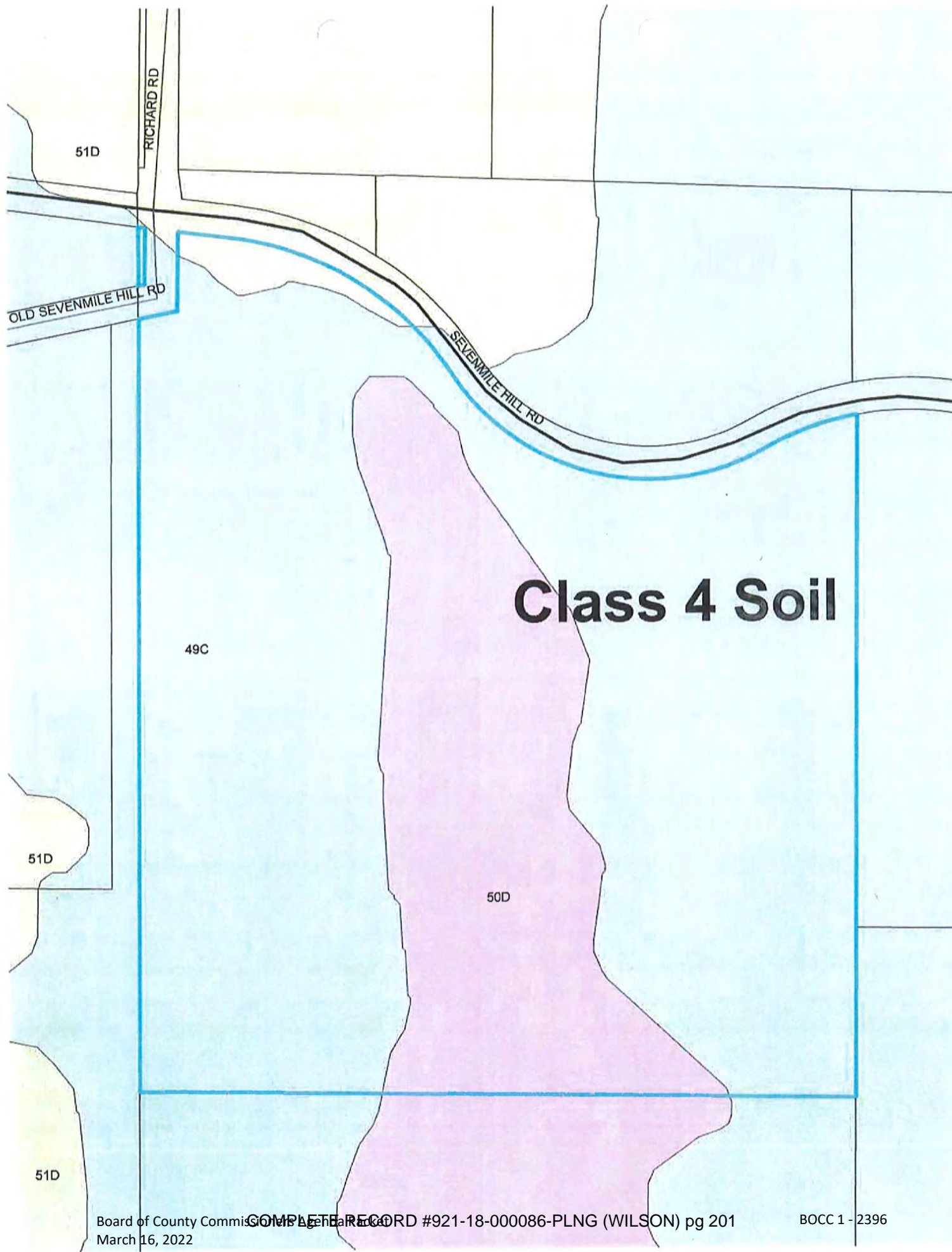






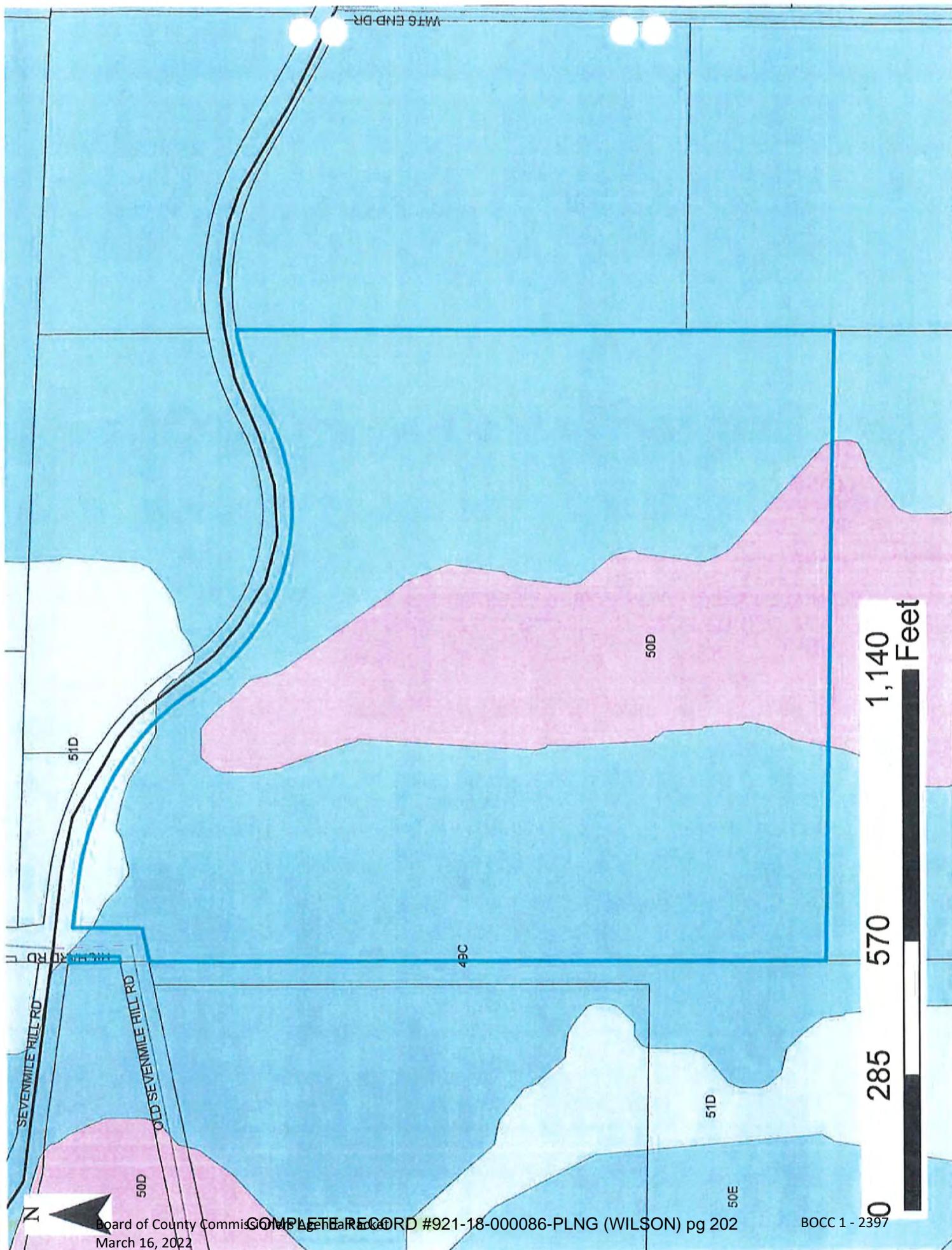






# Class 4 Soil





May 28, 2019

Dear Wasco County Board of Commissioners,

RE: File # 921-18-000086-PLNG: Application for a Comprehensive Plan Amendment, Exception to Statewide Planning Goal 4; and Zone Change from Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

I agree with the concerns contained in the Staff Report presented to the Planning Commission on April 2nd and the reasons for denial of the application for a rezone from Forest F-2 (80) to Forest Farm F-F (10). As the Staff Report presented to them differs from the Staff Report presented to you, I will be quoting from the earlier report.

The page numbers below correspond to Attachment C - Staff Report presented at the Planning Commission meeting (which differs from Attachment C – Staff Report to the Board of Commissioners on June 5<sup>th</sup>).

Attachment A – Staff Recommendation and Planning Commission Options contained the 4 concerns discussed below. The staff took a neutral position.

**Staff concern 1. Conducting forestry operations are not currently impracticable (Goal 4)**

**Staff report p. 37 I was involved in the Transitional Lands Study Area (TLSA) Study which is referred to in the report. It was an extensive long term study (1993-1997) that studied development concerns in northern Wasco County including water availability, fire hazards, conflicts with wildlife, etc. It did not recommend further development of Seven Mile beyond the existing zoning. The only rezoning on Seven Mile that resulted was described as “housekeeping” by the Planning Director at the time and included 8 parcels north of Seven Mile Hill Rd. being rezoned as RR-10 from FF-10 to avoid the conditional use review requirement. Page 17 of TLSA Study, Exhibit 1, summarizes the recommendation.**

**Forest land including this one was not rezoned due to its value as forest land. The TLSA Study recommendations integrated future development with resource protection.**

**The soils, slope and other information indicate this property is capable of being used for commercial forest uses. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.**

**“DENIAL FINDING: The soils, data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time.” “A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.”**

**p.42 The Comprehensive Plan definition of the purpose of the Farm Forest designation is that it is limited to Class 6 or 7 soils, which are not on this parcel at all.**



**P. 42 The soil types (Class 4) on this property support commercial timber. At 57.2 cubic feet per acre/per year it significantly exceeds the requirement for forestry use lands to exceed 20 cubic feet per acre per year.**

“DENIAL FINDING: The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used a part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses... For the two soil types on the subject property, both are listed at “4A”, where 4 is the number of cubic meters/hectare/year, and A is “slight or no limitation”. Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per are per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.”

**The surrounding properties are tree covered. The fact that the current owner is not using most of this property for forest purpose and hasn’t replanted the open field (or let it grow back naturally) doesn’t make it less valuable as forest land.**

**The conversion of this property would result in further encroachment of residential use into resource zones. The next property owner will want to do the same thing and how do you deny that? You could be setting a precedent. Could the same applicant use this rezone as a reason to rezone his other 69 acres?**

**Adding more residences increases conflicts with accepted forest practices which are protected by Oregon law under the Farm and Forest Practices Act.**

**Proximity to existing rural residential areas is not a valid reason to say that the property is irrevocably committed.**

**In 2013 there was an application by Ken Thomas and others to rezone this property and several adjacent parcels (totaling 287 acres and the creation of 22 potential lots). p. 6 It was denied by the County Commission after they received a letter from Department of Land Conservation and Development (DLCD) in strong opposition to this rezone due to its value as forest land. DLCD rejected the arguments for a rezone (including the being physically developed and irrevocably committed arguments) and recommended that the existing plan and zone designations be retained. At the County Commission meeting there were also concerns regarding fire safety and water supply.**

**p. 12 The applicant owns 69 adjoining acres of forest land for a total of 109 acres. He could use the exact same arguments to rezone that if you allow this. How could you deny it if you allow this?**

**The area is not irrevocably committed to residential use. At the April 2<sup>nd</sup> meeting of the Planning Commission it was stated that this is the only surrounding F-2 property on the road and is surrounded on 3 sides by residential or potentially residential development. This is a misleading statement as the most of the west side and all of the south side are zoned F-2. There is a 16 acre lot to the west that**

**has split zoning with the upper north part FF-10 and the rest F-2. To the west of that lot is commercial forest land that stretches almost a mile west. To the south of the Wilson property is a 1,100 acre tract of timberland under one ownership with more forest land beyond that.**

**p.13** “A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulations, dating back to the early 1900s. The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F (10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small-scale agricultural uses (on the 69 acre lot owned by the applicant). Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See map for a visual representation of the area.” (Note: The R-R (5) is located to the north across the road and the FF-10 is to the east with the RR-10 beyond it.)

**p. 11 Refers to the old farmhouse as unusable in its current condition. It is dilapidated and missing part of an exterior wall and some windows, and has no foundation. Using this as a dwelling is not an allowed use since he has a replacement dwelling. It was abandoned when the replacement dwelling was built but was never torn down although it should have been. There is another old outbuilding which is also unusable but has also never been torn down. This outbuilding is missing its roof and appears to be falling down. There is very little physical development on the property.**

**Both buildings are visible from the road when you drive by the property.**

**According to the staff report, p. 12 The land has minor developments on it, but is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.**

“DENIAL FINDING: The clustering of the existing house on the western edge, with the 1000’ driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640’ driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.”

**The staff report, p. 23 also does not support a physically developed exception:**

“DENIAL FINDING: The current home and driveway are clustered against the western property line. There are abandoned structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.”

**p.12 The 40 acres that the application applies to have portions that are grass land currently and portions that are farmed currently, and small portions that have marketable timber currently.**

“DENIAL FINDING: The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal #4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.”

**Staff concern 2. More residences would result in the loss of more wildlife habitat (Goal 5)**

**There would be the loss of pine oak habitat. This is sensitive wildlife habitat and low elevation big game winter range.**

**Staff concern 3. The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7)**

**If a fire starts in this area, it will spread to the adjoining forest lands. It takes 60 to 80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Dept. of Forestry. Response time is slow due to terrain and distance. Fire risk and intensity have increased.**

**If a fire from this property headed towards our property (which is not in a fire district) it would be potentially unstoppable due to the terrain and lack of road access. The last time there was a fire near us it took an hour for the Department of Forestry to arrive (without water). We and the neighbors put out the fire with shovels and the help of a couple of Mosier fire volunteers. It was a human caused fire.**

Staff Report P. 20 “DENIAL FINDING: One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation.”

**p. 37 and 43 Due to concerns related to public safety and welfare in this area, the request should be denied. New residences increase fire risk and Seven Mile Hill Rd. serves as a buffer.**

“DENIAL FINDING: An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.”

“DENIAL FINDING: However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.”

**Staff concern 4. The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11)**

**Refer to previous Denial Findings. Water issues are increasing in the area. The neighbors (Morgans) just up the road (about 780 feet away) had their well drop 50 feet between January and March and go dry.**

**p. 42 There is a concern with lowering water supply and general fire risk.**

**p.43 There has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years (2 foot per year decline, p.30) according to Robert Wood, Watermaster.**

**As it only takes one criterion not being met to recommend denial of the request, this request should be denied.**

Sincerely,

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon 97040





Brenda Jenkins &lt;brendaj@co.wasco.or.us&gt;

## Fwd: Wilson application to Wasco BOCC - Jill Barker testimony

1 message

William Smith &lt;wills@co.wasco.or.us&gt;

Wed, Jul 3, 2019 at 8:34 AM

To: Jensi Smith &lt;jensis@co.wasco.or.us&gt;, Brenda Jenkins &lt;brendaj@co.wasco.or.us&gt;

**From:** jilbrkrb@aol.com**Date:** May 29, 2019 at 2:37:01 PM PDT**To:** SteveK@co.wasco.or.us, ScottH@co.wasco.or.us, KathyS@co.wasco.or.us, dancer@artforthesky.com**Subject:** Wilson application to Wasco BOCC - Jill Barker testimony

May 27, 2019

Dear Wasco County Commissioners,

I have the following concerns regarding the Wilson application:

Aquifers in the area are declining at a rate of about 2 feet a year according to Watermaster Robert Wood. A neighbor reported that their well had dropped 50 feet between January and March of this year. There is widespread concern in the area about the water table and the water demands from new residences. As a result of the excessive number of lots created north of Seven Mile Hill Road in the early 1900s, there is already a significant demand on the water resources there.

A recent PBS report on wildfire stated that it is irresponsible to continue residential development in high fire risk zones and high wind zones, citing Paradise, California as a perfect example. "The Oregon Department of Forestry (ODF) has identified the Seven Mile Hill area as one of particularly high fire risk during fire season and has repeatedly identified residential and associated buildings as significant fire hazards." ODF has also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost ." (Beitzing Record, page 230.)

It has been noted that the soil type has been designated as a Class 4, which is very capable of supporting commercial forestry. "The Comprehensive Plan definition of the purpose of the Forest-Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all."

Staff report to Planning Commission, Denial Finding, p. 20:

"Based on current composition of the subject parcel as being predominately open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber... The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres... The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this property could practicably be used for forest uses per OAR 660-004-0028 (3)."

During the 1970s and earlier, this property was used to grow 3 cuttings of hay per year. It was known as the Decker Ranch. The west part of the property in front of the log house, where there has been no mowing, is tree covered now.

The reason that there are small parcels on the south side of Seven Mile Hill Road is that most were pre-existing at the time of the Transitional Lands Study Area (TLSA) Study.

Staff Report to Planning Commission, Denial Finding, p. 37 – p. 38:

"A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area." This application asserts that due to adjacent uses being Board of County Commissioners General Record #921-18-00086-PLNG (WILSON) pg 208

BOCC 1 - 2403

converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established."

"This area... has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire."

This area is part of the Big Game Winter Range and residential development would have a negative impact on this use and the wildlife habitat there.

Staff Report to Planning Commission, Denial Finding, p. 33:

"This application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for "built" and/or "committed" exceptions. The proposal does not comply with Goal 4."

At the April 2<sup>nd</sup> Planning Commission hearing, it was stated that it only takes one criterion not being met to recommend denial of the request. In my opinion, several of the criterion have not been met which should result in a denial of the application.

I am very concerned about the fact that the Planning Department Staff Report that was presented to the Wasco County Planning Commission was much more complete than the redacted version of the Staff Report that was given to the Wasco County Commissioners. The Planning Commission version of the Staff Report included much information regarding valid reasons for denying the Wilson application, whereas none of these reasons for denial was even included in the redacted version of the Staff Report given to the County Commissioners. Why do these Staff Reports differ?

To make an informed decision about a precedent-setting Zone change from a Forest Resource Zone to Residential designation, the Commissioners absolutely need to know ALL the Staff's pertinent findings for a denial of the application, which has been entirely excluded from the Commissioners version of this Report. This omission is remiss at best and all the denial findings should immediately be given to you, the County Commissioners, before you make any decision on the Wilson application. Thank you for your attention.

Sincerely,

Jill Barker  
3375 Vensel Rd./P.O. Box 572  
Mosier, Oregon 97040

**Will Smith, AICP | Senior Planner**  
**PLANNING DEPARTMENT**

7/3/2019

Wasco County Mail - Fwd: Wilson application to Wasco BOCC - Jill Barker testimony



[wills@co.wasco.or.us](mailto:wills@co.wasco.or.us) | [www.co.wasco.or.us](http://www.co.wasco.or.us)

541-506-2560 | Fax 541-506-2561

2705 East Second Street | The Dalles, OR 97058

*Note: This correspondence does not constitute a Land Use Decision per ORS 197.015.*

*It is informational only and a matter of public record.*

**Planning for the Future. Wasco County 2040.**

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Date: June 17, 2019

Re: #921-18-000086-PLNG – Full Board of County Commissioners Information Packet

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\*\*\*Planning Commission Audio dated 04/02/19 – see file





**PLANNING DEPARTMENT**

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*Pioneering pathways to prosperity.*

**PLANNING COMMISSION RECOMMENDATION  
to The Wasco County Board of Commissioners**

FILE # 921-18-000086-PLNG

**BOARD OF COMMISSIONERS HEARING DATE:** June 5, 2019

**NEWSPAPER PUBLISH DATE:** May 15, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**PLANNING COMMISSION  
RECOMMENDATION:**

Approval, with conditions

**APPLICANT/OWNER:**

David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY  
LOCATION:**

The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:**

F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:**

EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Planning Commission Recommendation and Board of Commissioners Options
- B. Maps
- C. Staff Report
- D. Exhibits

## ATTACHMENT A

### PLANNING COMMISSION RECOMMENDATION AND BOARD OF COMMISSIONERS OPTIONS

The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the May 15, 2019, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **PLANNING COMMISSION RECOMMENDATION**

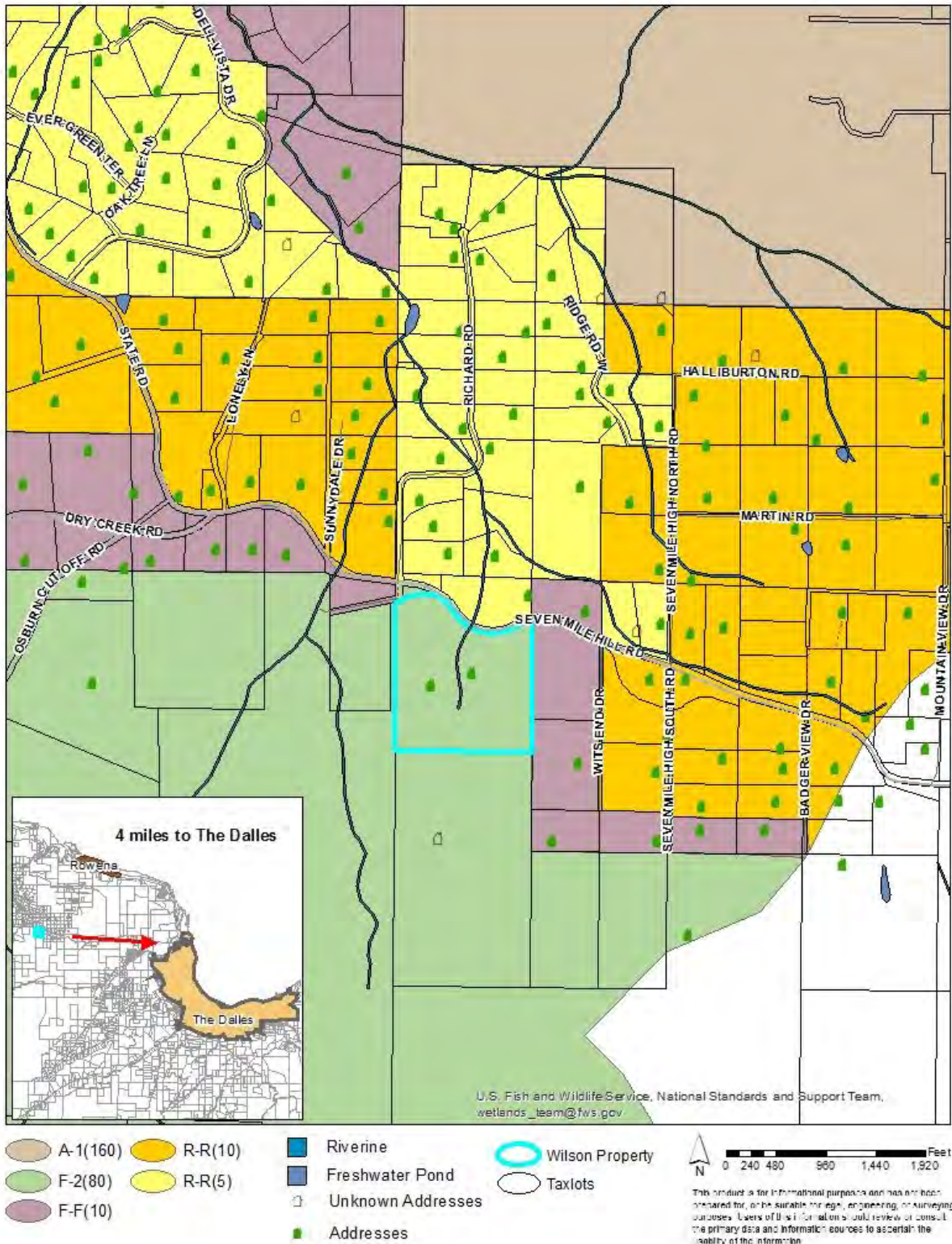
On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend **APPROVAL** of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

#### **BOARD OF COMMISSIONERS OPTIONS**

- A. Approve, with Recommended Conditions and Findings: Based upon all of the findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- B. Approve, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, approve this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- C. Deny, with Amended Conditions and Findings: Based upon amended findings of fact and conclusions of law set forth throughout the report, deny this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- D. Remand, to the Planning Commission: Based on specified insufficient information to make a decision, Remand this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment back to the Planning Commission for further review.
- E. Continuation: Continue the hearing to a date and time certain.

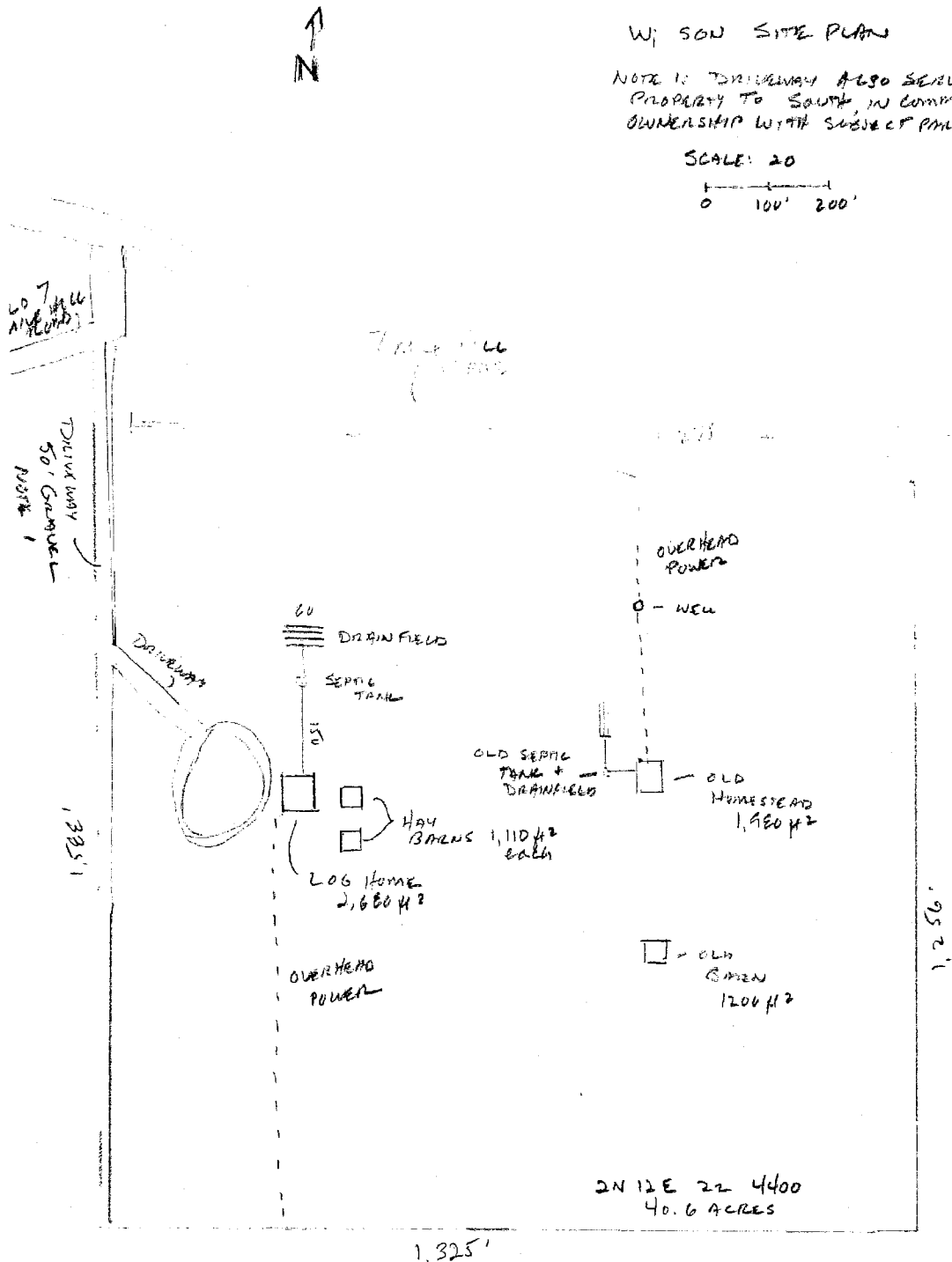
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan





## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Board of Commissioners

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Planning Commission Recommendation:** Approval, with conditions

**Board of Commissioners Hearing Date:** June 5, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

- PLALEG-13-08-0002 (Rezone)
- PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)
- CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)
- PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)
- PLAPAR-17-05-0002 (Partition and Agricultural Structure)
- PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile

Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).



The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to

low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

\* \* \*

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

\* \* \*

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*



(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The subject parcel has several features that lead it to be “Physically Developed.” A driveway runs along the western property line, accessing the single family dwelling and accessory structure on the western portion of the parcel, as well as providing access to the single family dwelling located on the parcel directly to the south (also owned by the applicant). In the center of a property, an old farm house stands (no longer used as a dwelling), with an additional driveway feature bisecting the property. In this area there are further accessory structures including a pump house and an old barn. The property is served by two wells. Two wells would be capable of serving four dwellings as each well is permitted to serve two dwellings each. The applicant submitted well records for these to demonstrate their capacity. To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability

- This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under “potential for habitat elements”, hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the house at about 1650’ and 210’ below the high point to the southeast at 1760’. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant’s adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a “Dwelling in conjunction with agricultural use.” Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*“According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years...”*

The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000’ driveway, the old farmhouse in the center after a 400’ driveway and the old barn another 240’ further south, within 450’ of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. The property is also

served by two wells, and a pump house located in the north central portion of the parcel, approximately 190 feet south of the road. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**b. OAR 660-004-0028(2):** *“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.



The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

The immediately adjacent lands on both sides of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Seven Mile Hill Road are already F-F (10), or are Rural Residential zoning, with 5 or 10 acre minimum parcel sizes. This demonstrates how irrevocably committed the area is to residential use.

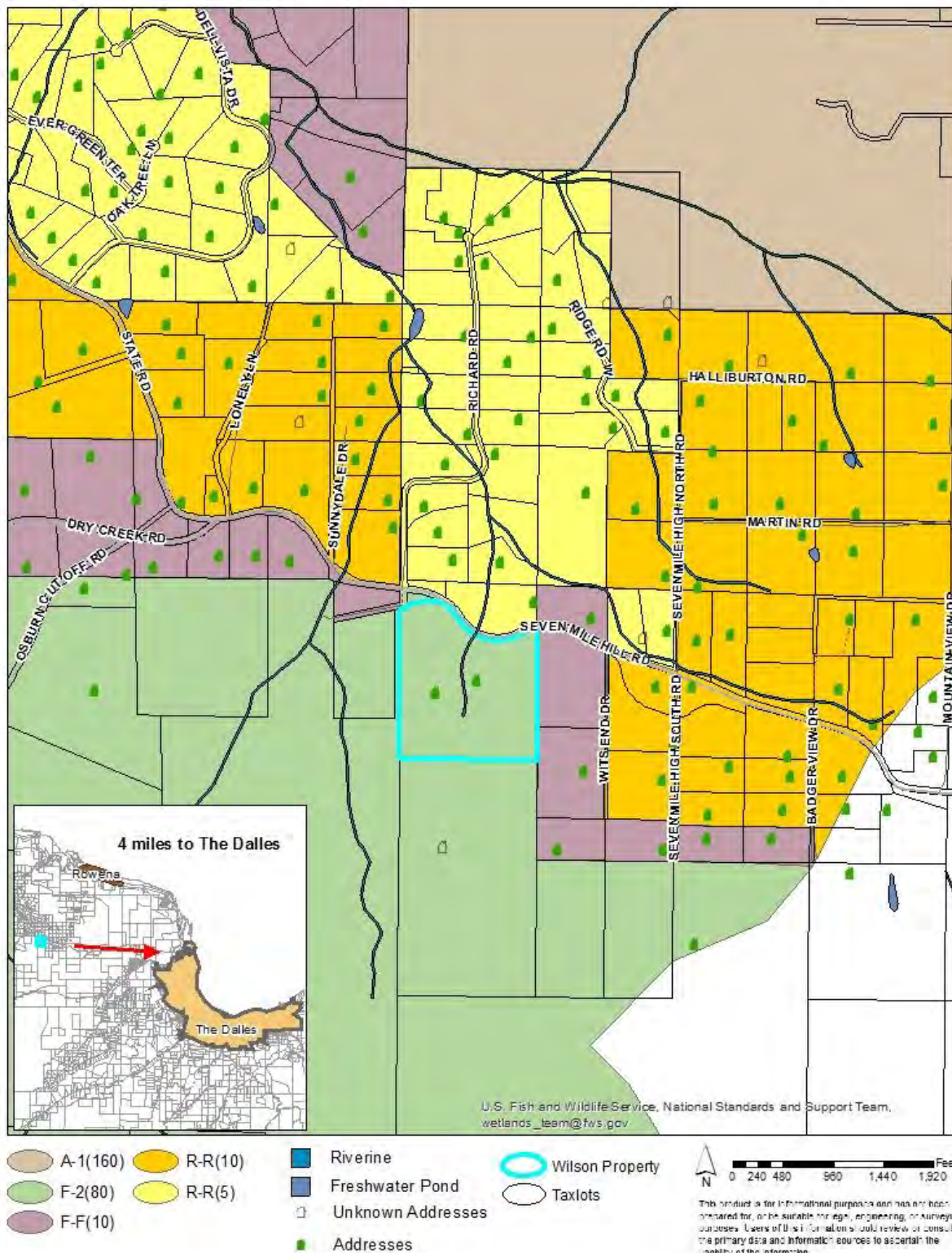


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.



*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and south west are resource zones while those to the north, north west, and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it, however, it is unique in its zoning. It is the only parcel on all of Seven Mile Hill Road that is zoned F-2 (80), Forest. All other parcels are either already the non-resource zone, F-F (10), or else are zoned Rural-Residential with five and 10 acre minimum lot sizes. This creates a unique situation where the subject parcel is enclosed on three of its sides by residentially zoned properties, most of which are used for residential purposes. If the subject parcel was used for a forestry operation it could be potentially disruptive to this residential community. This area is irrevocably committed to a residential use, and changing the zoning of the subject parcel to the same would enable this status quo to continue, limiting potential conflict with any future resource use at this location.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

(b) *Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

(c) *Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine *"the relationship between the exception area and the lands adjacent to it"* when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

"(a) Uses related to and in support of forest operations;

(b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;

(c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about its location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral”

farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below. The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*

*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

- (A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads*



*and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land’s actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are

residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

*(f) Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g.** *OAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h.** *OAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or

water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

OAR 660-004-0040 (5) and (6):

- (5) *The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) *A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) *A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

- (7) *After October 4, 2000, a local government’s requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division.”*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

- (8)(a) *The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule.”*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

- (b) *Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial



forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

*(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

*(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

*(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

*(A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

*(B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

*(C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

*(D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

*(E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco County LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners"

Association formed to maintain common open space and other common improvements.” Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

- (f) *Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) *In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule’s requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) *A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

(A) *The parcel to be divided has two or more permanent habitable dwellings on it;*

(B) *The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*

(C) *Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*

(D) *The partition would not create any vacant parcels on which a new dwelling could be established.*

(E) *For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) *For rural residential areas designated after the effective date of this rule, the affected county shall either:*

(A) *Require that any new lot or parcel have an area of at least ten acres, or*

(B) *Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'*"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

*OAR 660-004-0118 Planning and Zoning for Exception Areas*

(2) *For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

(a) *That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

(b) *That meet the following requirements:*

(A) *The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

(B) *The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in



a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as “to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space.” This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### *A. Intent and Purpose*

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

*B. A Comprehensive Plan Amendment May Take the Following Forms:*

(\*\*\*)

*5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:*

*Comprehensive Plan Revision may be initiated by:*

(\*\*\*)

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

(\*\*\*)

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

(\*\*\*)

#### *H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance is achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-



forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “*To maintain and improve the quality of the air, water and land resources of the state.*” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “*To protect people and property from natural hazards.*” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “*To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “*To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation. The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “*To provide for the housing needs of citizens of the state.*” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in

existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also

recognizes that the character of the neighborhood south of Sevenmile Hill Road has changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

*4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

*5. Proof of change in the inventories originally developed.*

The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

*6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**I. Transportation Planning Rule Compliance**

*1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed*



*to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*

- a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- b. Change standards implementing a functional classification system; or*
- c. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - (1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - (2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - (3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
- 2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
  - a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
- 3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips

(ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a “significant impact” under OAR 660-12-0060, the Transportation Planning Rule (TPR).

**J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

*(\*\*\*)*

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission’s recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.”*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with the requirements in (1). This was submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing, meeting the requirements of (2). At that hearing, five Planning Commissioners were present for the vote, greater than the four needed to form a quorum, which meets the requirements of (3). They voted 4-1 to recommend approval of the proposal, meeting the requirements of (4). Notice of this recommendation was mailed out on May 9, and scheduled to be posted in The Dalles Chronicle on May 15. The Board of Commissioners hearing is scheduled for June 5, which is 21 days after May 15, within the 20-40 day requirement of newspaper notification noted in (2). It is also at least twenty (20) days after notice was mailed, as required in (5). Staff finds that Criteria (1)-

(5) were met and are being met for both the Planning Commission hearing and the Board of Commissioners hearing.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

***Section 9.010 – Application for Zone Change***

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

***Section 9.020 – Criteria for Decision***

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. *The original zoning was the product of a mistake; or*

**FINDING:** As discussed above in the Comprehensive Plan Chapter 11 Section H.3., the application materials assert that it was a mistake, stating that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads, leaving the subject property as the sole F-2 zoned property along the length of Seven Mile Hill Road, with the rest being Forest-Farm or Rural-Residential. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change. This land was zoned for Forestry initially, but has not been used for that purpose. Staff finds that the subject parcel is physically developed with residential uses, and irrevocably committed to that use, indicating that the zoning of this land to be used for Forestry, as determined by the Comprehensive Plan, was a mistake.

- B. *It is established that*

1. *The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards

that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found to be in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote



clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – "TPR").*  
*"Significant" means the proposal would:*

1. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
2. *Change standards implementing a functional classification system; or*
3. *As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. *Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. *Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. *Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

Capacity for State Rd/7-Mile Hill Rd      1,500/day

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

*A. Special yards and spaces;*

*B. Fences and walls;*

*C. Special parking and/or loading provisions;*

*D. Street dedication and improvements or bonds in lieu of improvements;*

*E. Control of points of vehicular ingress and egress;*

*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**Section 9.080 - Action by County Governing Body**

*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** The Planning Commission met on April 2, 2019 and recommended Approval. Due to a procedural oversight by staff, notification was not distributed to interested parties within ten (10) days of the hearing. However, this notification (which included a statement of the facts and reasons upon which it was based) was distributed to all interested parties, agencies, and those that signed in and spoke at the Planning Commission Hearing as required by mailing and/or email on May 9, 2019. A hearing that had been scheduled for May 15 was postponed to June 5 to meet the requirements of Section 9.080 to ensure the County Governing Body would not act for at least twenty (20) days from the date the Notice of Planning Commission Recommendation was mailed. The County Governing Body is the Board of Commissioners, who will meet to take action that they deem appropriate on this request on June 5, 2019, more than twenty (20) days after the Planning Commission Recommendation was mailed. Despite missing the ten day window, all individuals and agencies that needed to be notified were, and action was not taken by the Governing Body until sufficient time had passed. Staff finds that Sections 9.060, 9.070, and 9.080 were met.



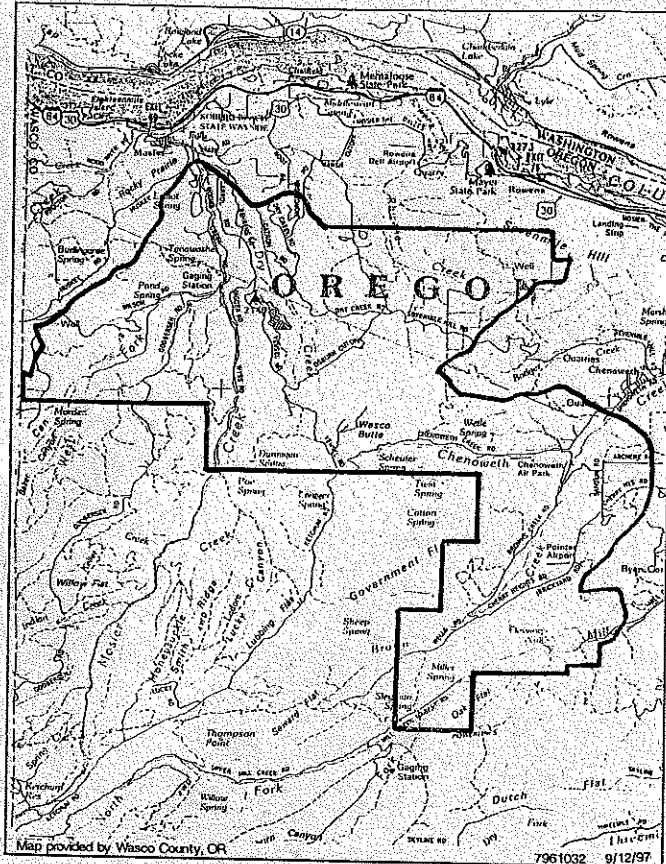
**EXHIBIT 1**

**Transition Lands Study Area**

**(Full Report)**

2044

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
2705 East 2<sup>nd</sup> Street  
The Dalles, Oregon 97058

**Prepared by**

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**September 12, 1997**

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## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

### **1.2 Purpose**

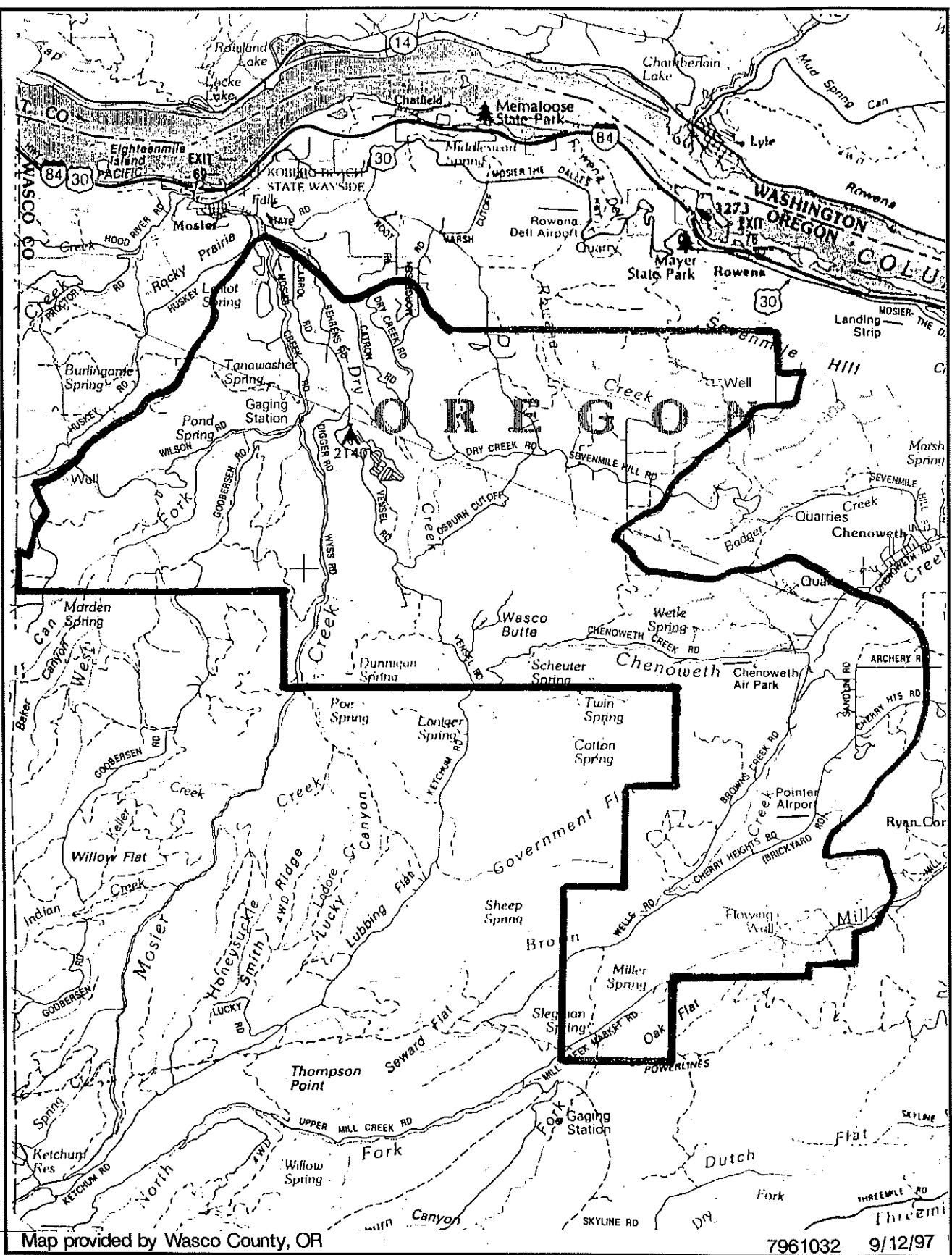
#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.





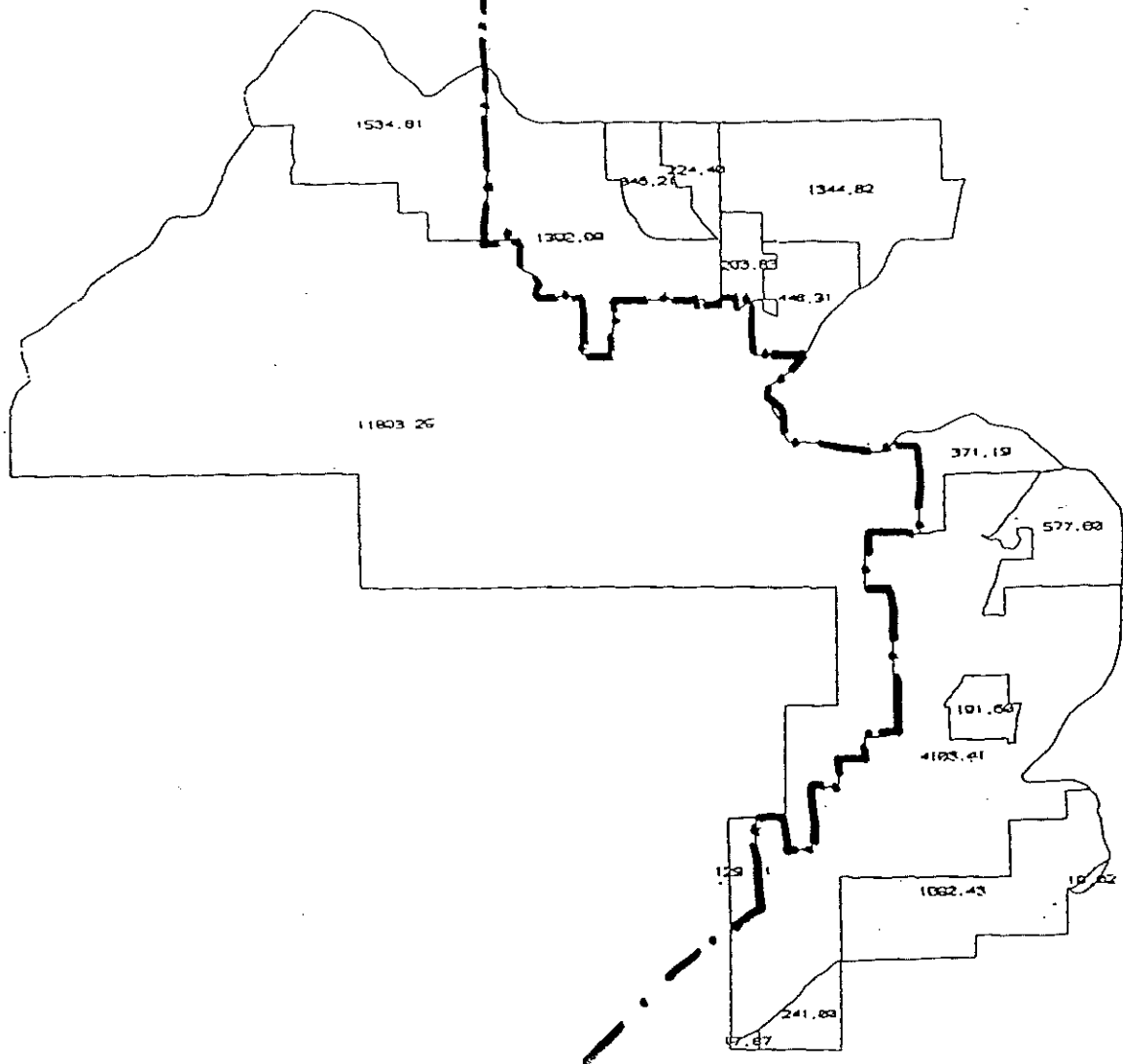
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.2 : ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. : RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



SRI/SHAPIRO/AGCO  
INCORPORATED

- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLISA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?*

*What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.



One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

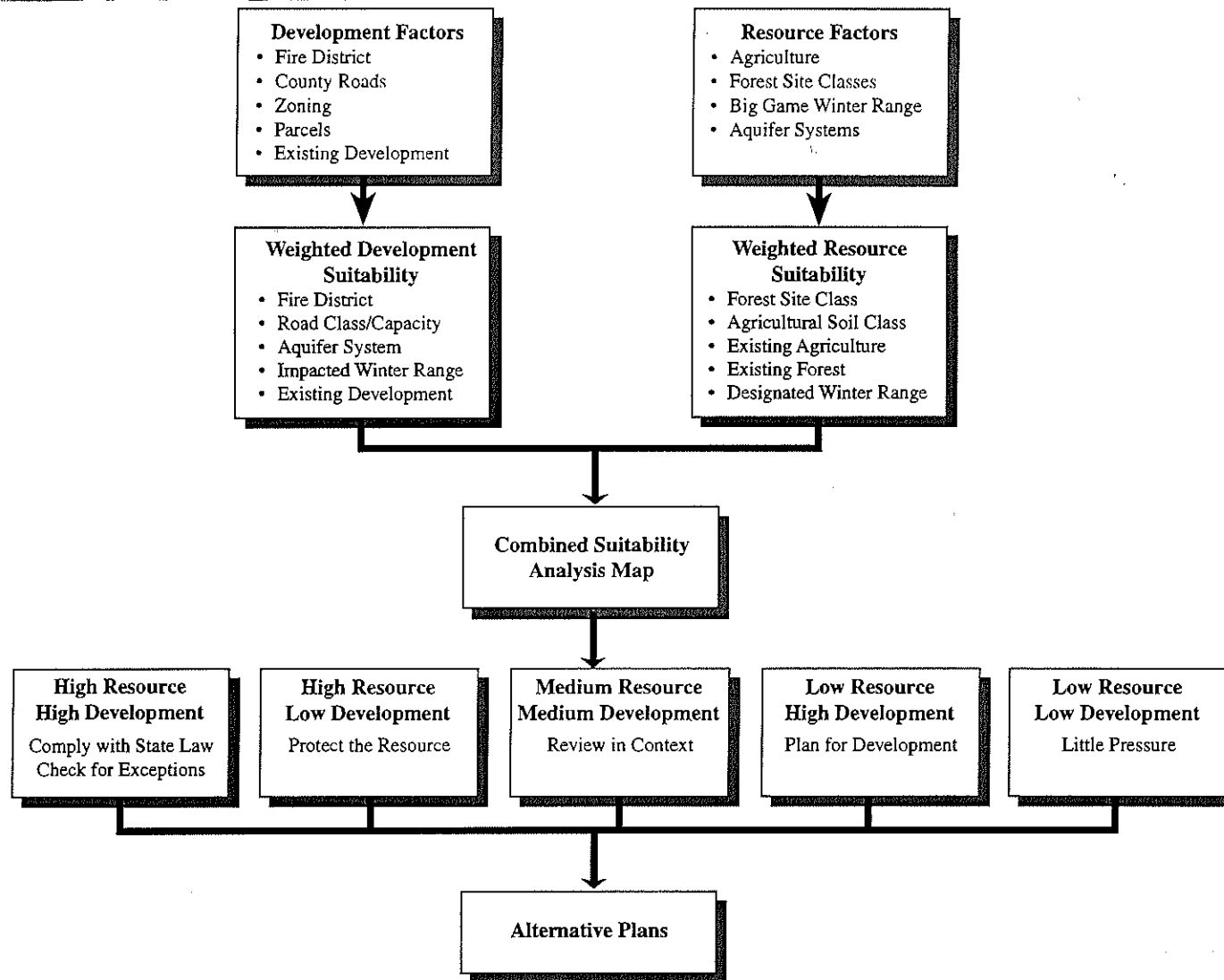
The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems



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Wasco County Transition Lands Study Area  
Simplified Flow Diagram

FIGURE  
4



# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
 High Value (Class 1-2) = 2 pt.  
 Class 3 - 6 = 2 pt.  
 Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
 Class 6 = 1 pt.  
 Class 5 = 2 pt.  
 Class 4 = 3 pt.  
 Existing Forest Use  
 ≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

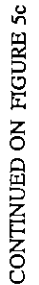
CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
 Revised "Recipe" Diagram

FIGURE  
5a

#### 4: Fire Districts/Response Time

FIGURE  
5b

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads  
Road Capacity

Roads in TLSA  
Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning  
Developed  
Parcels  
Aquifer Units

Zoning  
Existing Developed (house)

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions  
Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.  
†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

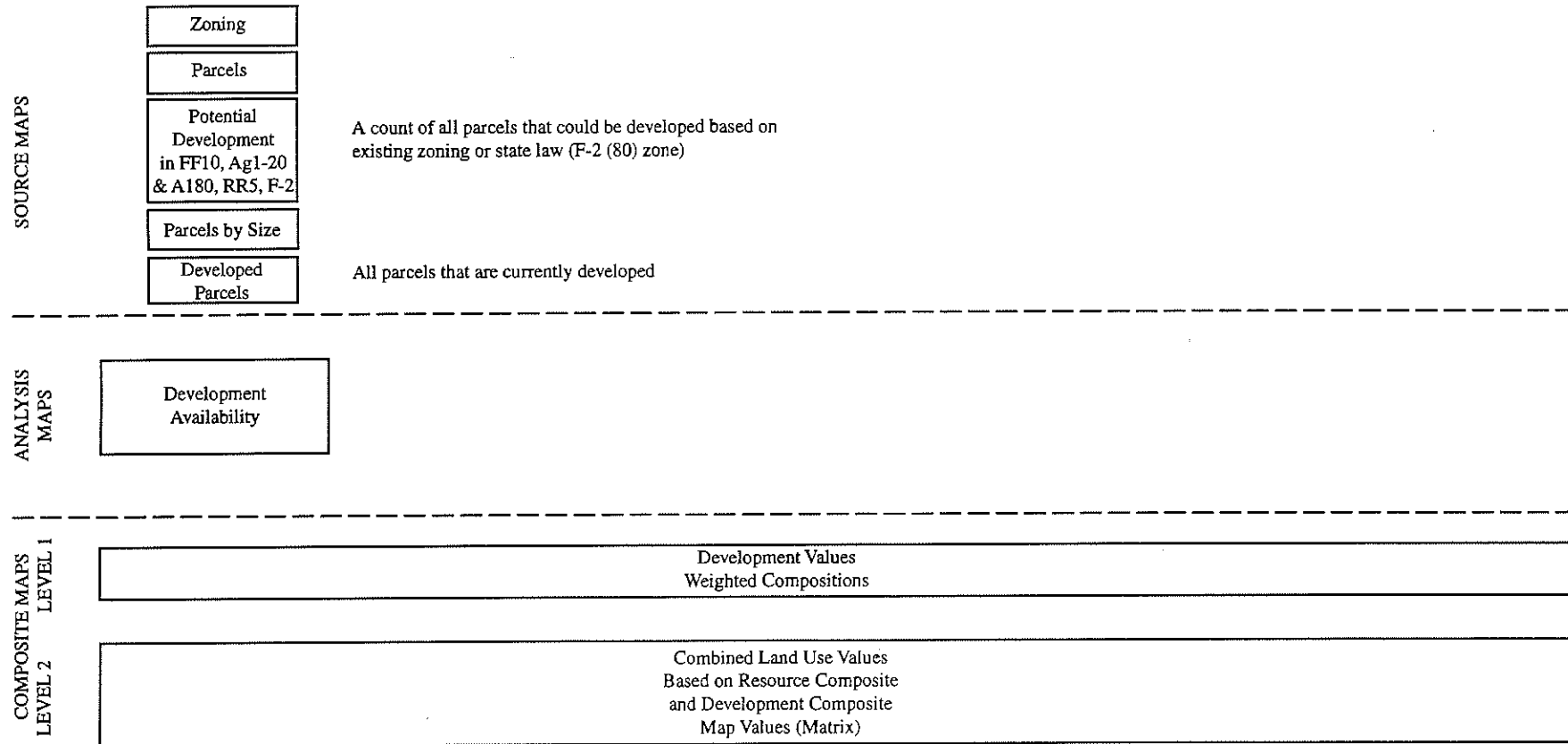
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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 7: Development Availability



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Wasco County Transition Lands Study Area  
 Revised "Recipe" Diagram

FIGURE  
 5d



### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

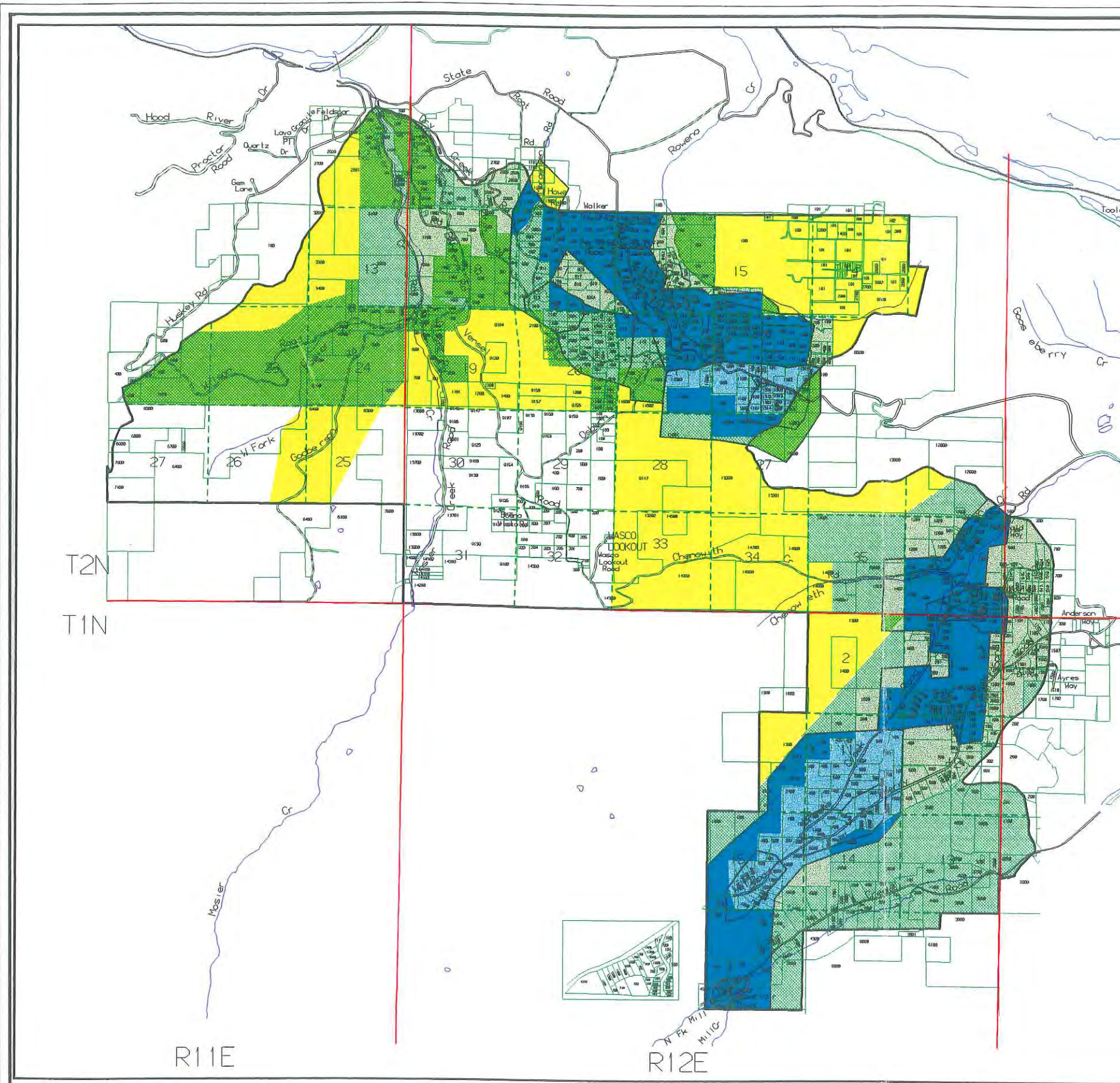
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

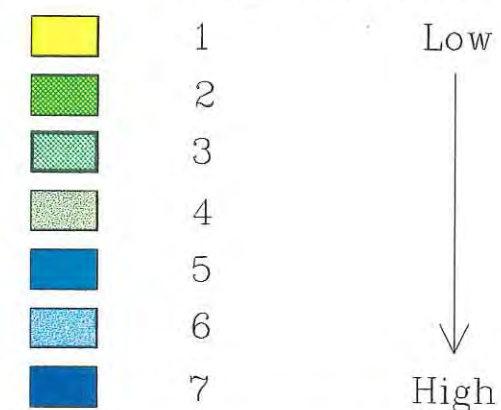




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



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WASCO COUNTY  
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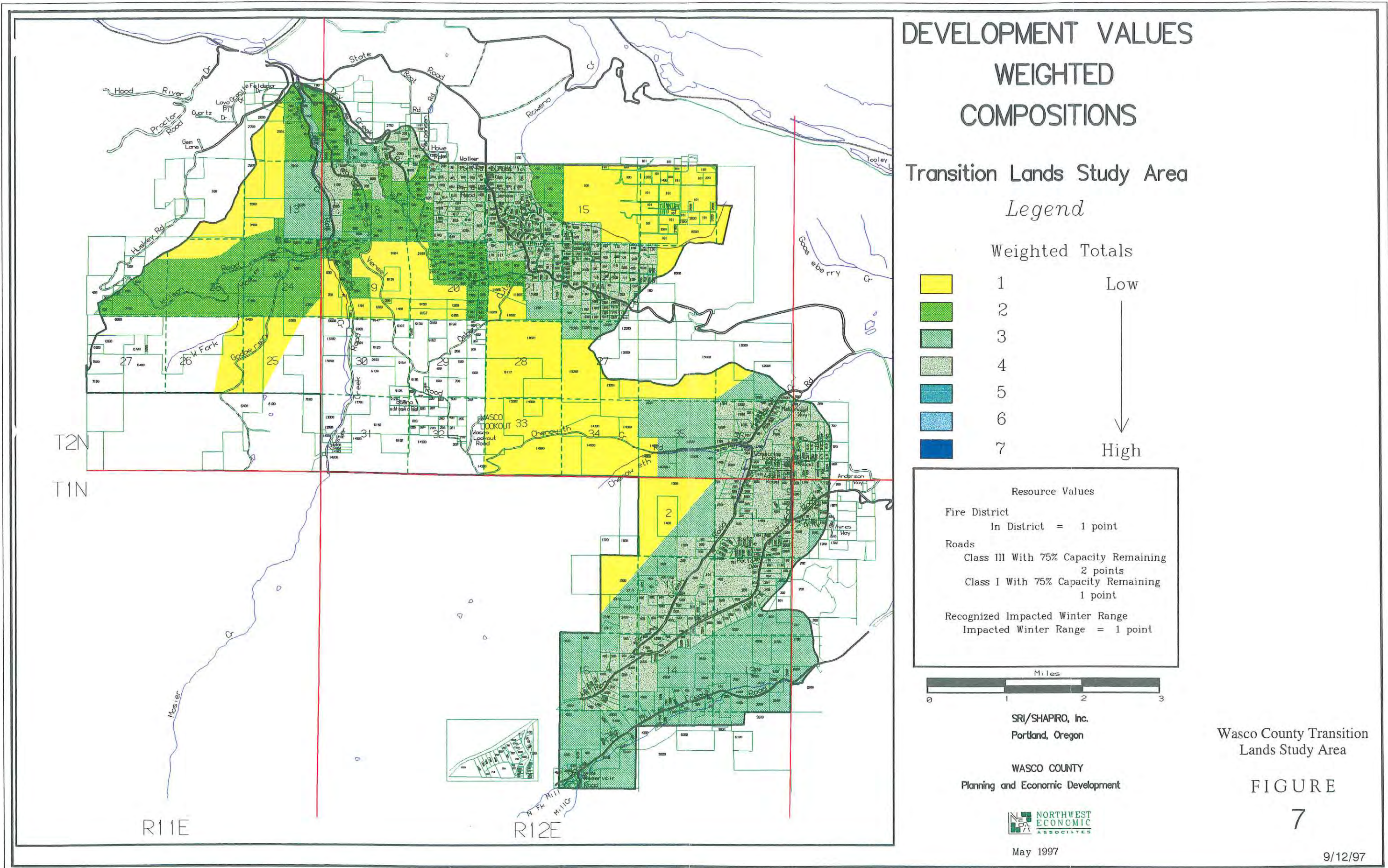
May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
6

9/12/97



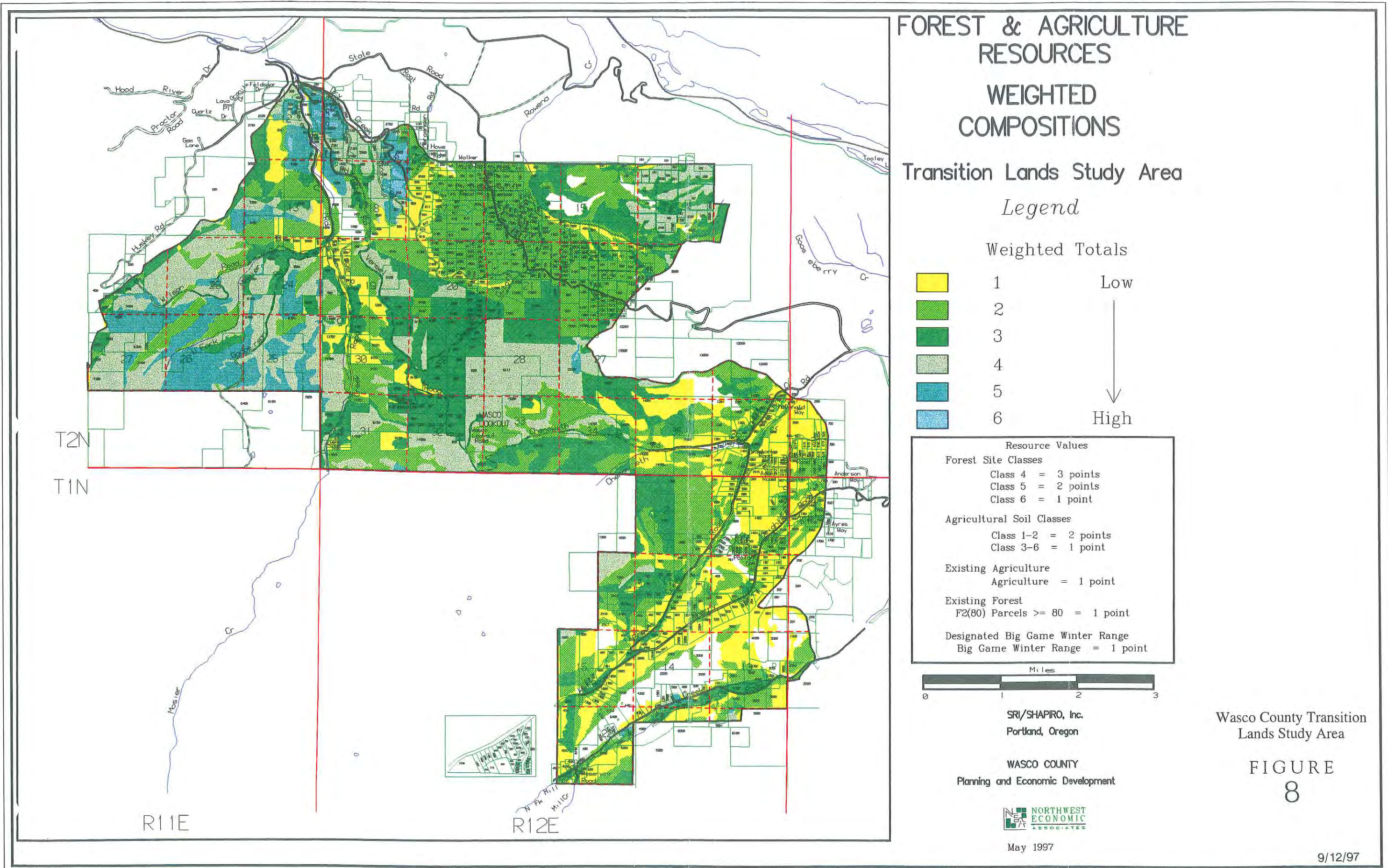


Map from Northwest Economic Associates, 1997

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# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill	Mill Creek-Cherry Heights
FF-10 = 125	FF-10 = 256
RR-5 = 52	RR-5 = 50
Ag = 8	Ag = 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

Tables from Wasco County, OR, 1997

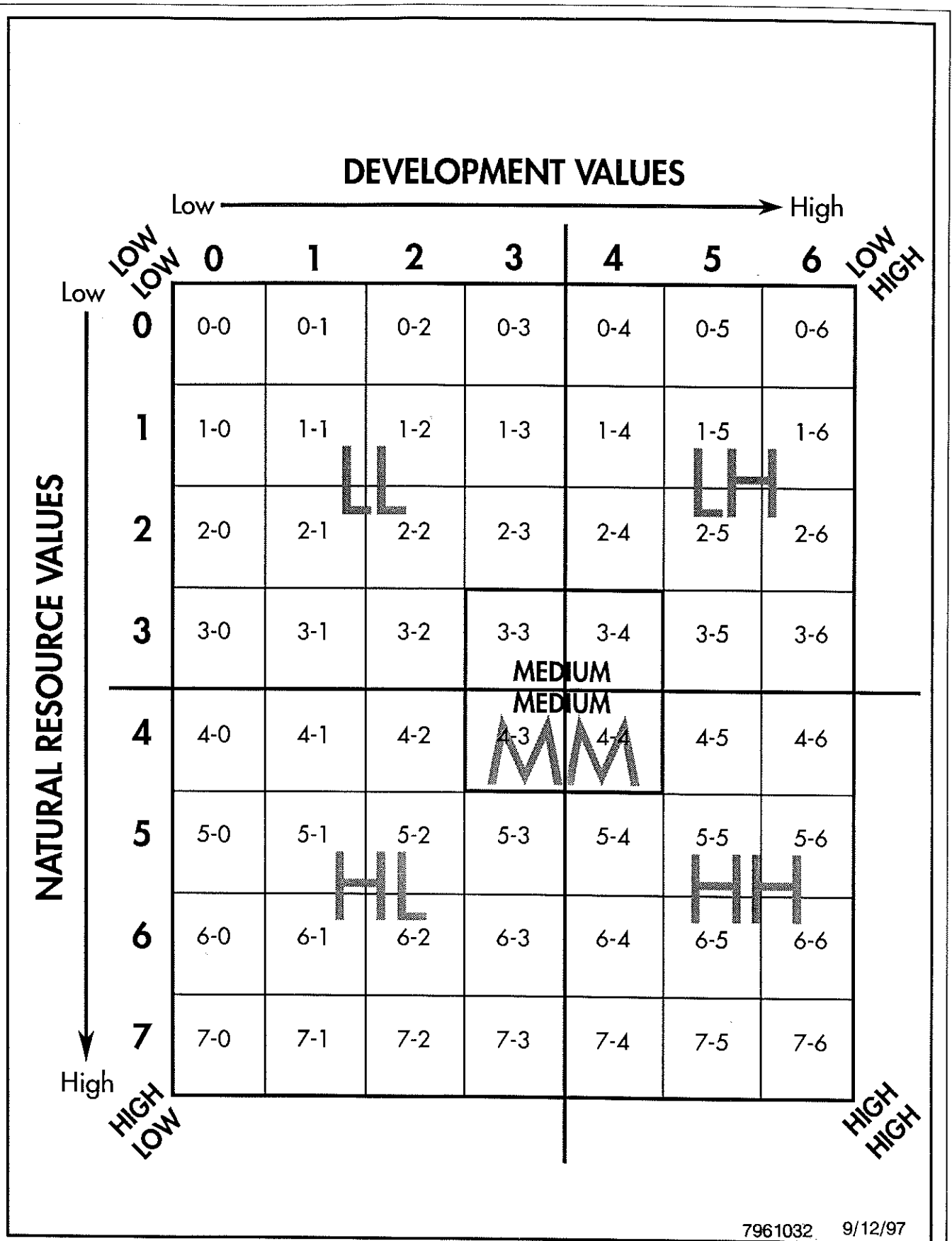
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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9



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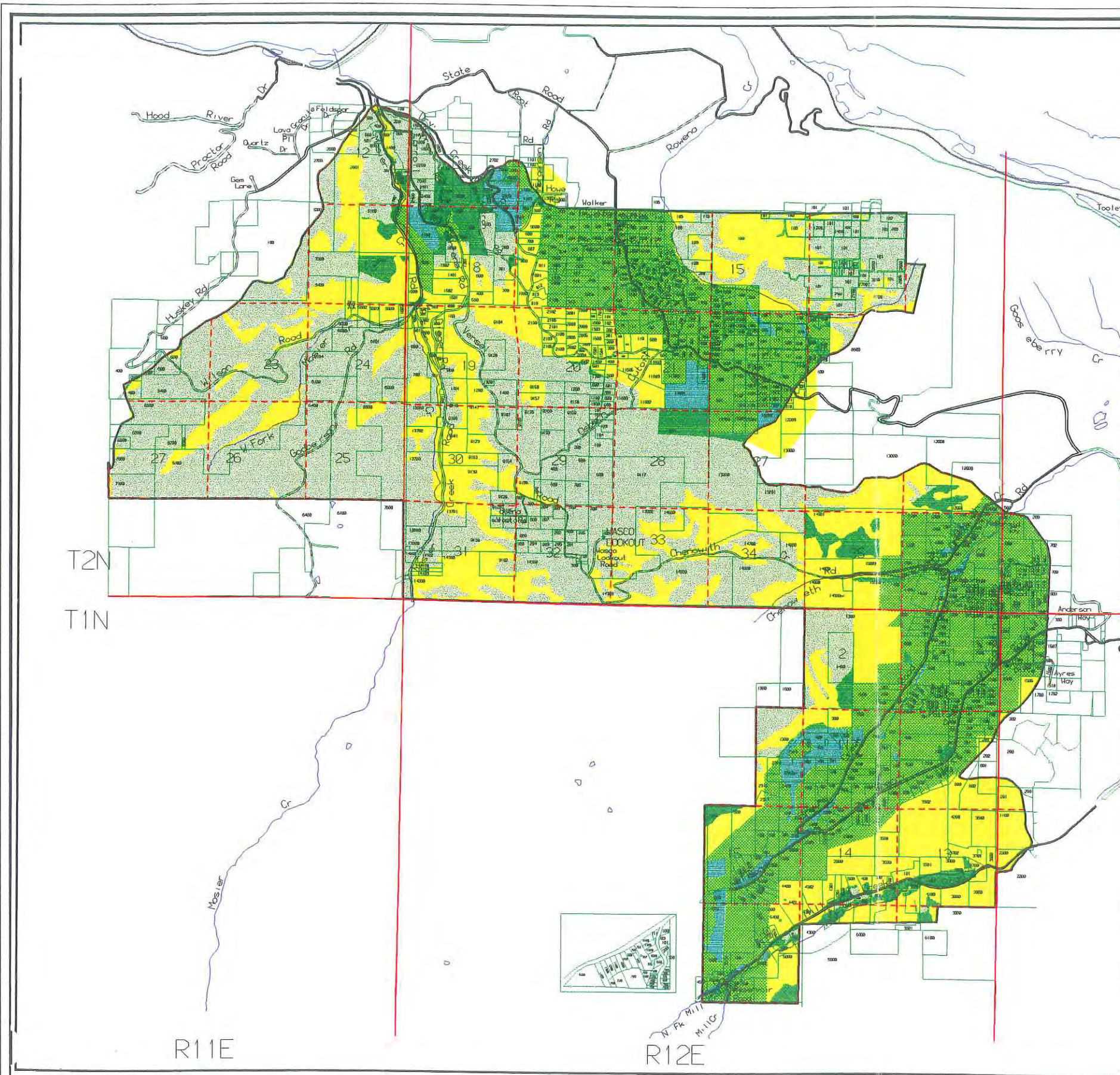
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Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

**FIGURE  
10**

**SRI/SHAPIRO/AGCO**  
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# COMBINED LAND USE VALUES (based on resource composite & development composite map values)

## Transition Lands Study Area

### Value Comparison

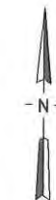
Forest & Agriculture Values      Development Values

L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7

F&A-Dev Medium Ranges

M/M 3-3, 3-4, 4-3, 4-4

0 1 2 3 4 5 6 7  
Low High



Miles  
0 1 2 3

Wasco County Transition  
Lands Study Area

FIGURE  
11

WASCO COUNTY  
Planning and Economic Development



June 1997

9/12/97



- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

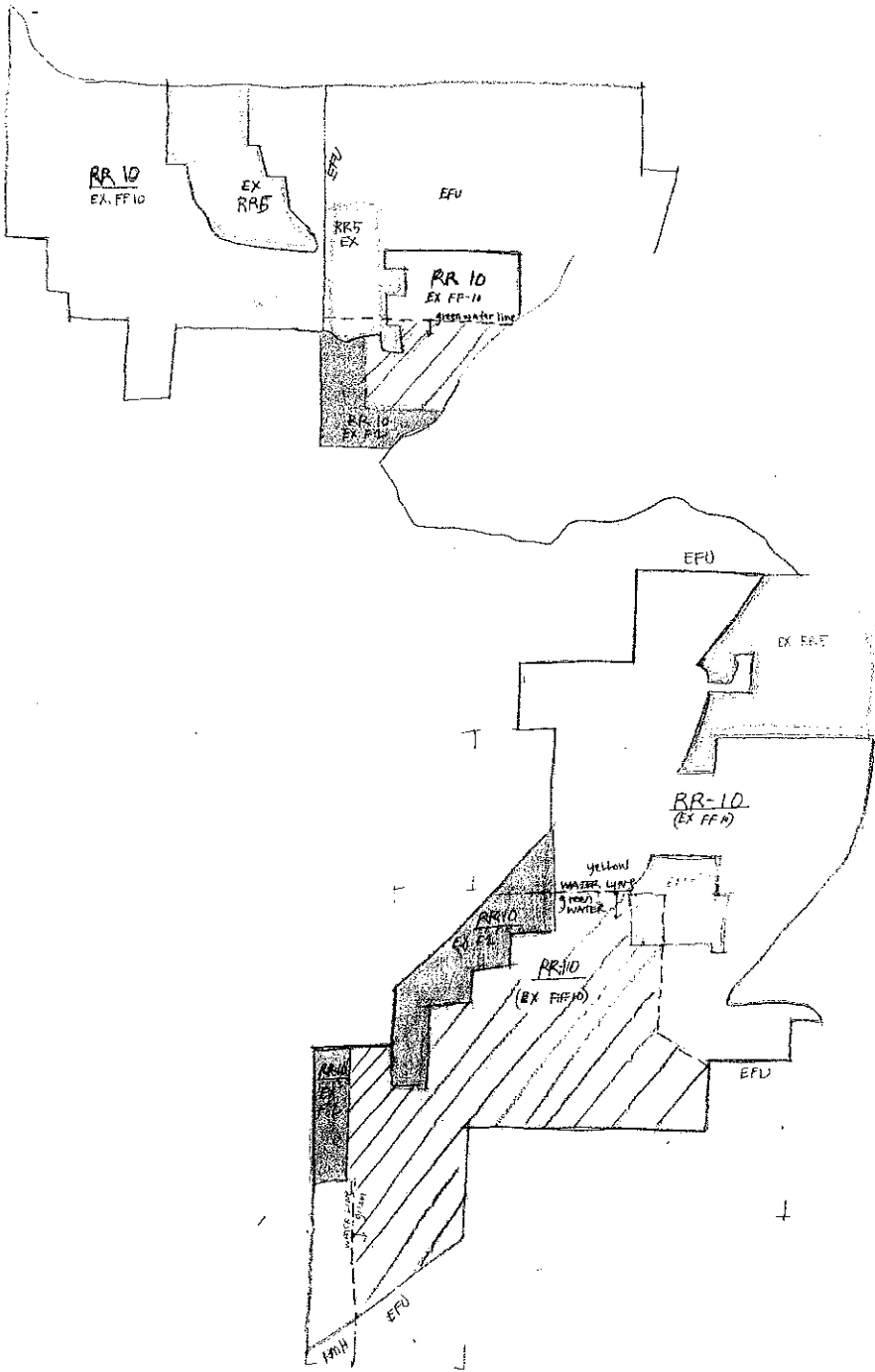
#### 5.1.1 Seven Mile Hill Area




In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

# ALTERNATIVE FOR MINIMUM DEVELOPMENT

(Same zoning w/ minor changes)



-  ALL EXISTING FF10 TO RR-10
-  WATER MONITORING AREAS FOR POTENTIAL INCREASE IN DENSITY (areas where current density spacing is working, other areas will be monitored, but not being counted for density increases)
-  PROPOSED MINOR INCLUSIONS OF RESOURCE LAND TO RR-10 (RES)

## MINIMUM DEVELOPMENT

### PROS:

- Rezone only very limited resource zoned lands with low resource values, retaining areas of higher resource value.
- Retain existing ten acre minimum.
- No increase in potential impacts on BGWR.
- Allows further testing and monitoring of aquifer systems prior to any increase in density - "we'll never be able to promise water but may understand the odds better."
- Doesn't increase potential service needs (roads and fire protection).
- Retains familiar 10 acre land use pattern.

### CONS:

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

Map from Wasco County, OR, 1997


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Wasco County Transition Lands Study Area  
Alternative 1 - Minimum Development

FIGURE  
12

# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend

 IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

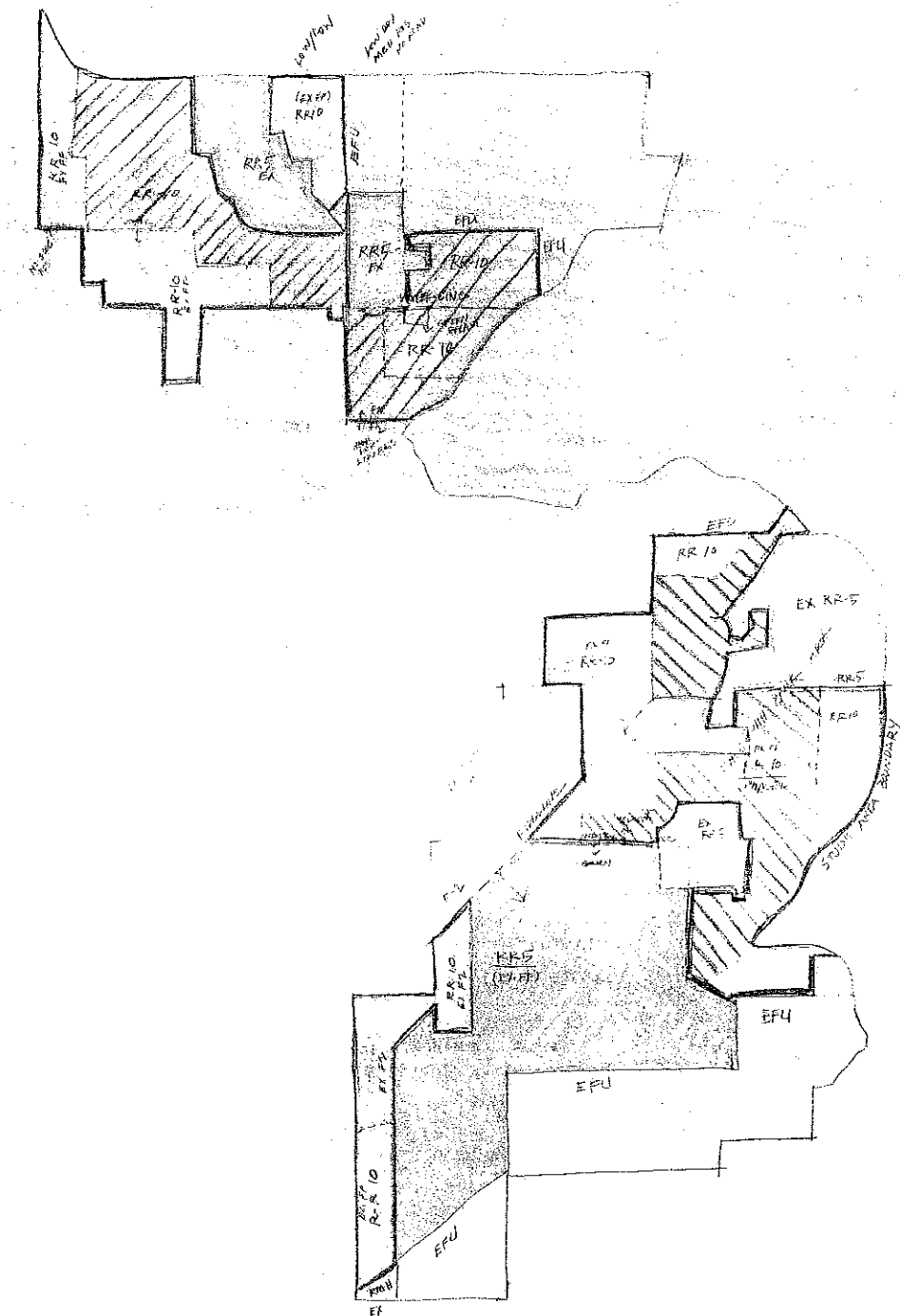
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



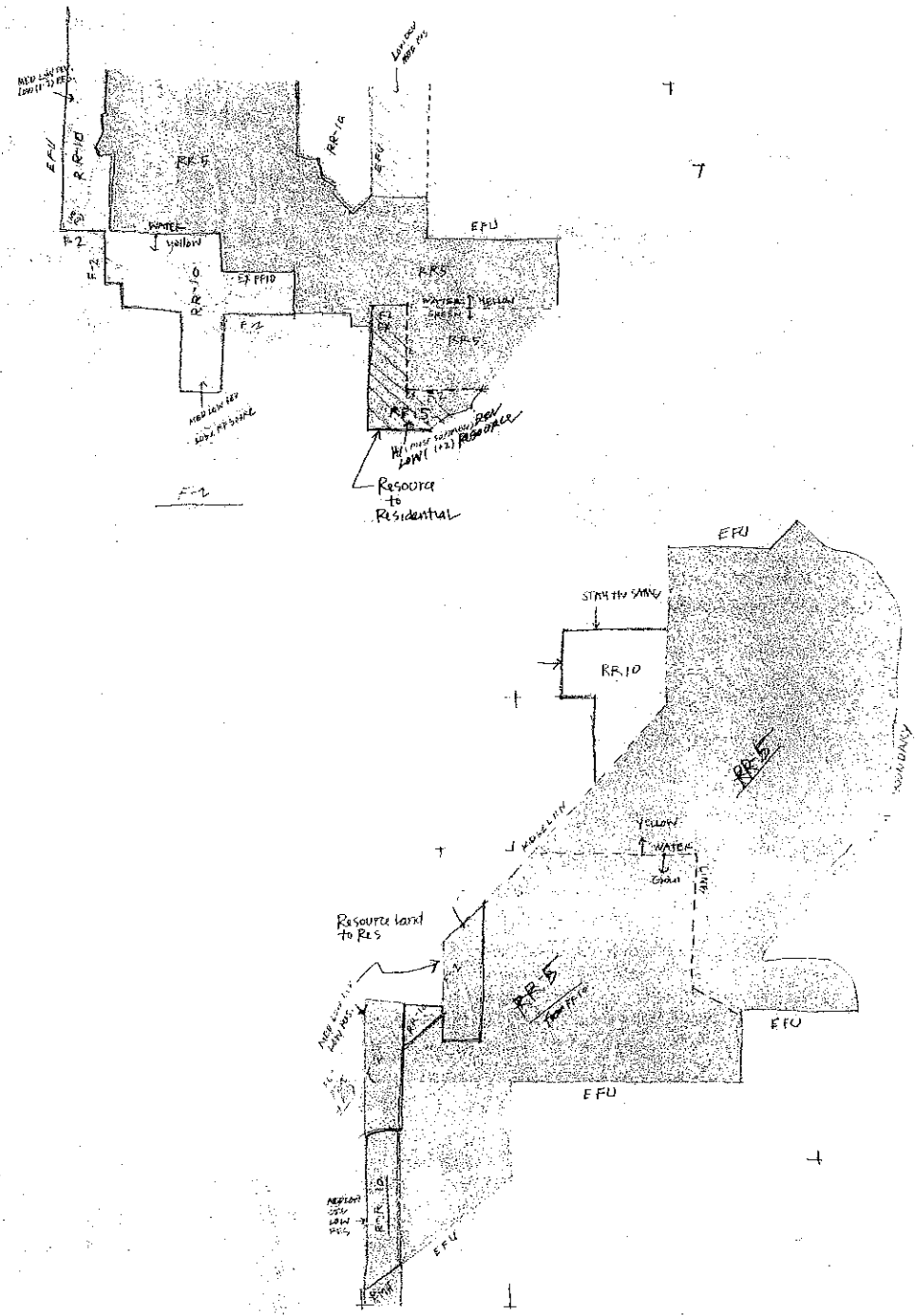
Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

7961032 9/12/97

FIGURE 13

# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
  - Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat- quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14



- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the



Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

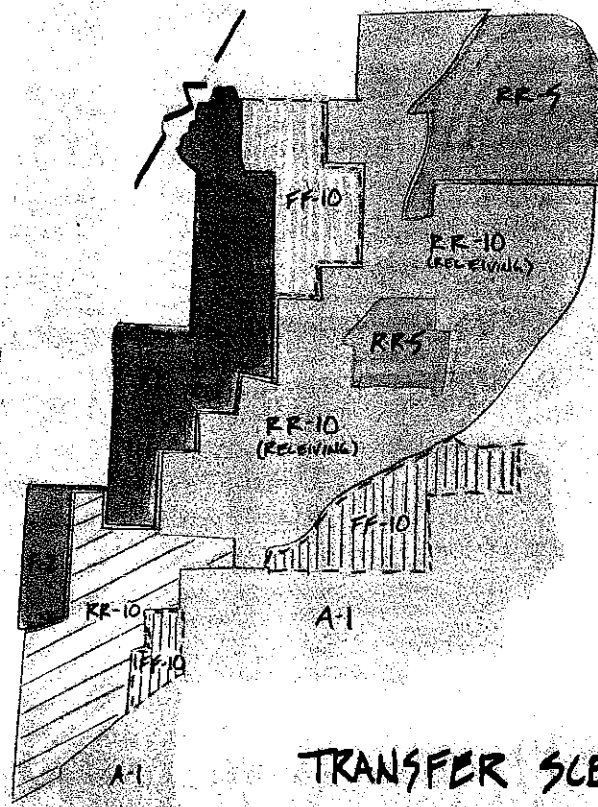
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



TRANSFER SCENARIO

Map from Wasco County, OR, 1997

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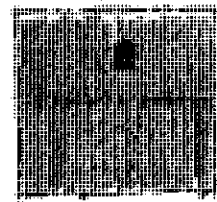
Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

FIGURE  
15

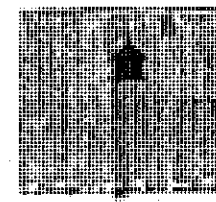


SRI/SHAPIRO/AGCO  
INCORPORATED

VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

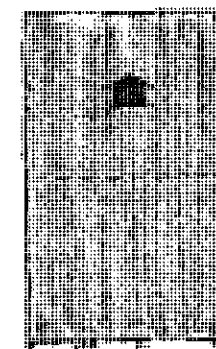
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 20 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

BROWN'S CREEK  
CHERRY HT'S

20AL WITH HOUSE (160,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSIER  
7 MILE HILL)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)  
MOSIER  
7 MILE  
HILL

(170,000<sup>00</sup>)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16

### 6.1.2 Mill Creek/Cherry Heights Area

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### 6.1.3 Intent and Impacts of the TDR Alternative

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

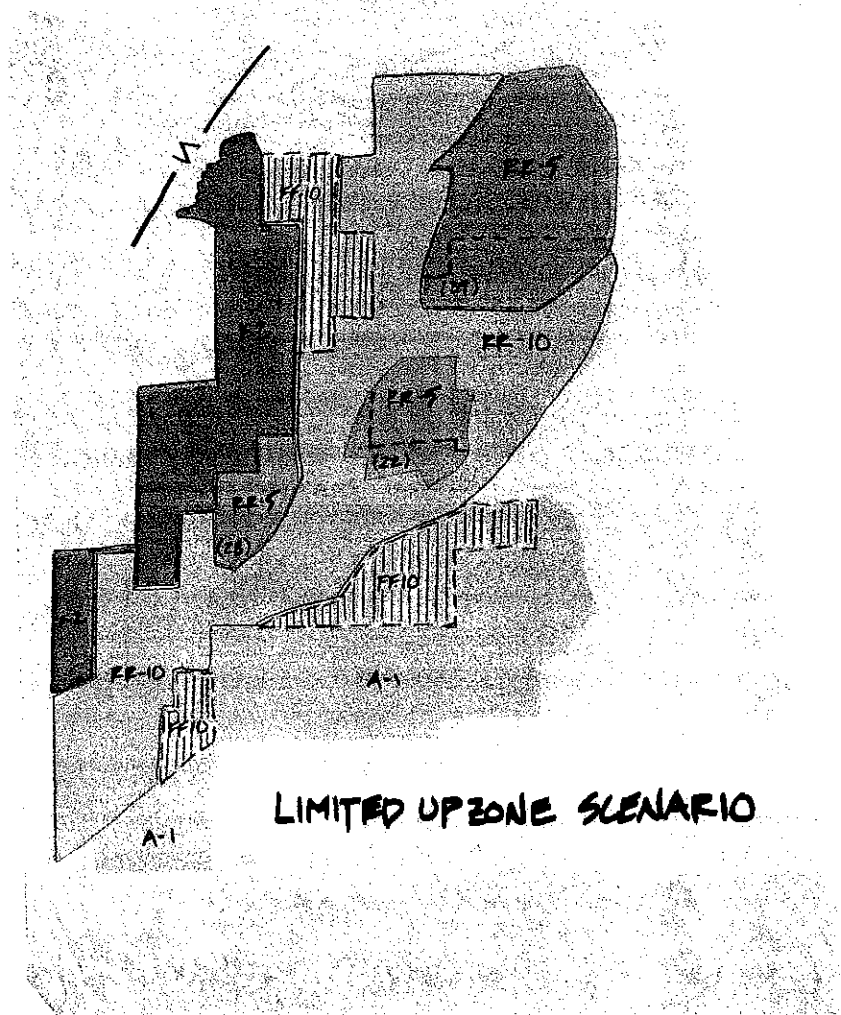
### 6.2 Limited Upzone Alternative

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### 6.2.1 Seven Mile Hill Area

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.





Map from Wasco County, OR, 1997

7961032 9/12/97

Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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INCORPORATED

## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

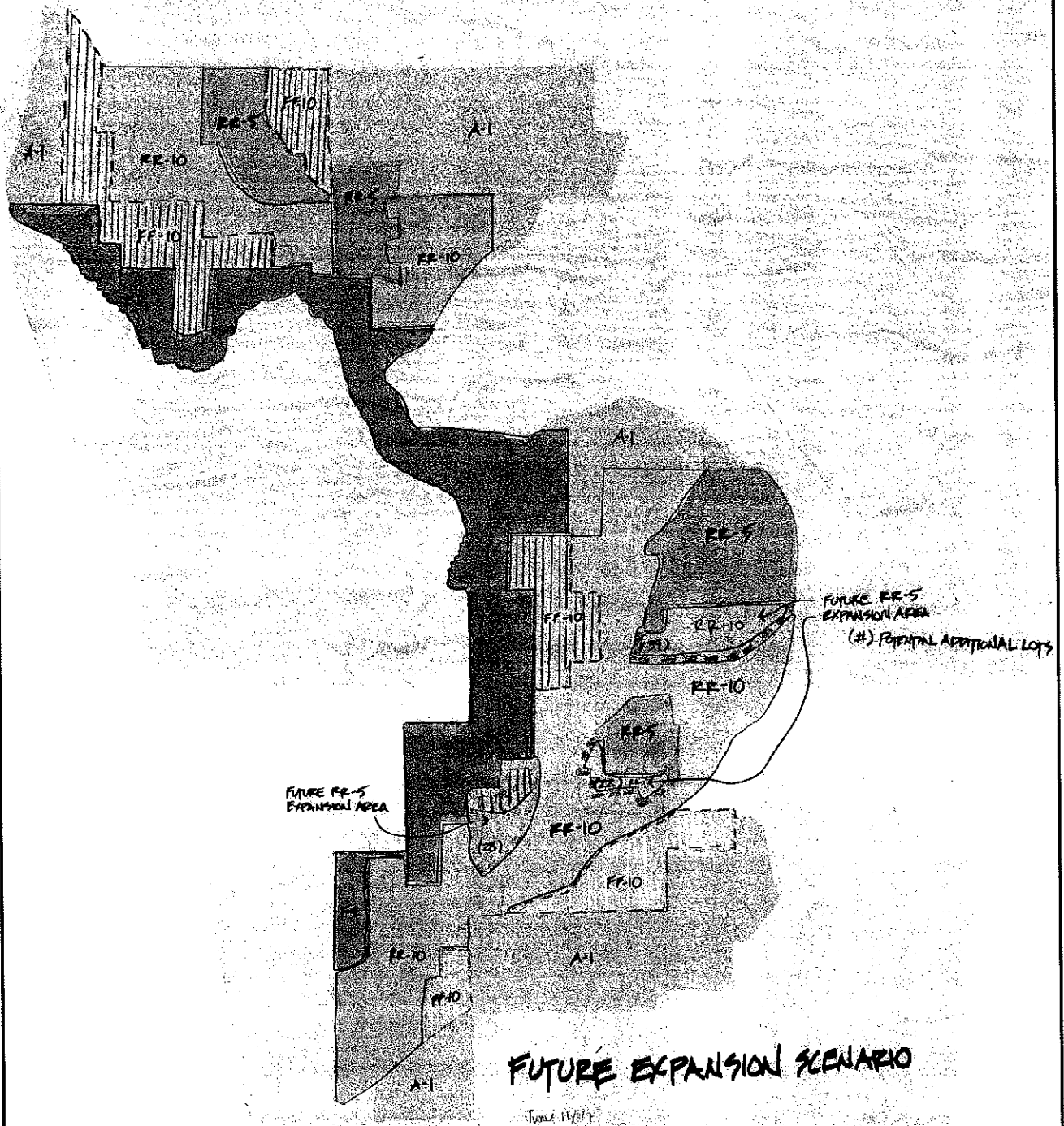
## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.



Map from Wasco County, OR, 1997

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# Wasco County Transition Lands Study Area Future Expansion Alternative

FIGURE  
18



SRI/SHAPIRO/AGCO  
INCORPORATED

## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in "receiving areas" at higher densities that zoning would indicate.



**EXHIBIT 2**

**Transition Lands Study Area**

**(Memo)**

## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

## EXHIBIT 2

**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR) Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

#### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**





# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below .

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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**EXHIBIT 3**

**2000 Settlement Agreement**

## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not

approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.



14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.

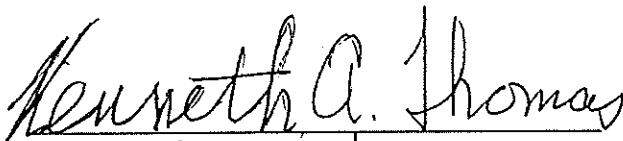
15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

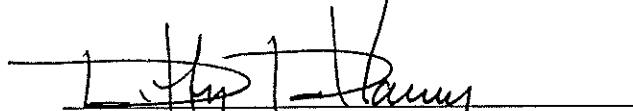
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

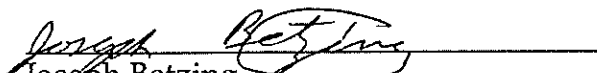
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing



**EXHIBIT 4**

**Transition Lands Study Area**

**Groundwater Study**



**JERVEY** Geological  
Consulting

810 FELDSPAR DR. / P.O. BOX 328  
MOSIER, OREGON 97040

TELEPHONE (541) 478-3883  
FAX (541) 478-3883

**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervy

**EXHIBIT 4**





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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervy

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

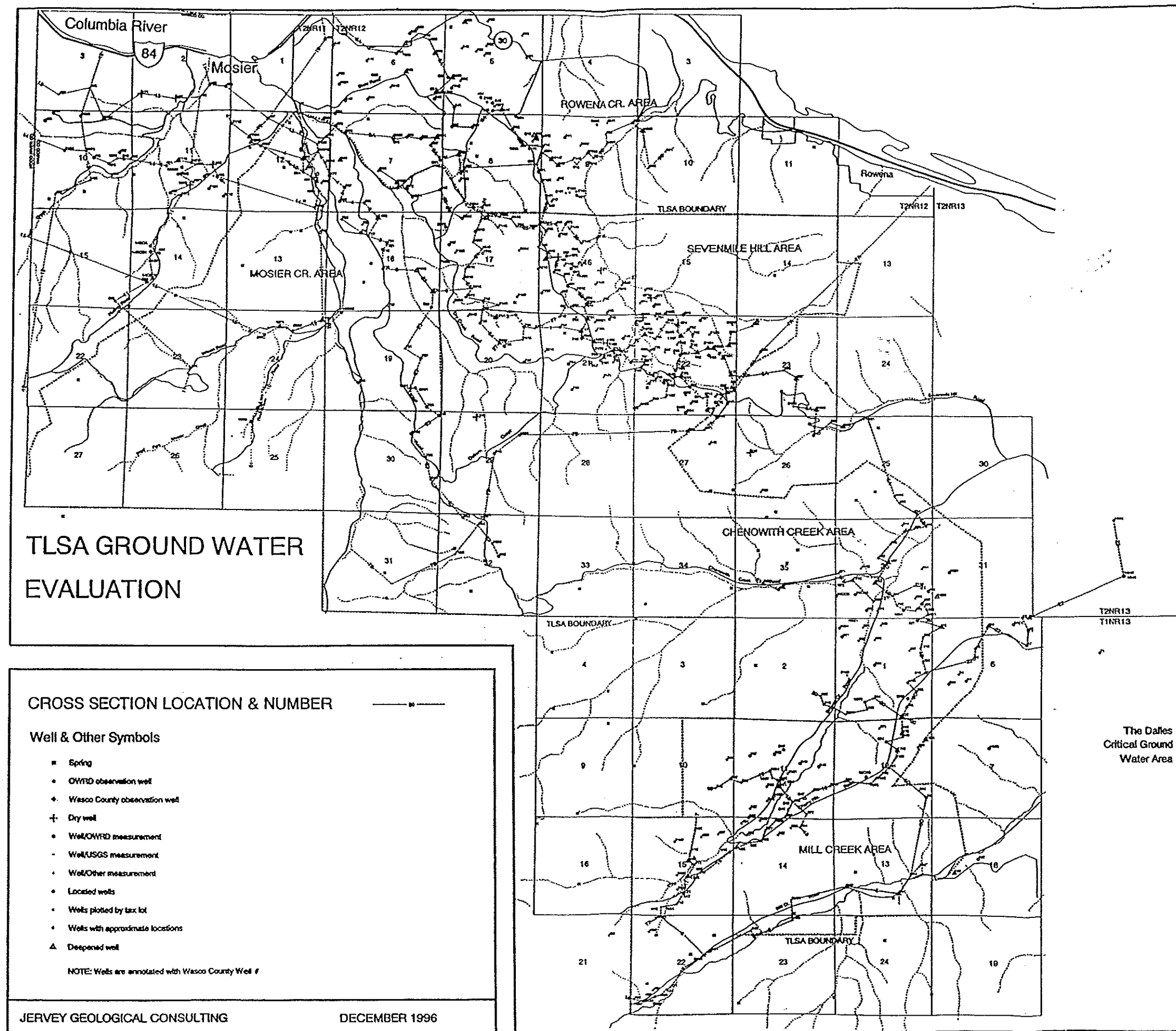
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year

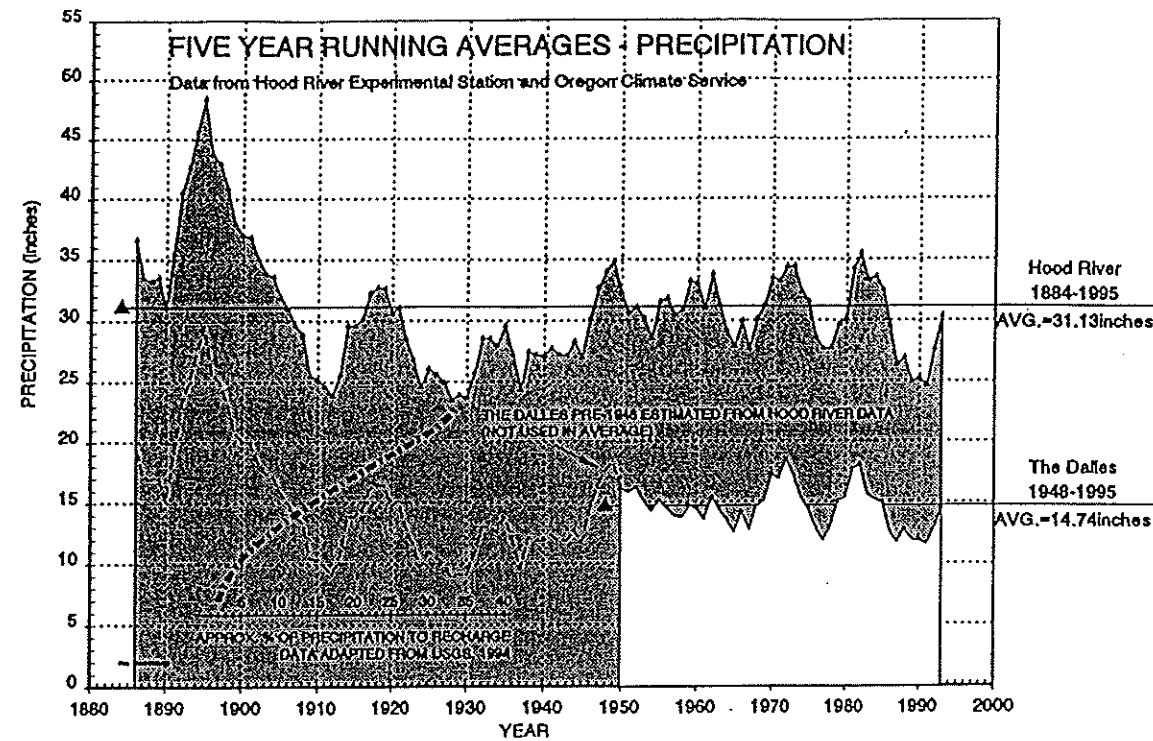


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

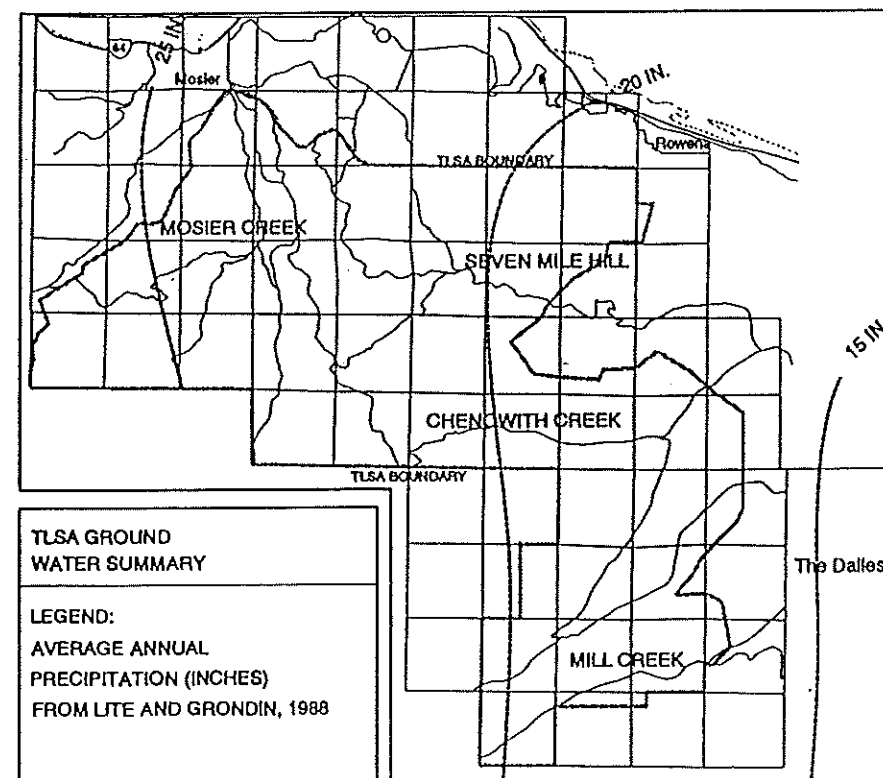


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).



CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				99,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

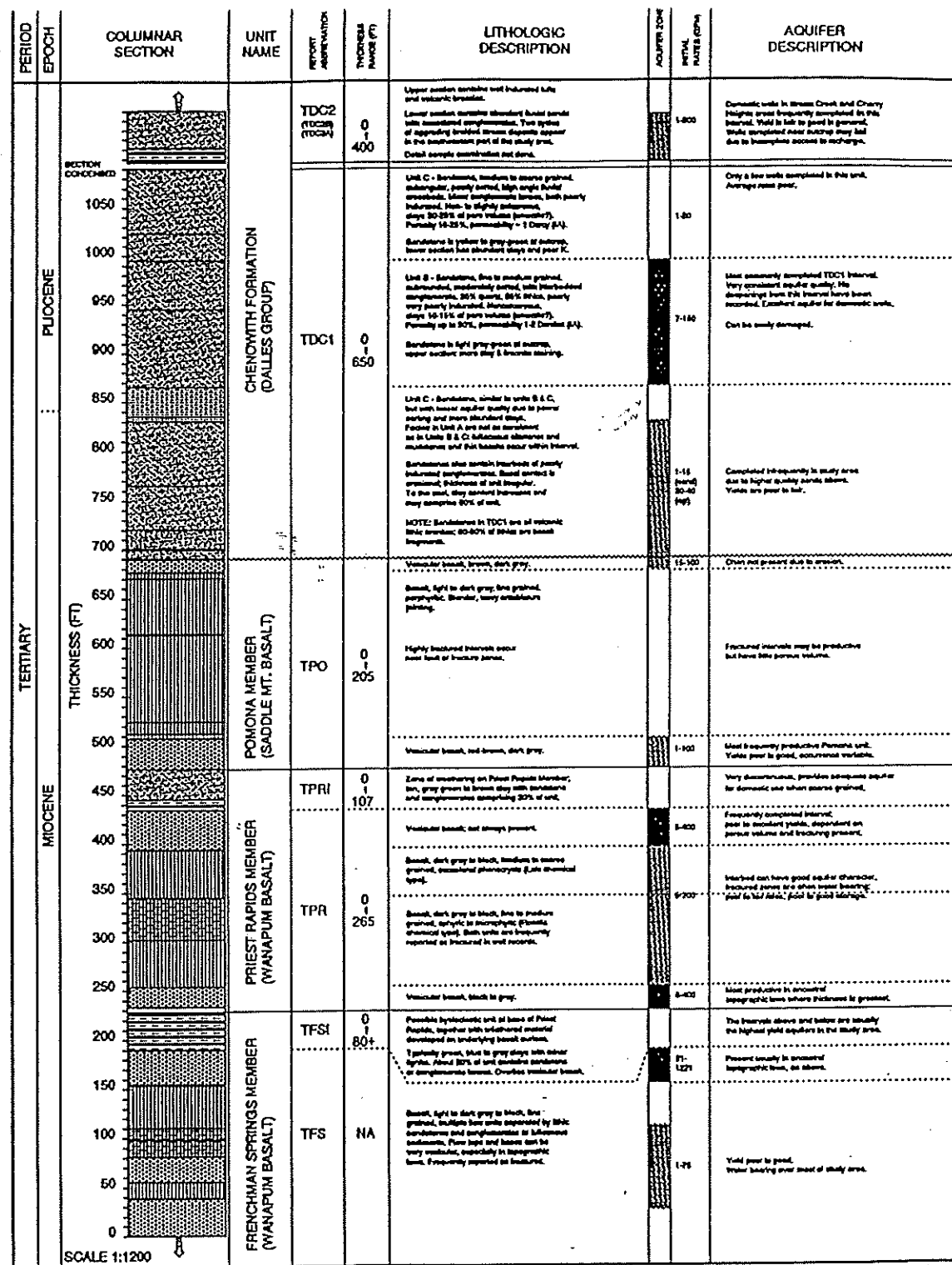
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

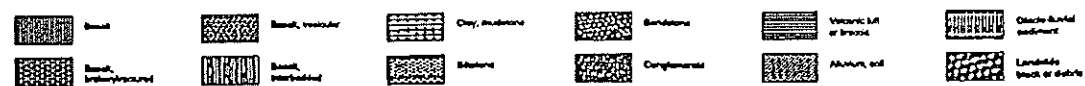


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keimle, 1995, and Lite and Grondin, 1988).

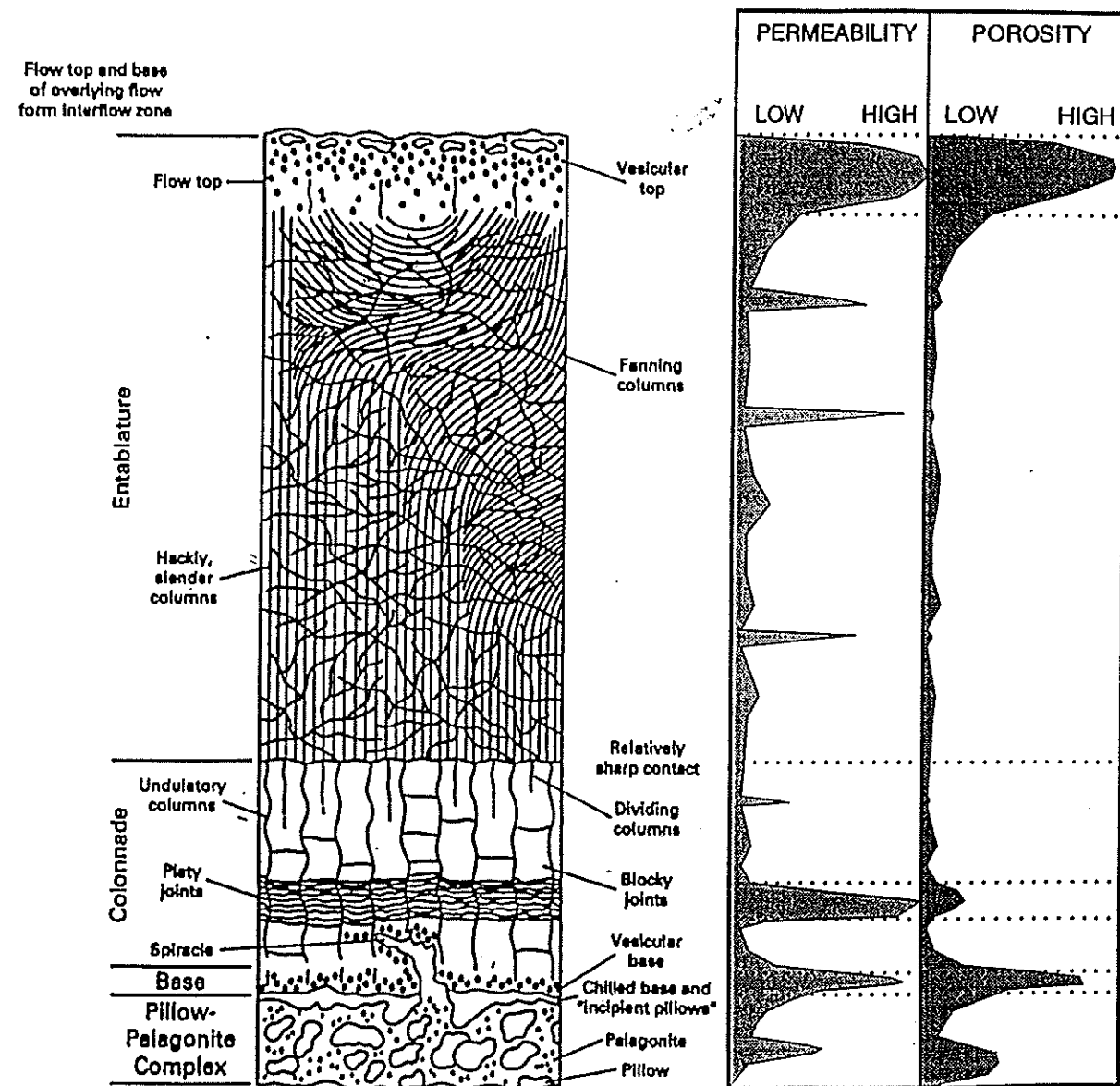


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).



general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

#### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

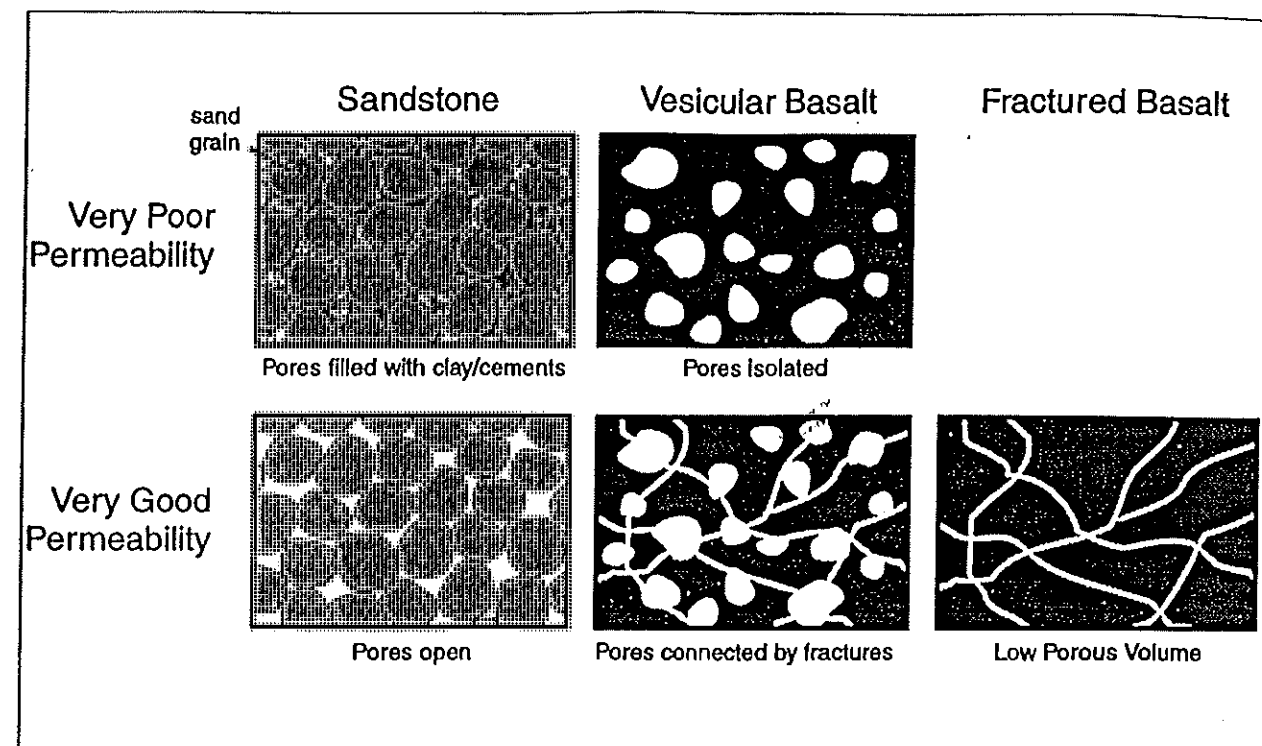


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

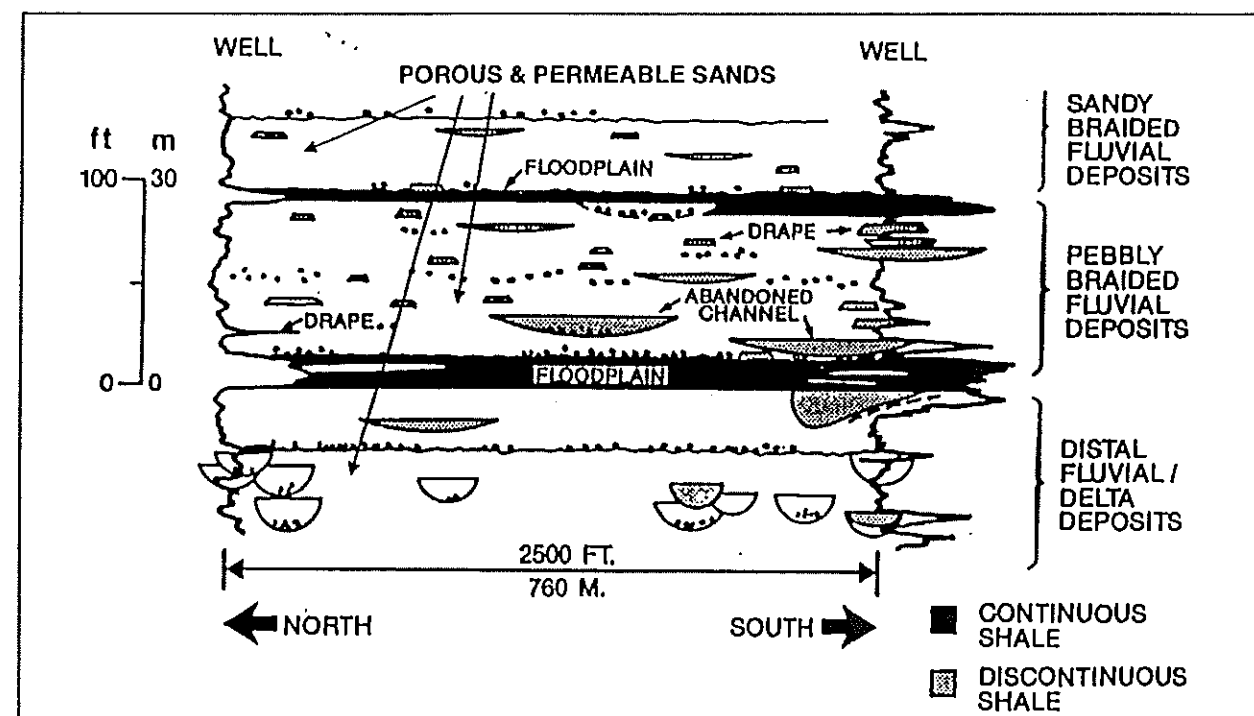


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

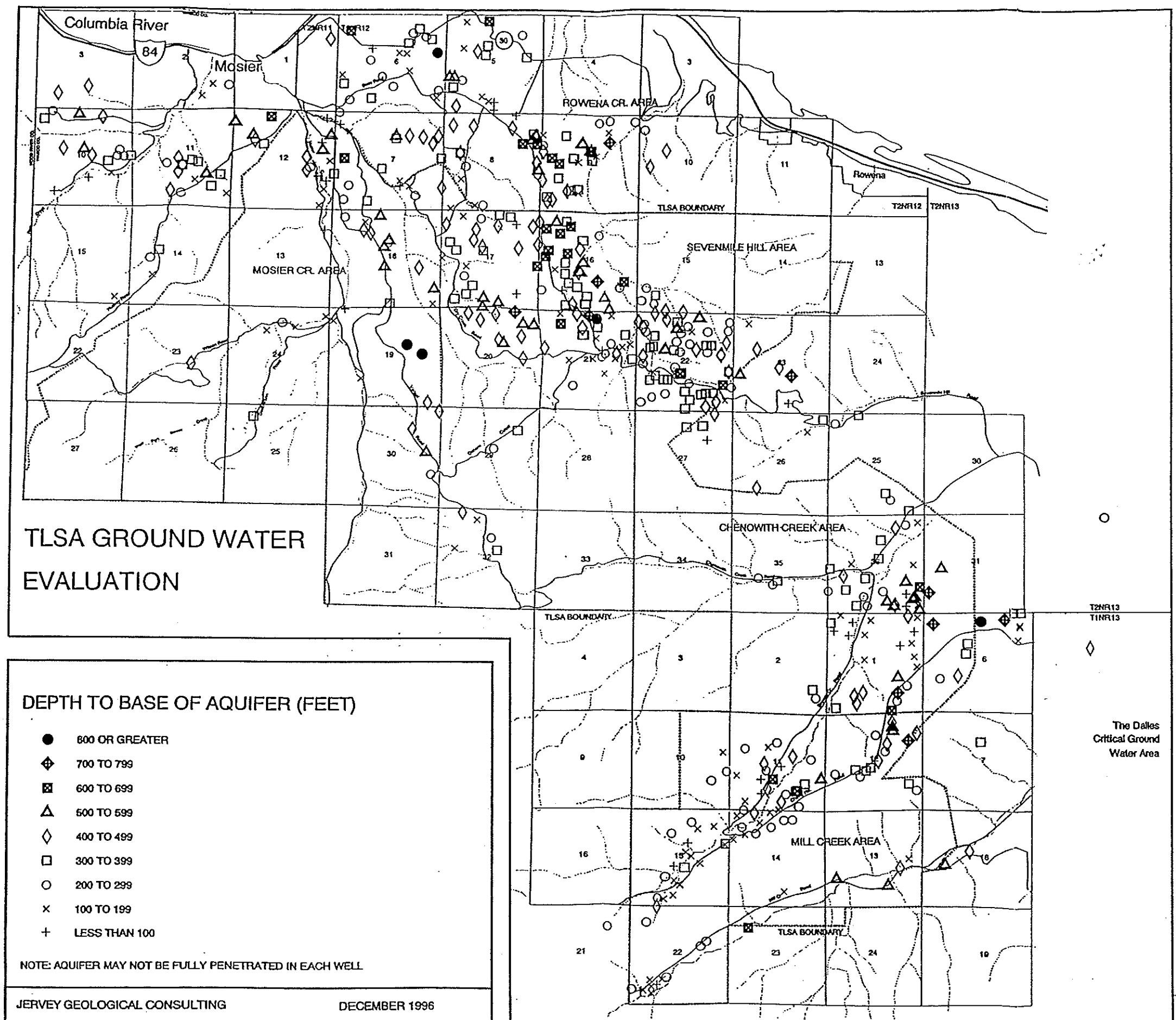
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

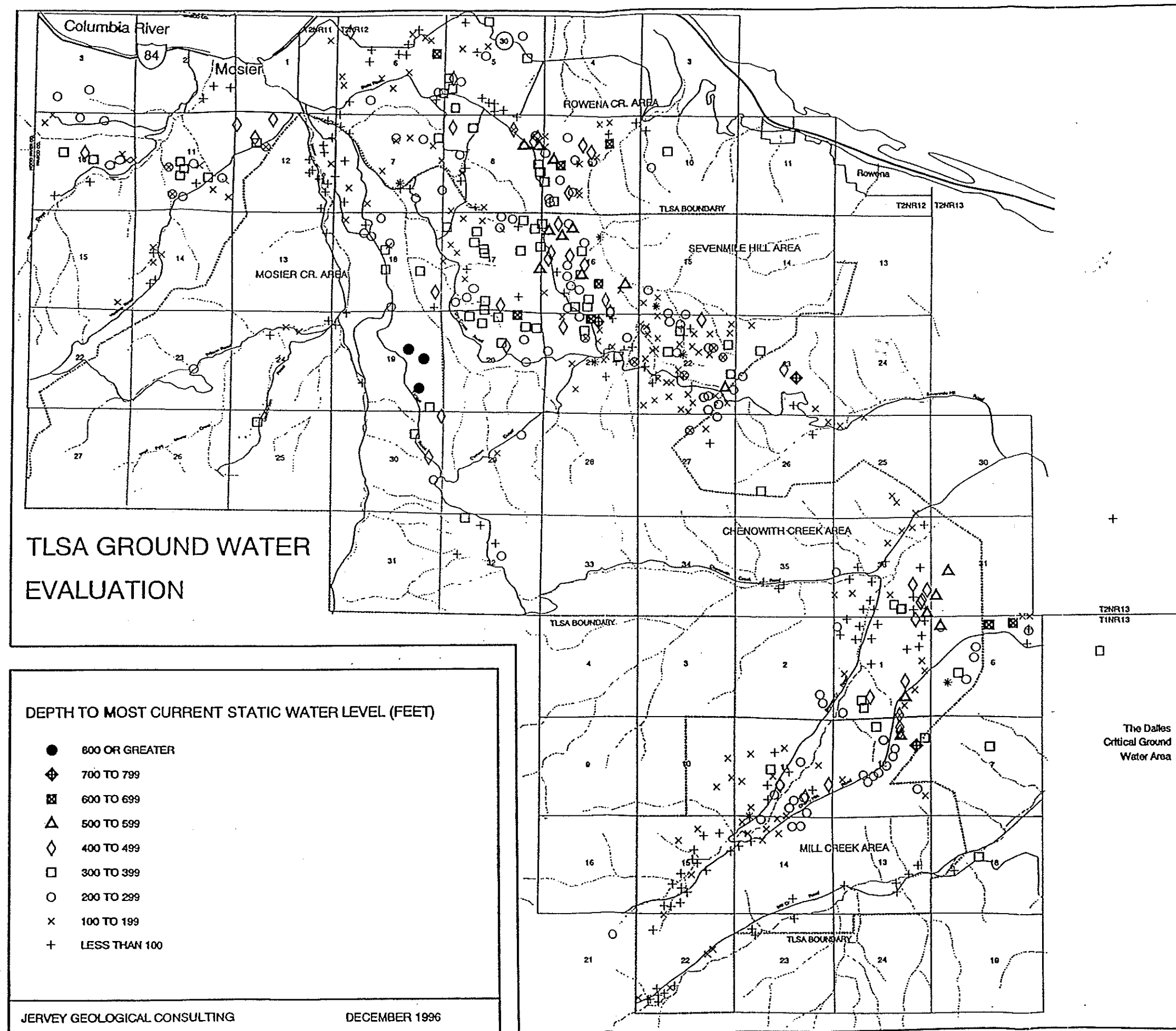
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

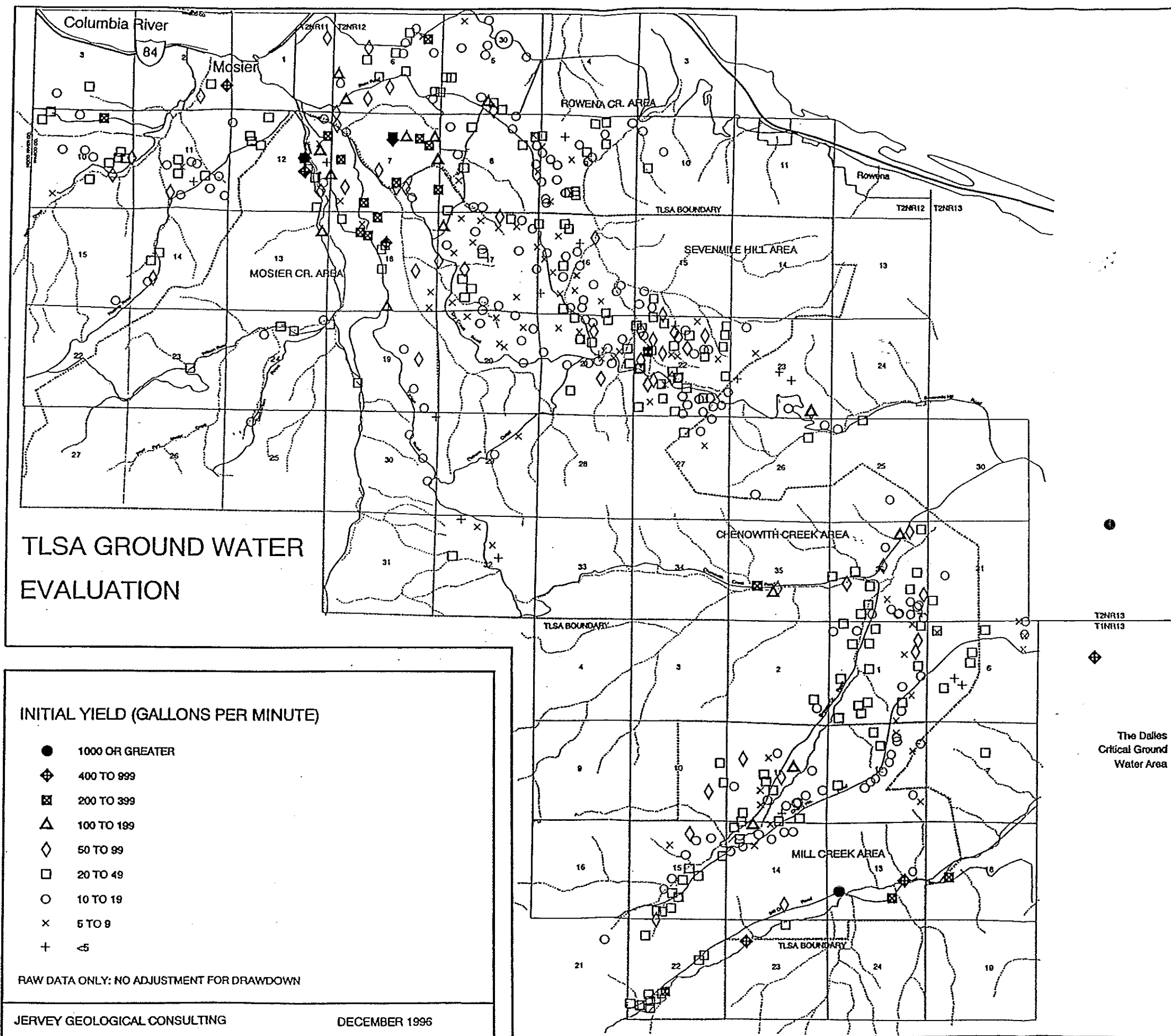
The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

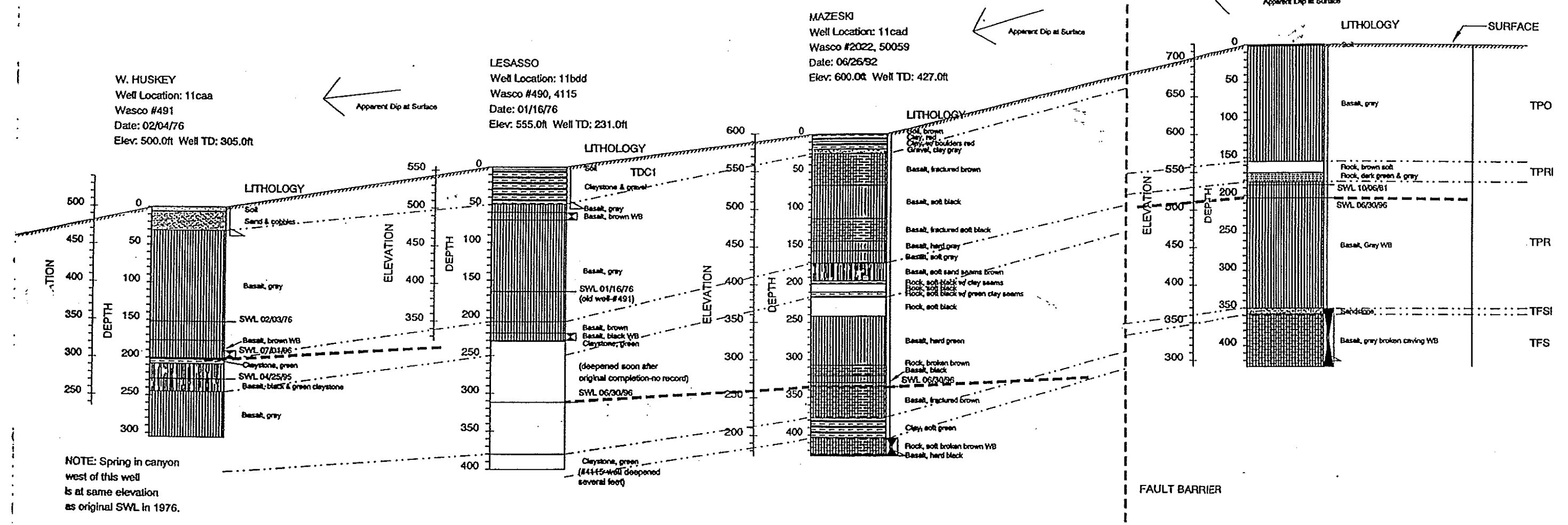
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt

as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepening (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not



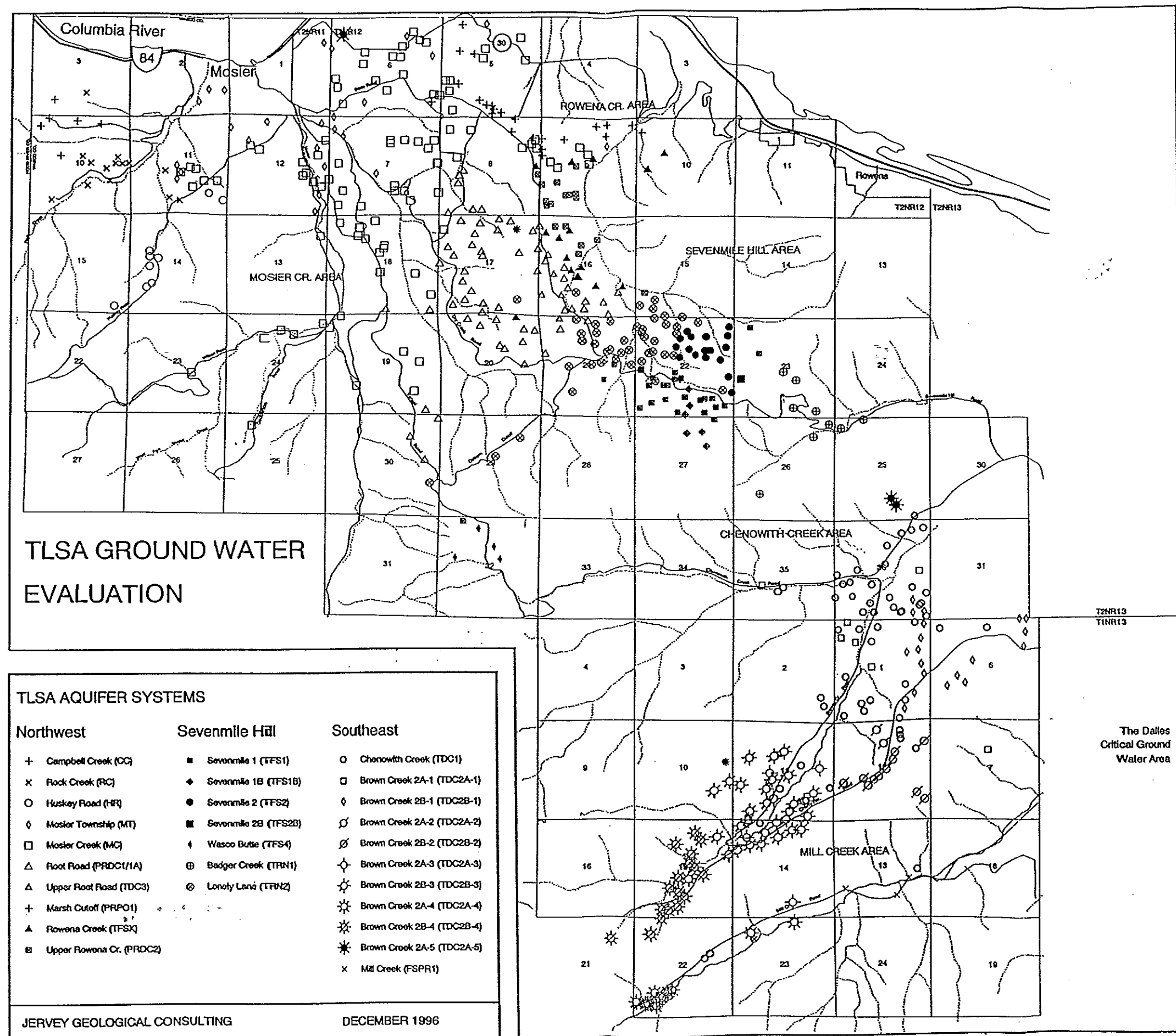
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG RATE DPTH	AVG SWL ELEV	AVG DPTH H2O	# OF DEEPEININGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	F	COMMENT	
NORTHWEST TLSA														
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61 1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TPR	14	719	286	30	545	174	113	0	1	0	4	-26	56
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0	* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58 HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61 HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60 2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60 SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56 SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59
SEVENMILE HILL														
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57 HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53 ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52 SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*	* SIMILAR TO TRN2?
SOUTHEAST TLSA														
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56 1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.



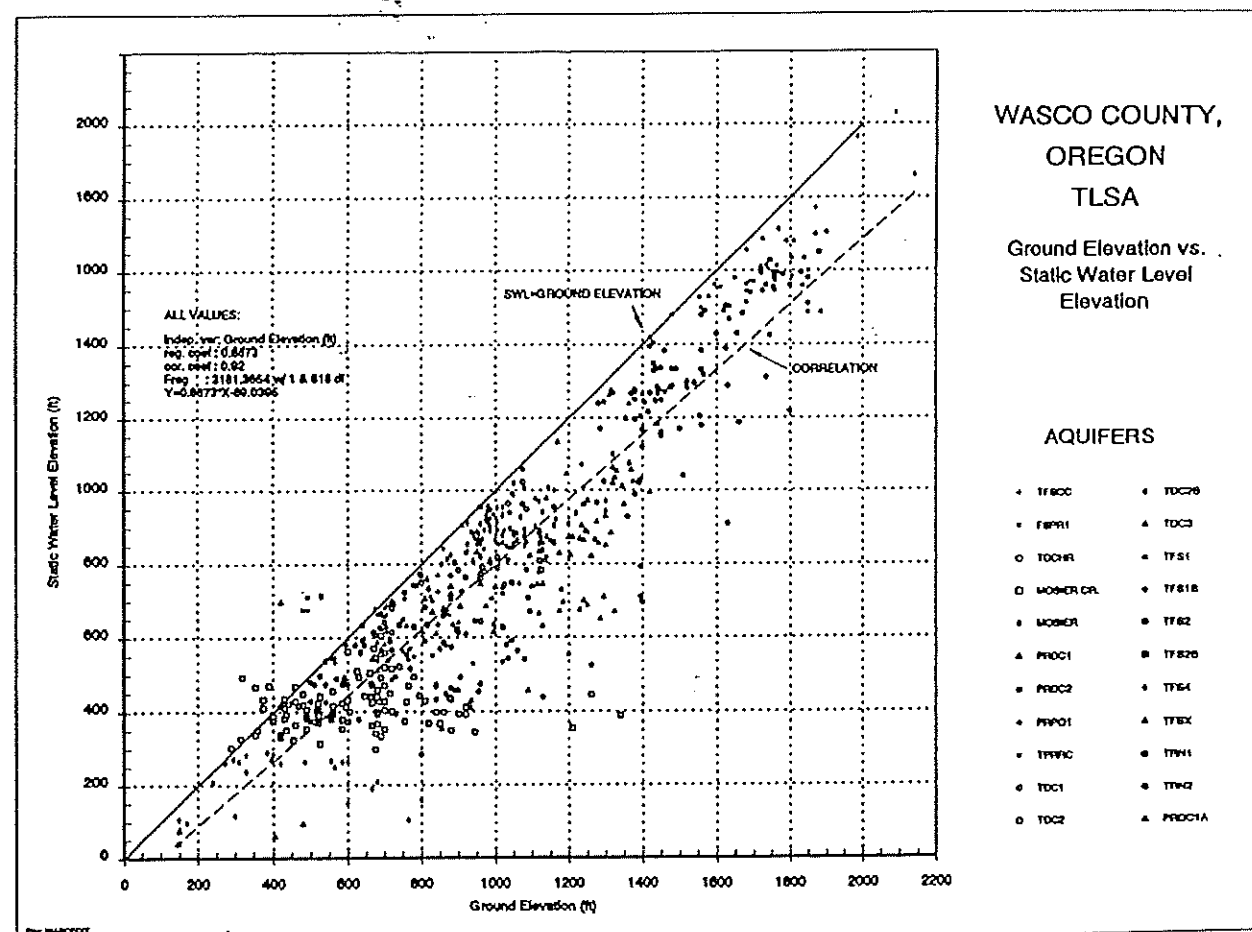


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

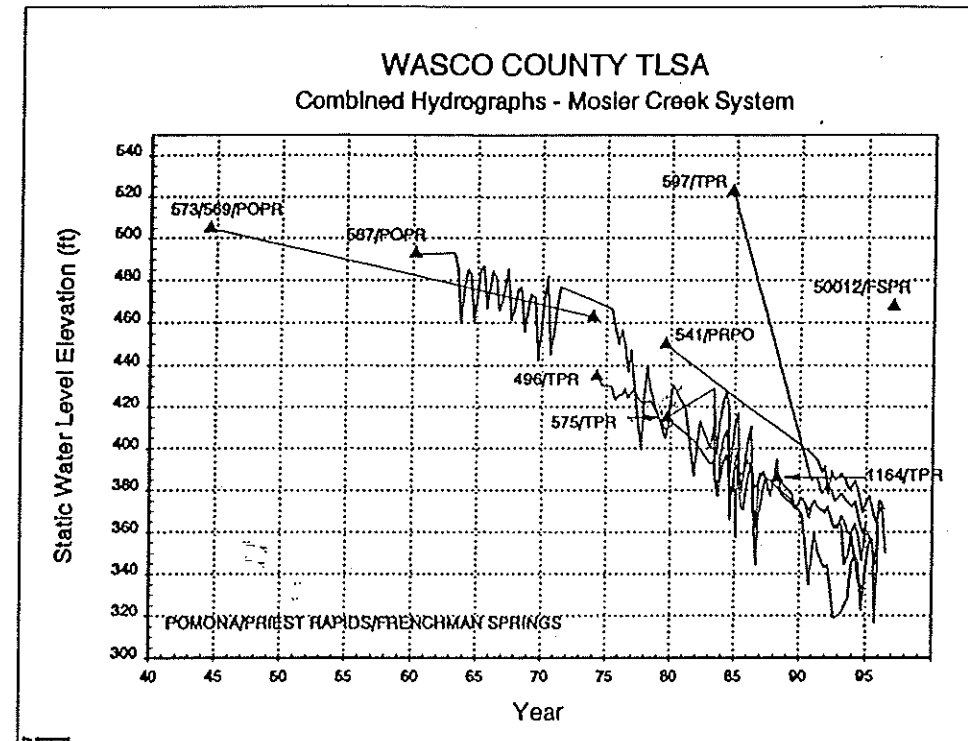


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

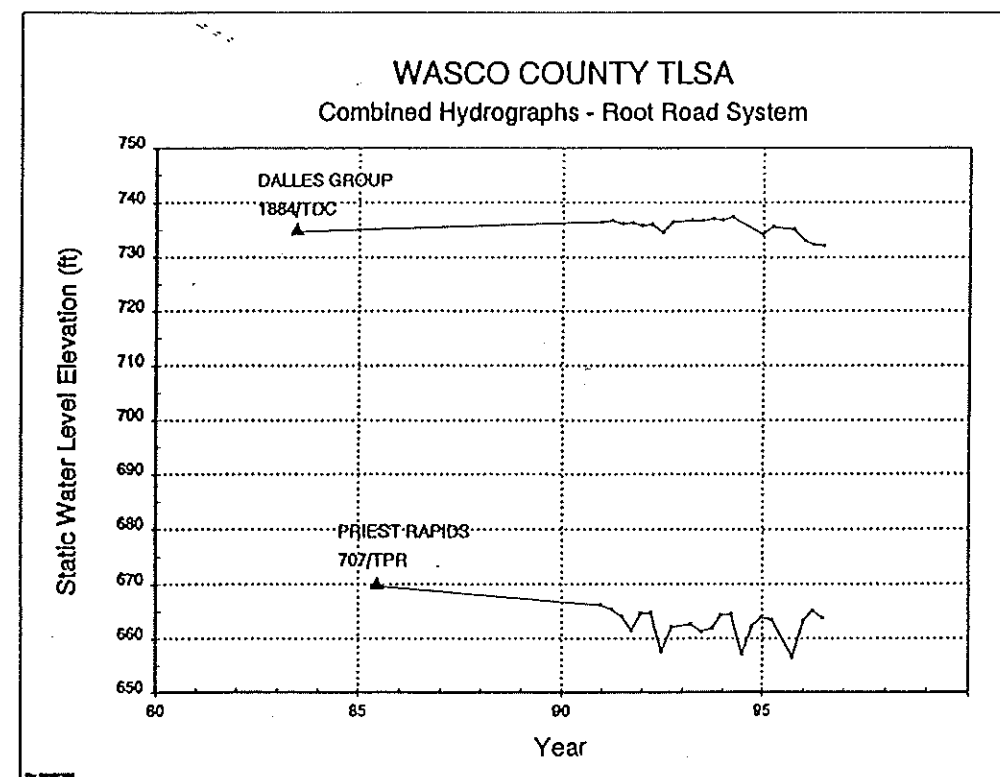


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.



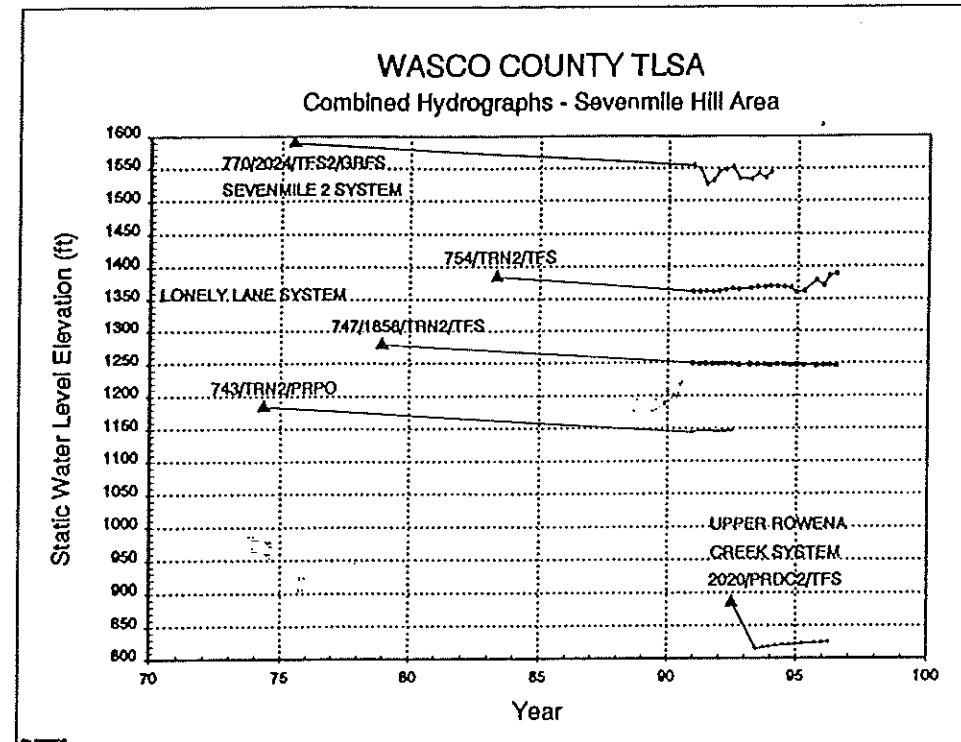


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

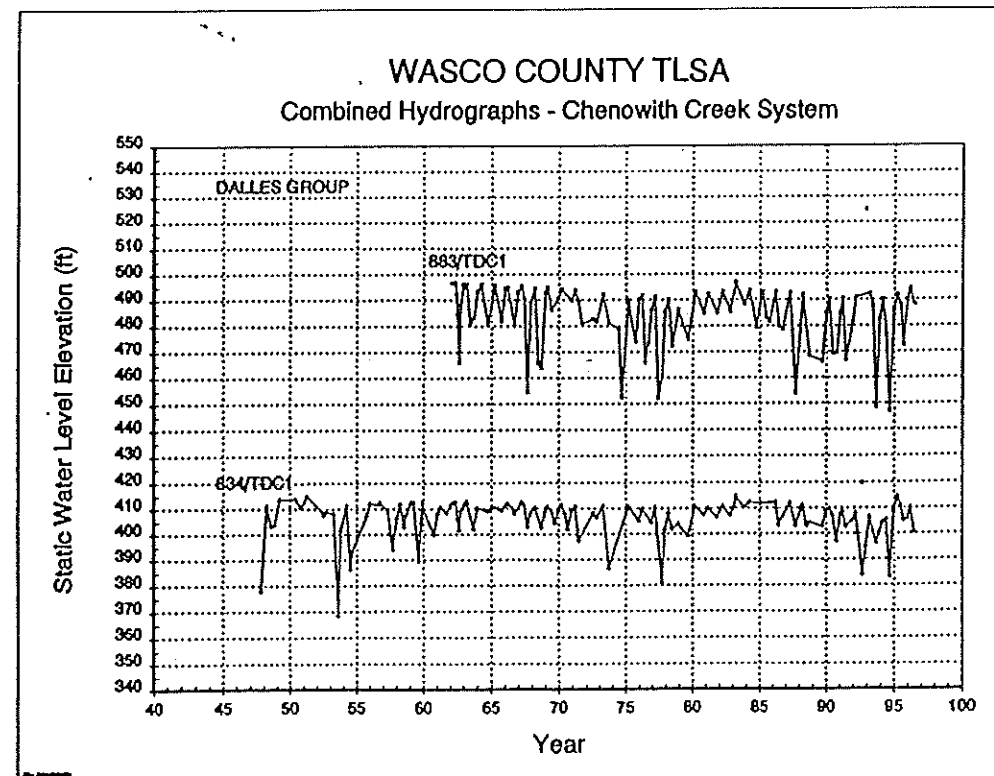


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

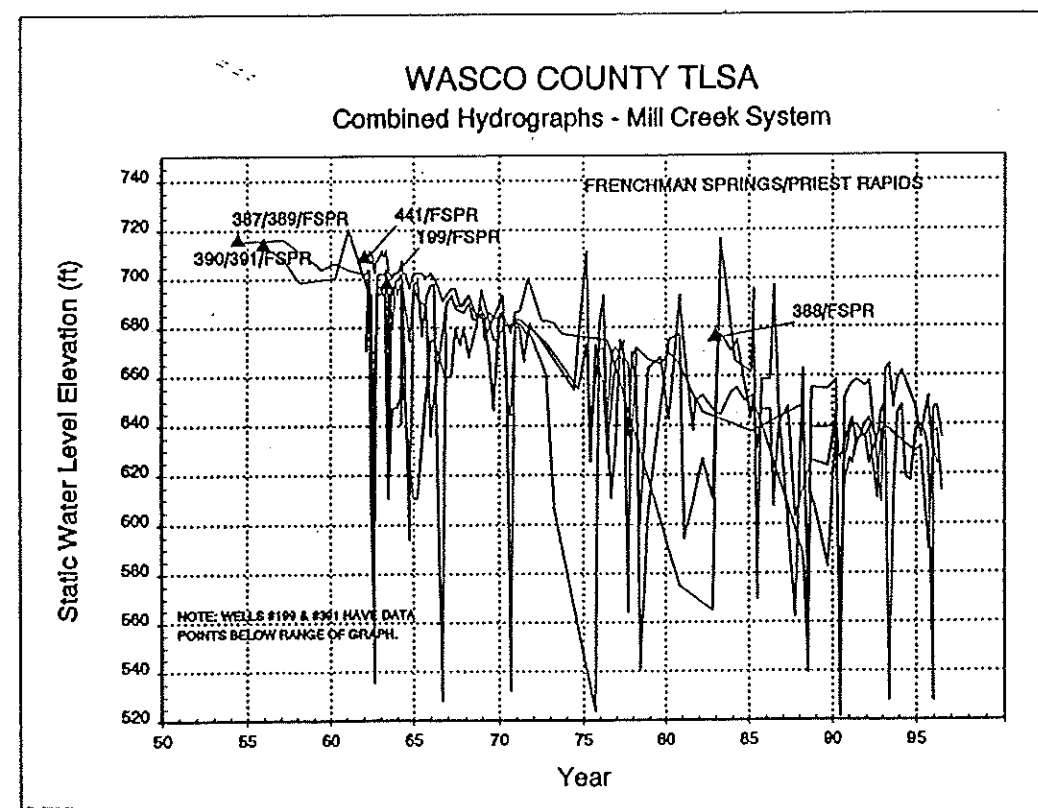


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no

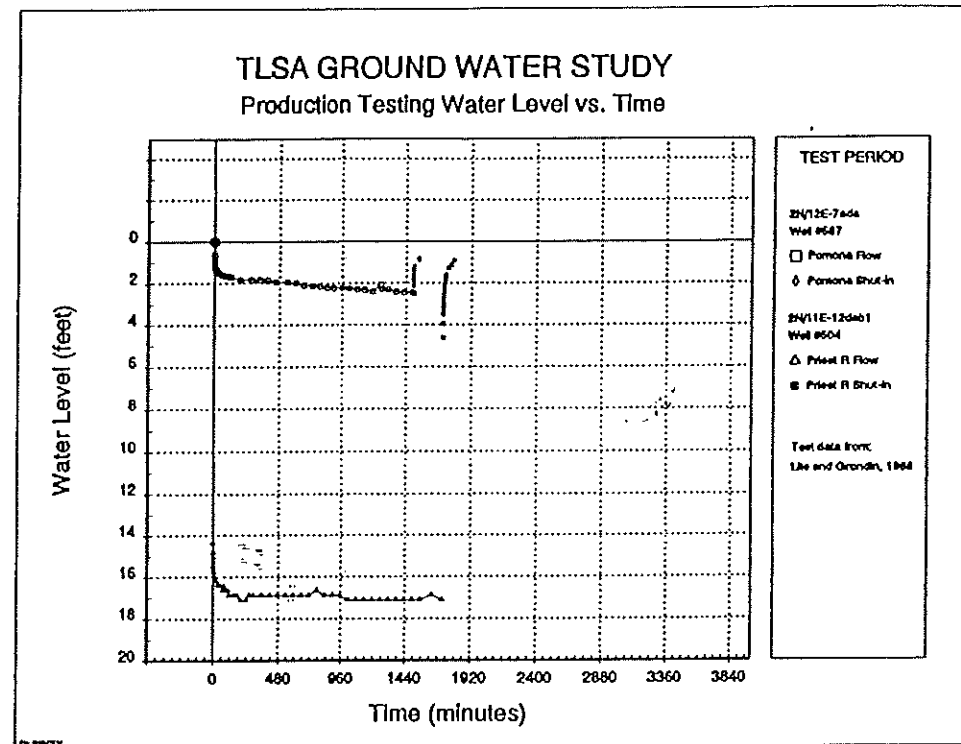


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

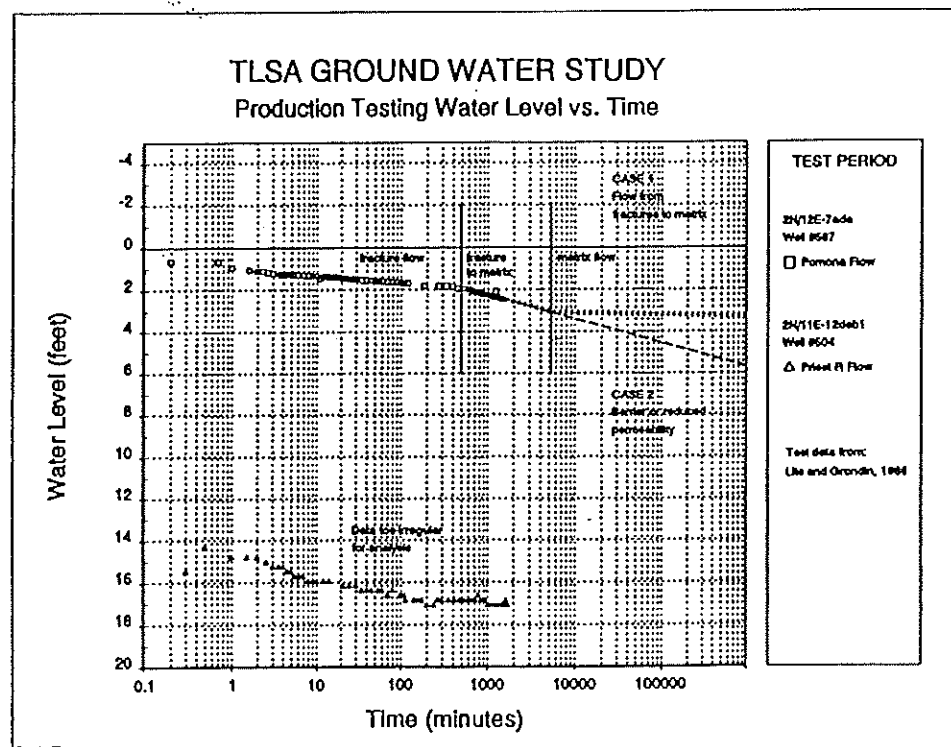


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).



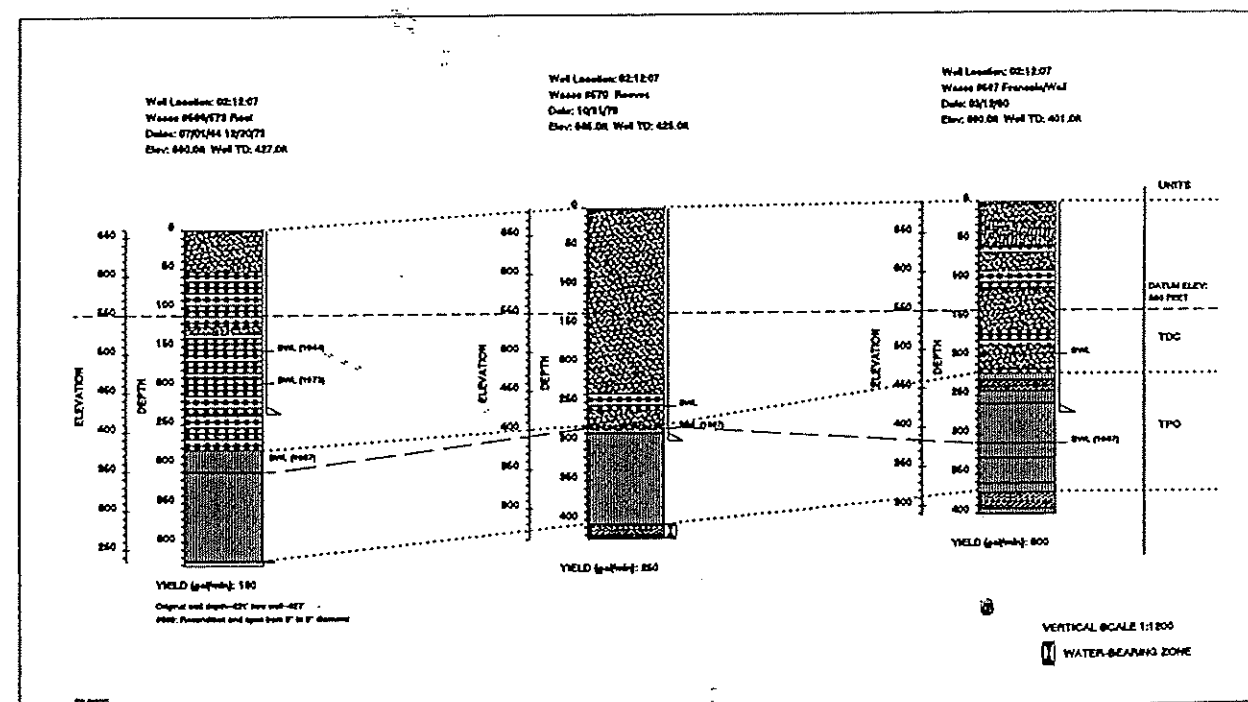


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

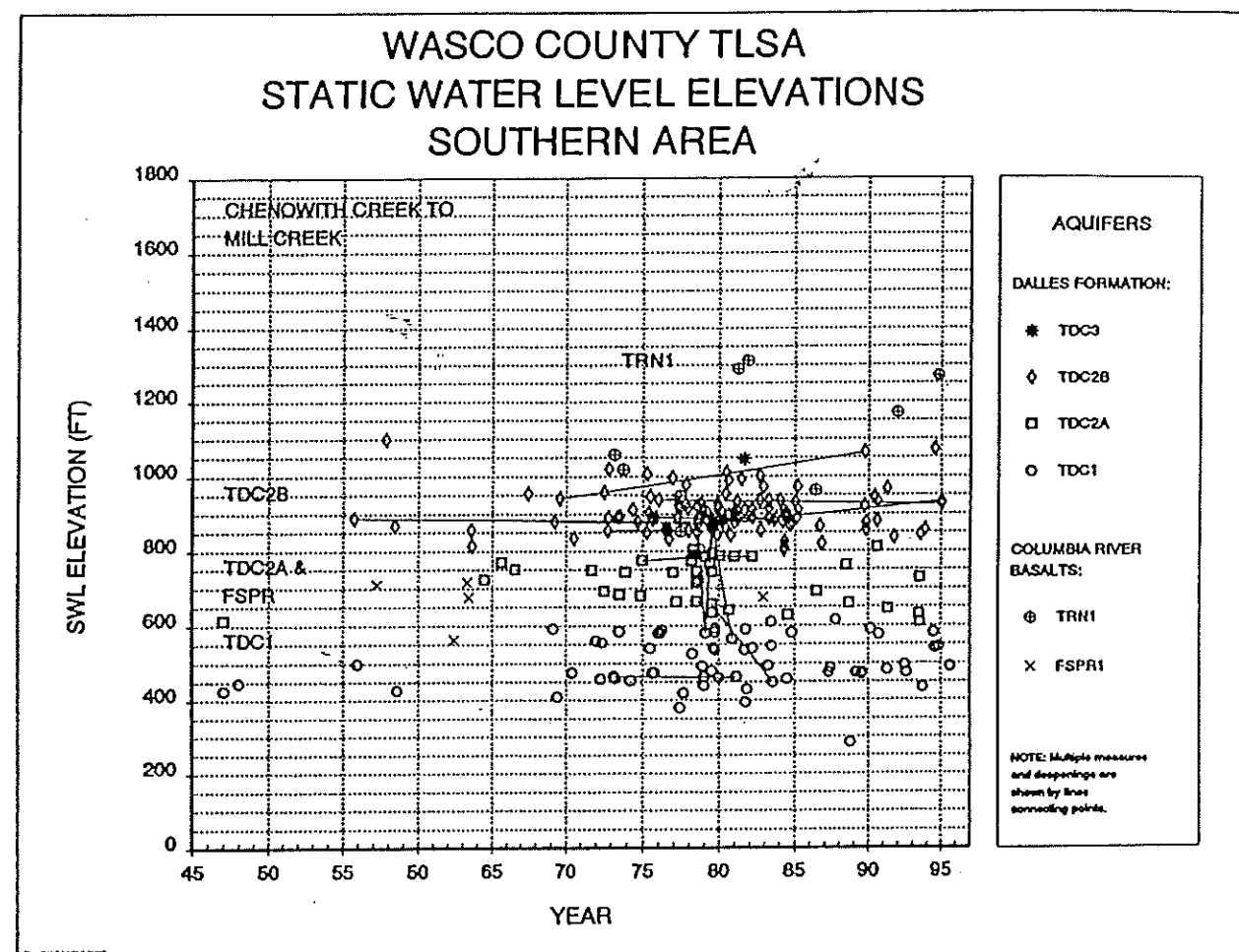


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

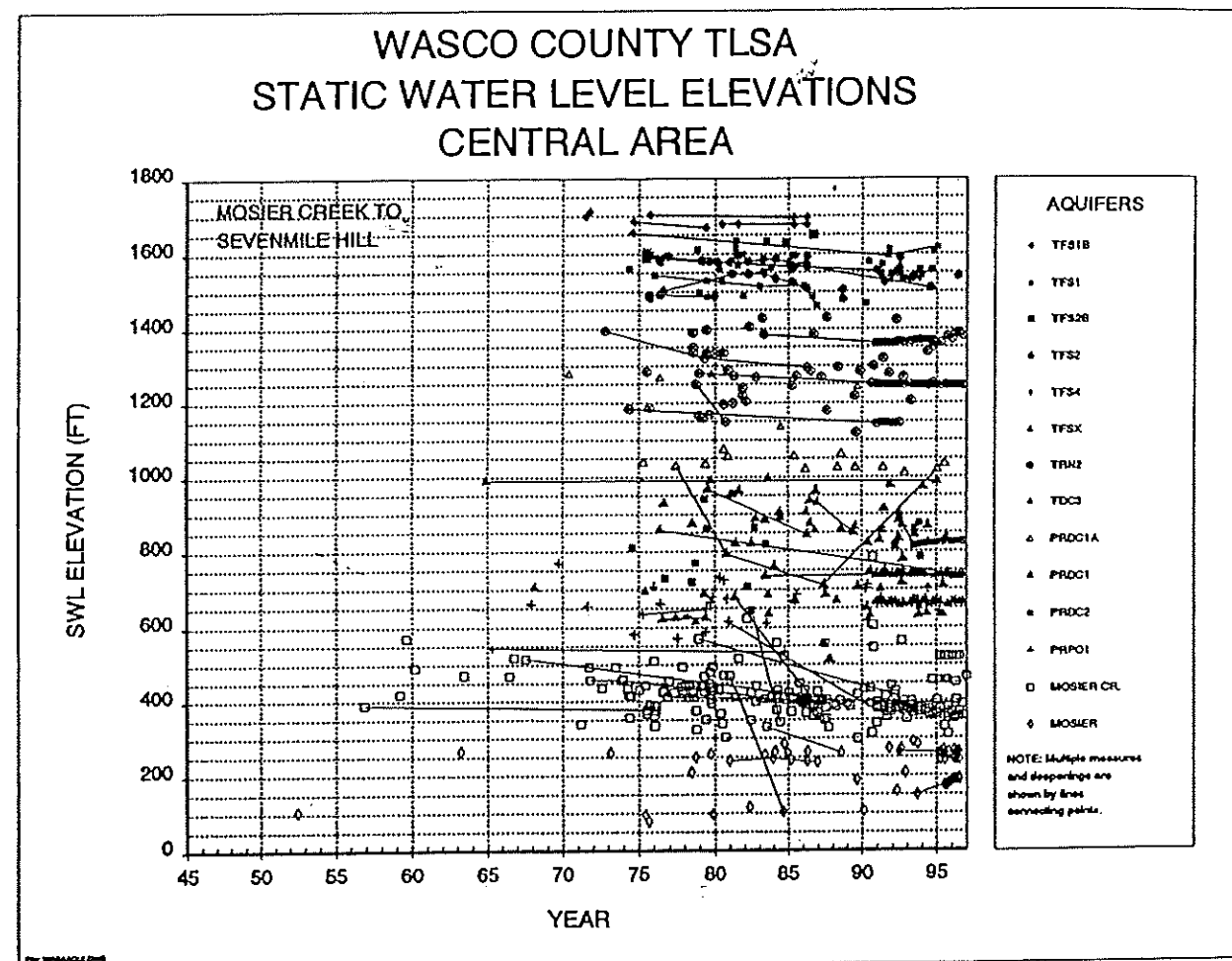


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.

significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPEMED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A



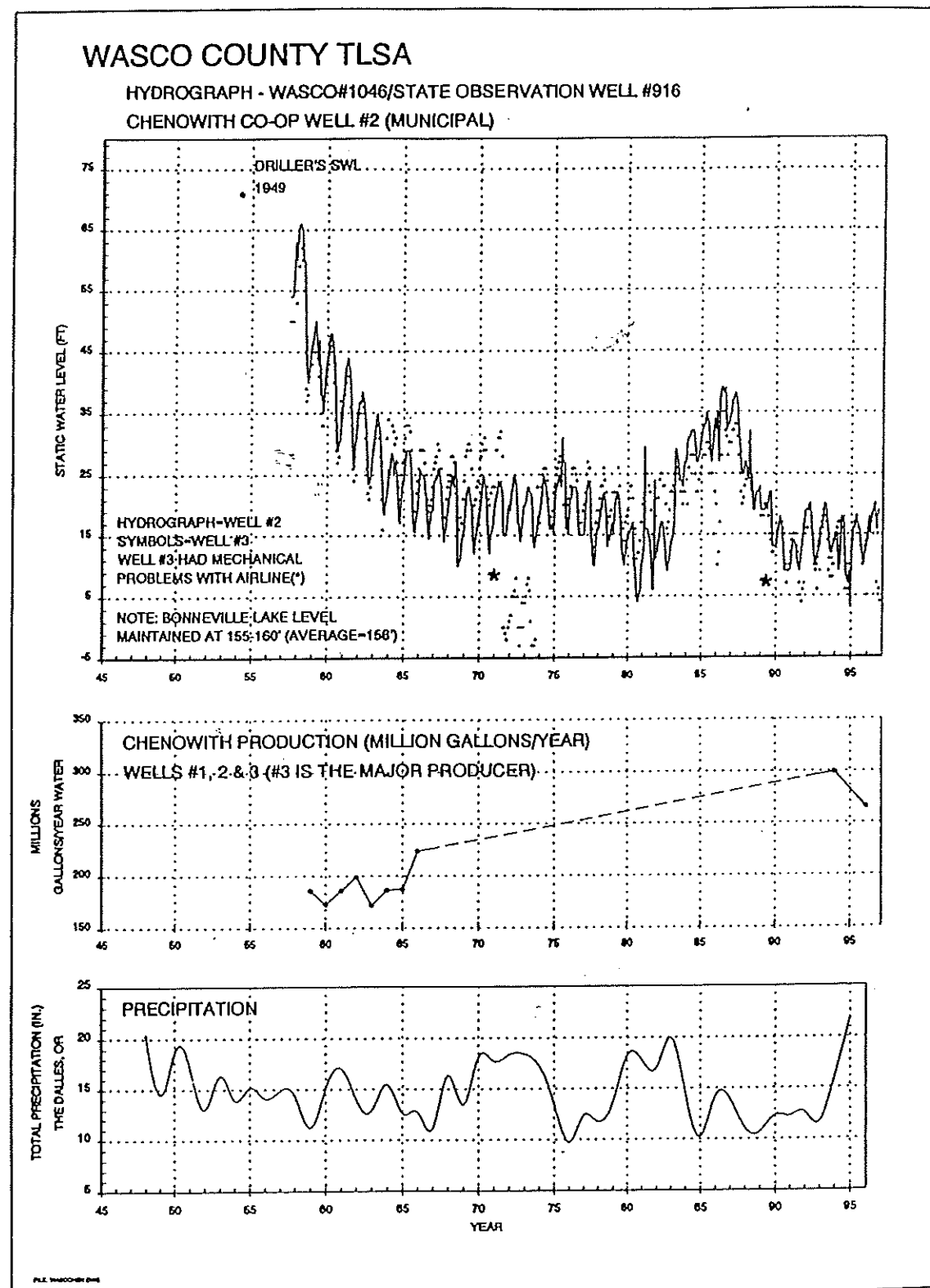


Figure 14. Chenowith Co-op water well data, 1949-1996.

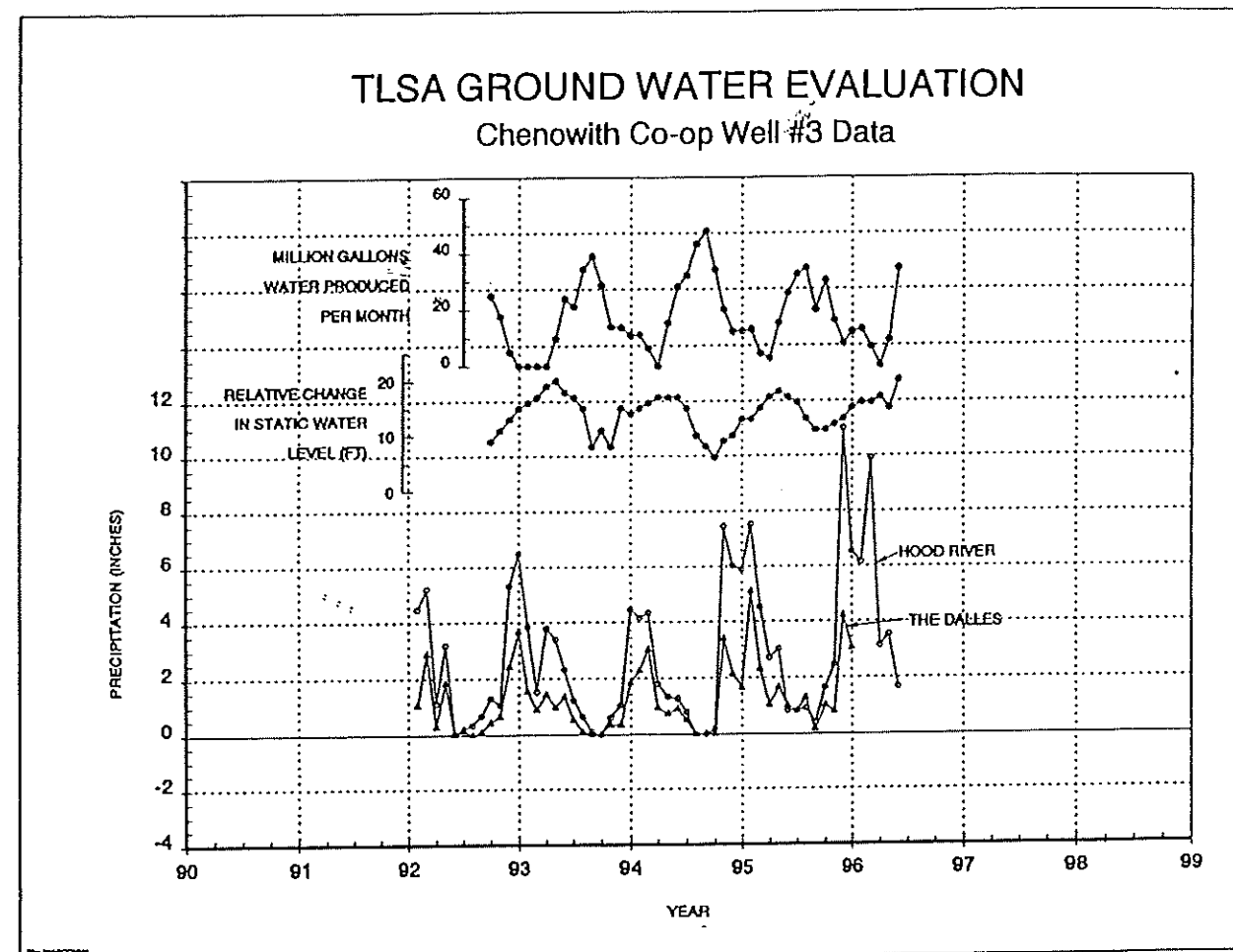


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

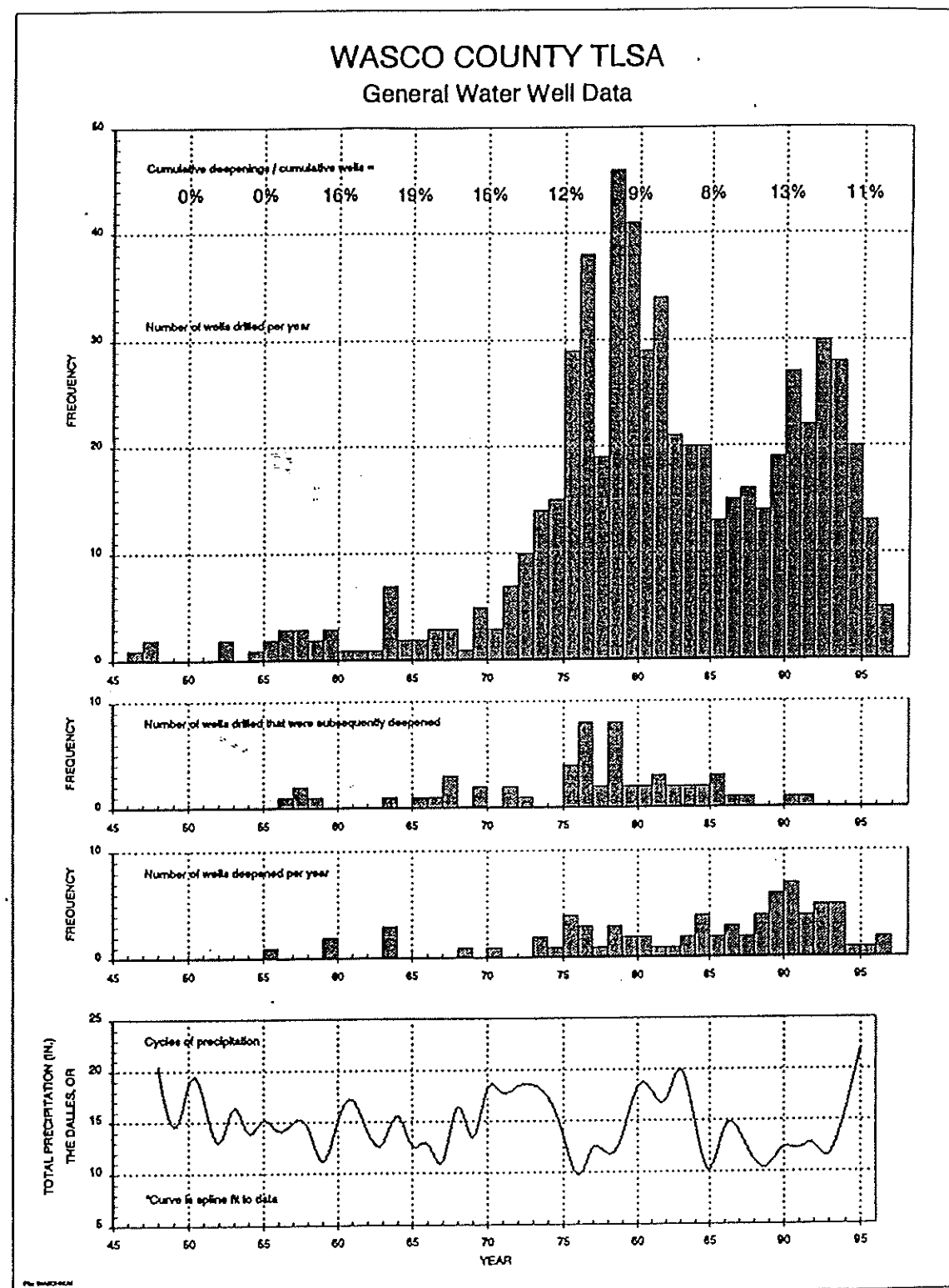


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.



The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

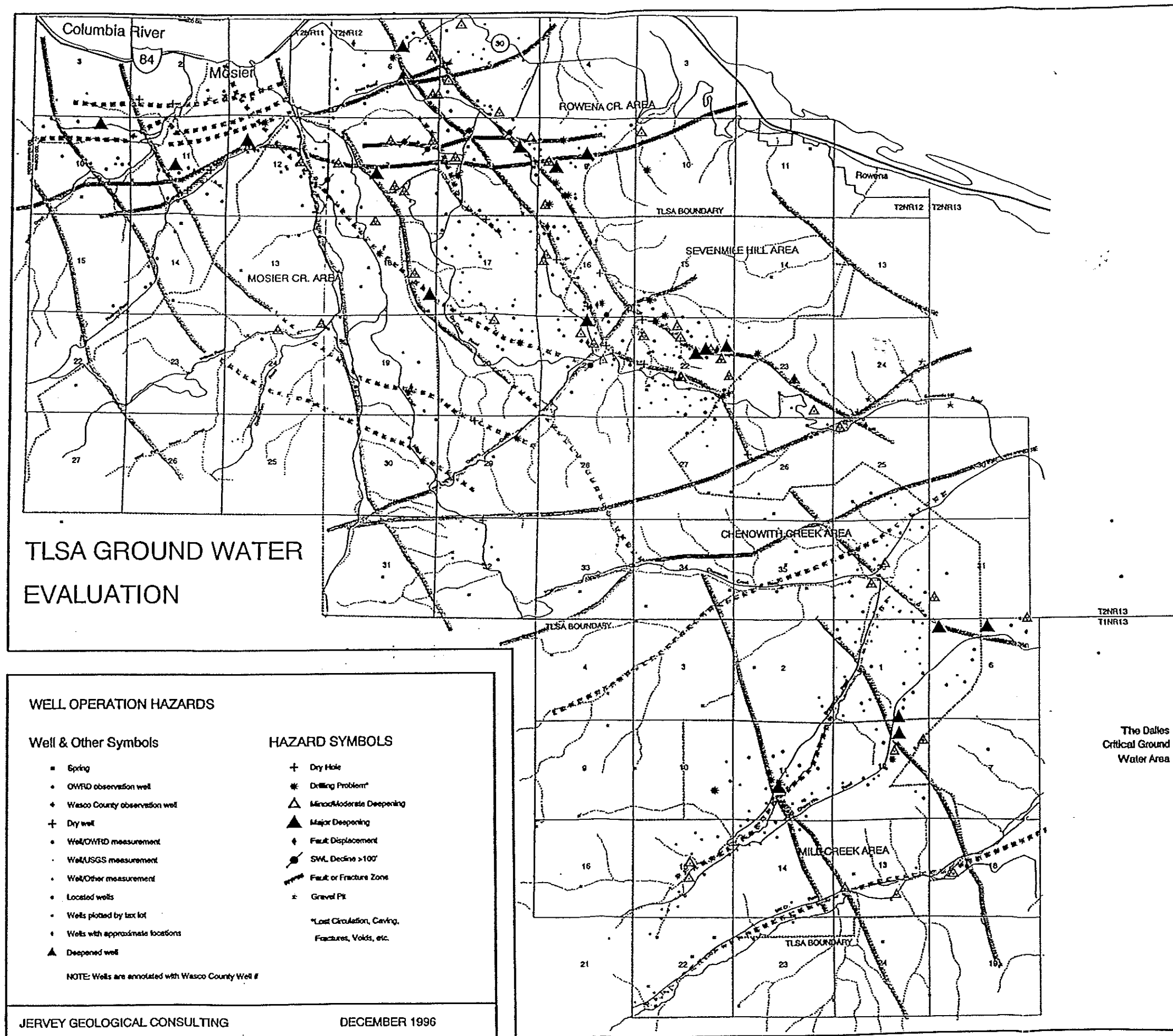




Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

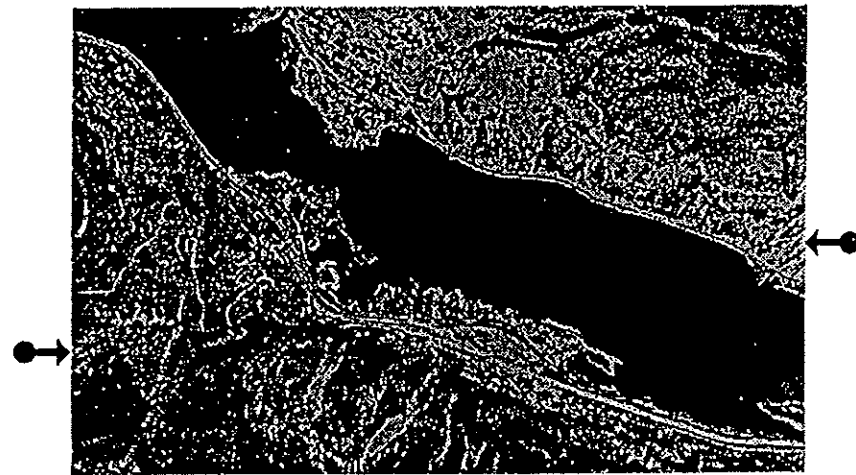


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.



Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

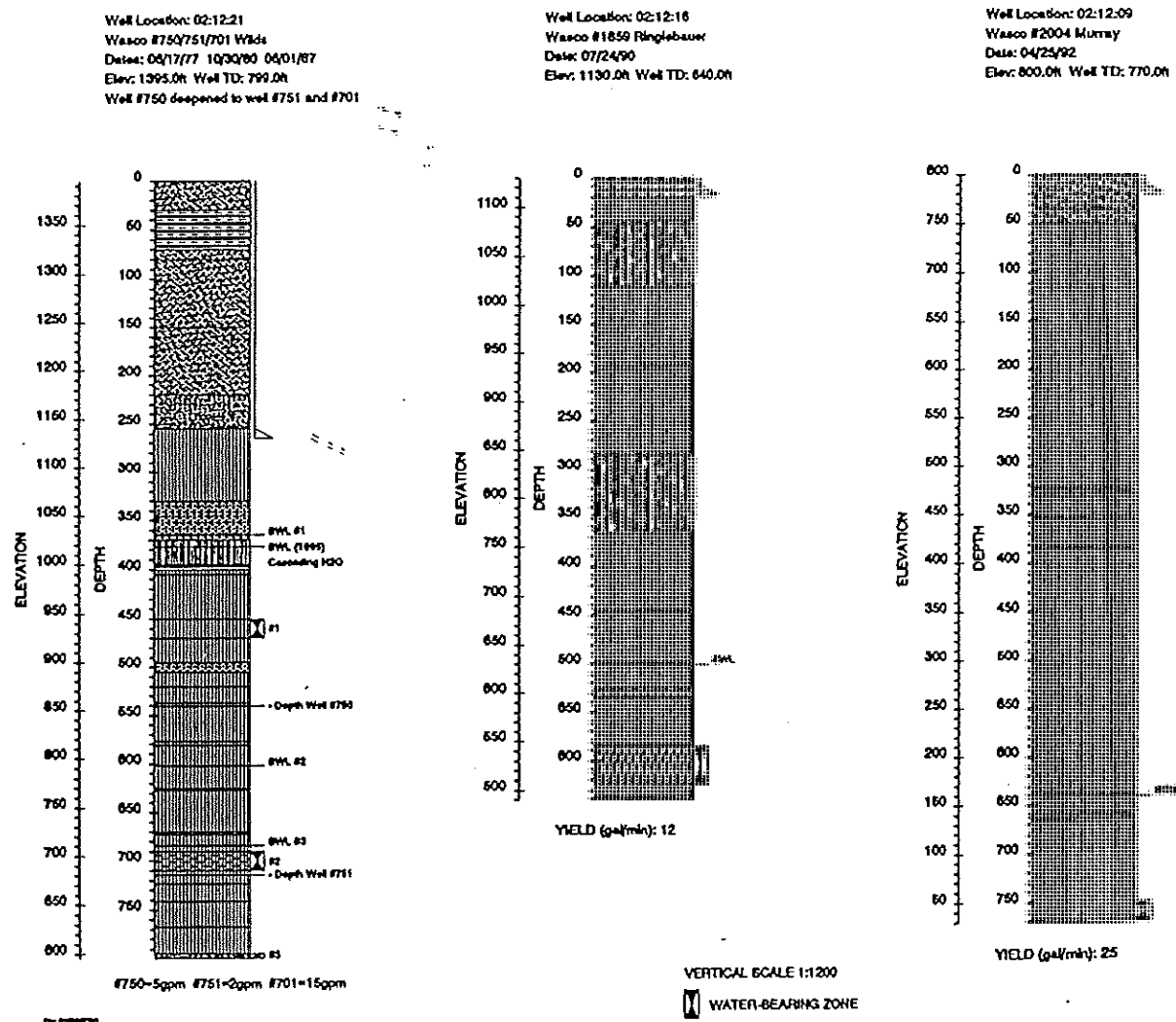


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.



- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

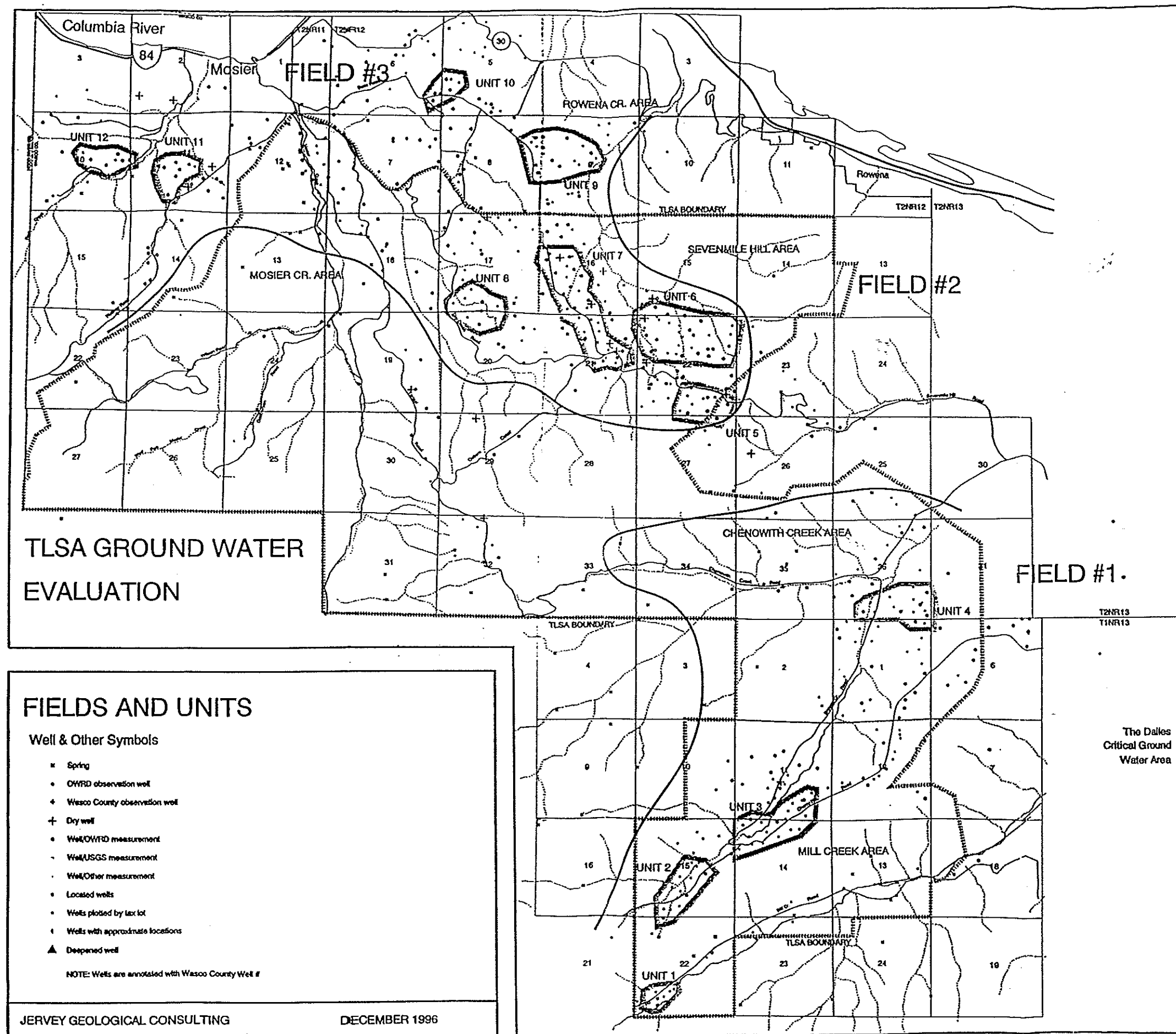
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.



REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by landowners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		PER WELL	AVERAGE WELL DISTANCE		DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	AREA ACRES		FEET	LOWER 1/3 WELL DISTANCE FEET		
1	TDC2A	8	49	6	388	318	3	
2	TDC2A&D	12	142	12	604	416	4	
3	TDC2B	19	212	11	653	478	5	
4	TDC1&2B	17	177	10	708	491	5	HIGH
5	TPS1&1B	12	123	10	602	393	4	
6	TF62/TRN2	33	342	10	599	386	3	HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3	HIGH
8	PRDC1	9	138	15	798	580	8	
9	PRPO1 HC TPSX	18	216	12	-	-	-	HIGH
10	HC	7	68	10	-	-	-	
11	MT/RC	7	97	14	-	-	-	
12	RC	7	91	13	-	-	-	

Table 3. Summary of well spacing in TLISA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.



**ACKNOWLEDGEMENTS**

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

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Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

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Harry Douthit	Clyde Root

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.

**EXHIBIT 5**

**Soil Information – 49C and 50D**



## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY					
				(PCT)	4	10	40	200		INDEX				
0-7 IL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		IML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 IWB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS K	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
FREQUENCY	DURATION	MONTHS	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP	FROST	ACTION
NONE			>6.0											

SANITARY FACILITIES										CONSTRUCTION MATERIAL									
SEPTIC TANK	SEVERE-PERCS SLOWLY									FAIR-AREA RECLAIM, THIN LAYER									
ABSORPTION FIELDS										ROADFILL									
SEWAGE LAGOON AREAS	SEVERE-SLOPE									SAND									
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK									GRAVEL									
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE									TOPSOIL									
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER																		
BUILDING SITE DEVELOPMENT										WATER MANAGEMENT									
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE									EMBANKMENTS									
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE									EXCAVATED PONDS									
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE									AGUIFER FED									
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE									DRAINAGE									
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION									IRRIGATION									
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE									TERRACES AND DIVERSIONS									
										GRASSED WATERWAYS									



		RECREATIONAL DEVELOPMENT	
CAMP AREAS	MODERATE-SLOPE,DUSTY	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	MODERATE-SLOPE,DUSTY	PATHS AND TRAILS	SEVERE-ERODES EASILY

[illegible]

Severe  
limitations  
(e) erosion

ORD	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY			
SYM	EROSION	EQUIP.	SEEDLING	WINDTH.	PLANT	COMMON TREES	SITE	TREES TO PLANT
	HAZARD	LIMIT	MORT'Y.	HAZARD	COMPET.		INDX	
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	70	PONDEROSA PINE

Index of potential productivity @ avg. total ht. and 100 yrs.

4 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac

A = slight or no limitations.

U. Avg. = 41 ft<sup>3</sup>/ac/yr.

Index of potential productivity @ avg. total ht. and 100 g.s.

$$64 \text{ cubic metres/hectare/yr.} = 57.2 \text{ t/ha}$$

A = slight or no limitations.

U.S. Avg = 41 ft<sup>3</sup>/ac/yr.

[illegible][illegible]

POTENTIAL NATIVE PLANT	COMMONITY	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	
IDAHO FESCUE	FEID	45
BLUEBUNCH WHEATGRASS	AGSP	10
SANDBERG BLUEGRASS	POSE	5
NARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	QUGA4	5
PONDEROSA PINE	PIPO	5

950

800

450

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

50D WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY			
				(PCT)	4	10	40	200		INDEX			
0-7	1L	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28	1L, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44	1L, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	1UB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY		
											STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY, SLOPE			ROADFILL	FAIR-AREA RECLAIM, THIN LAYER, SLOPE		
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS	SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			DIKES AND LEVEES			
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS	SEVERE-NO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			AQUIFER FED	DEEP TO WATER		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			DRAINAGE	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
				TERRACES AND DIVERSIONS			
				GRASSED WATERWAYS	SLOPE, ERODES EASILY		





# **EXHIBIT 6**

## **Guide for Using Soil Surveys**



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**

GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.



## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty

Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.



Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:



<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0

Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.



A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	

Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.



These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.

#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.



Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.



The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.



Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:



Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.

## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.



selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other

important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

#### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.



XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.

FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.



## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

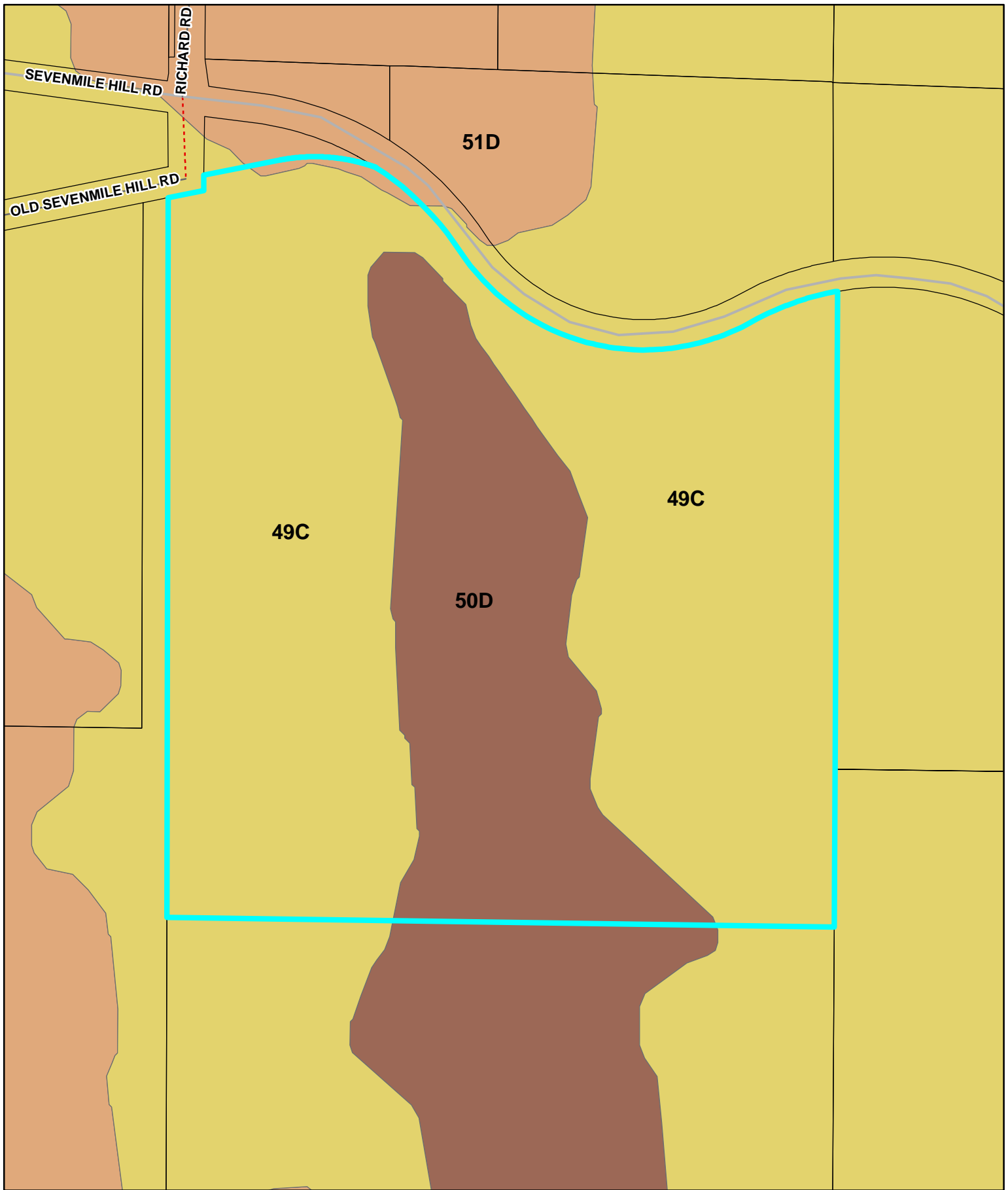
Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982


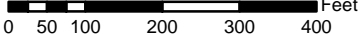
## **EXHIBIT 7**

### **Soil Map**



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

# Soil Map

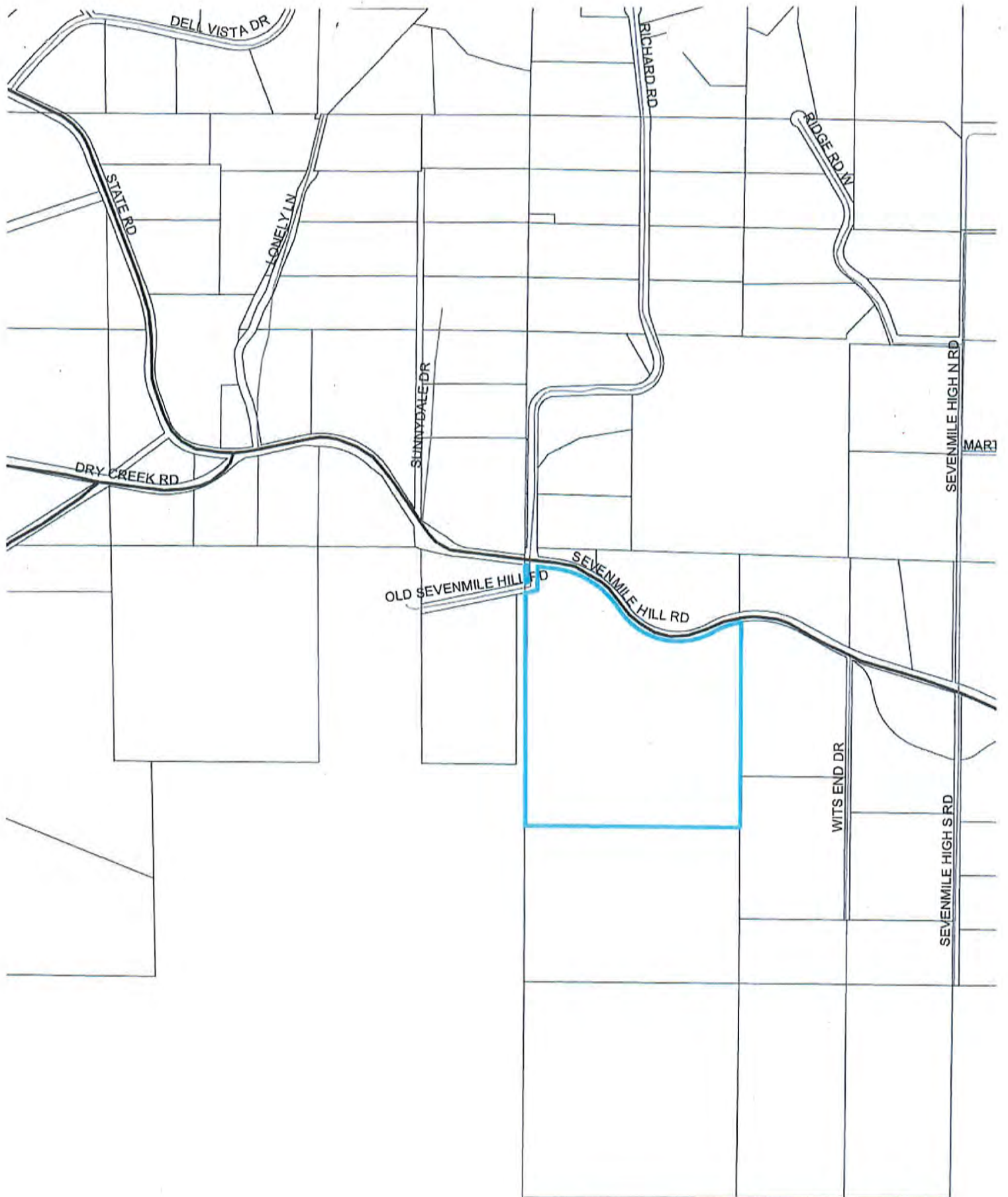



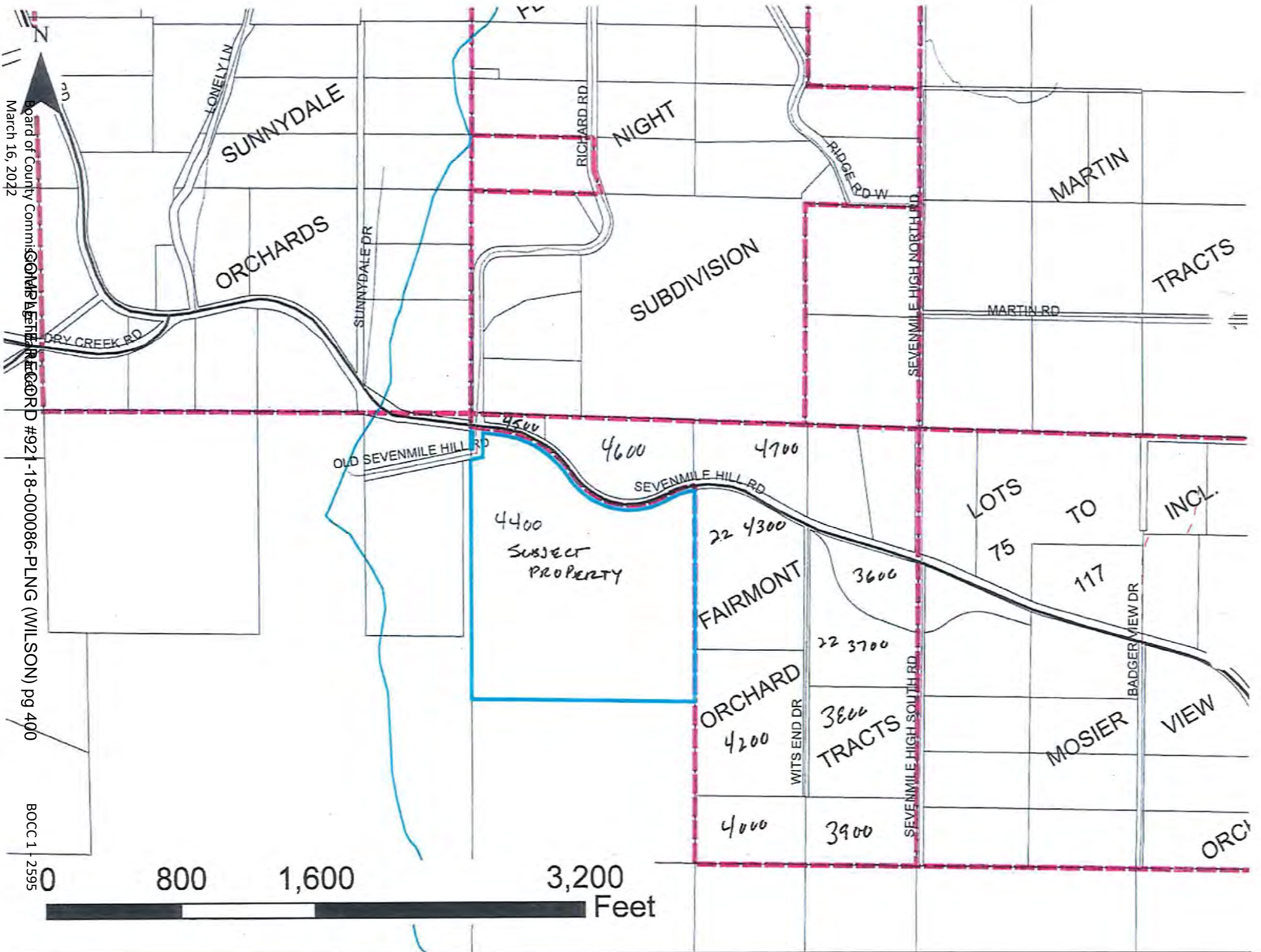
This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult primary data and other sources to ascertain the usability of the information.



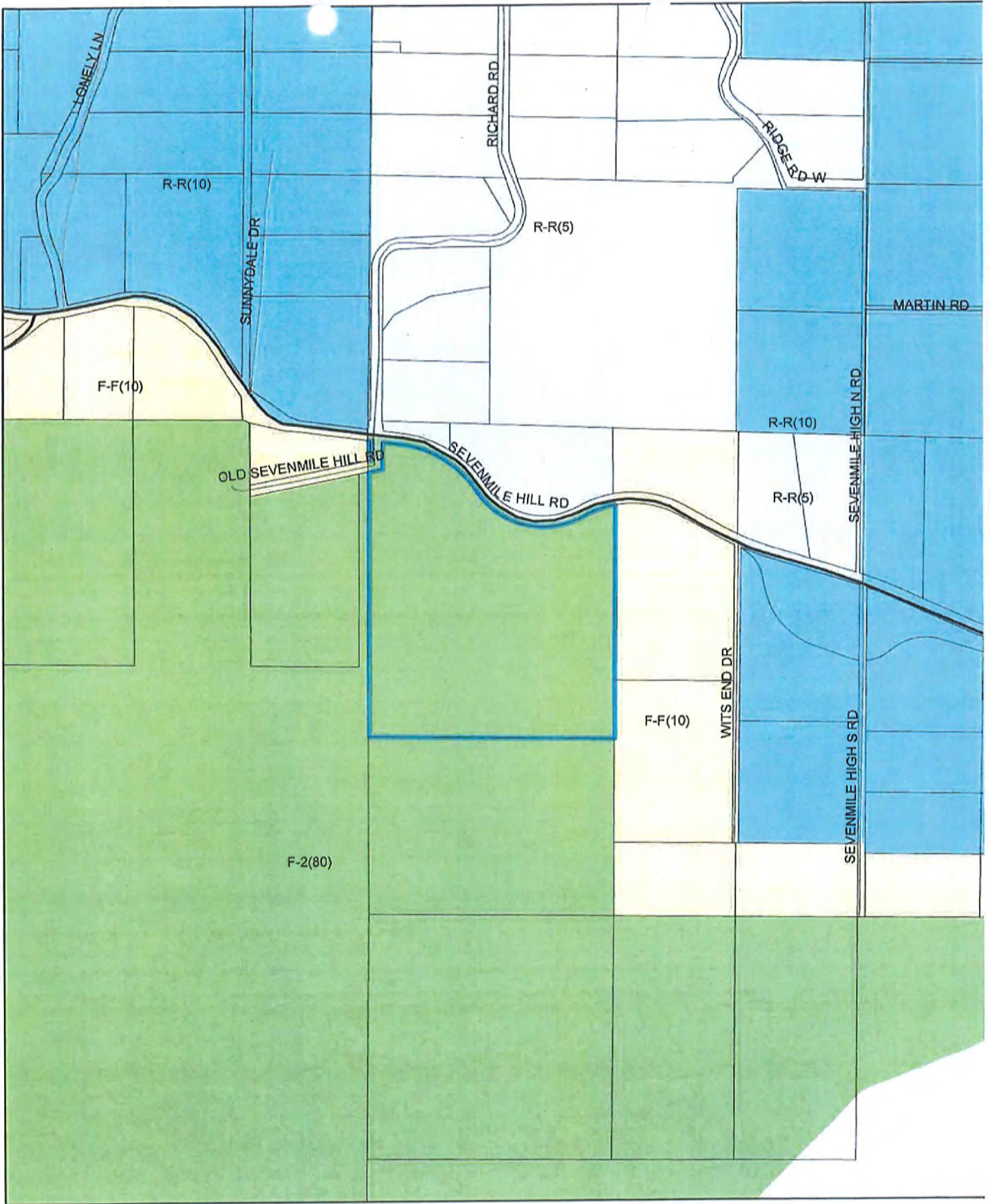
## **EXHIBIT 8**

### **Submitted Maps**



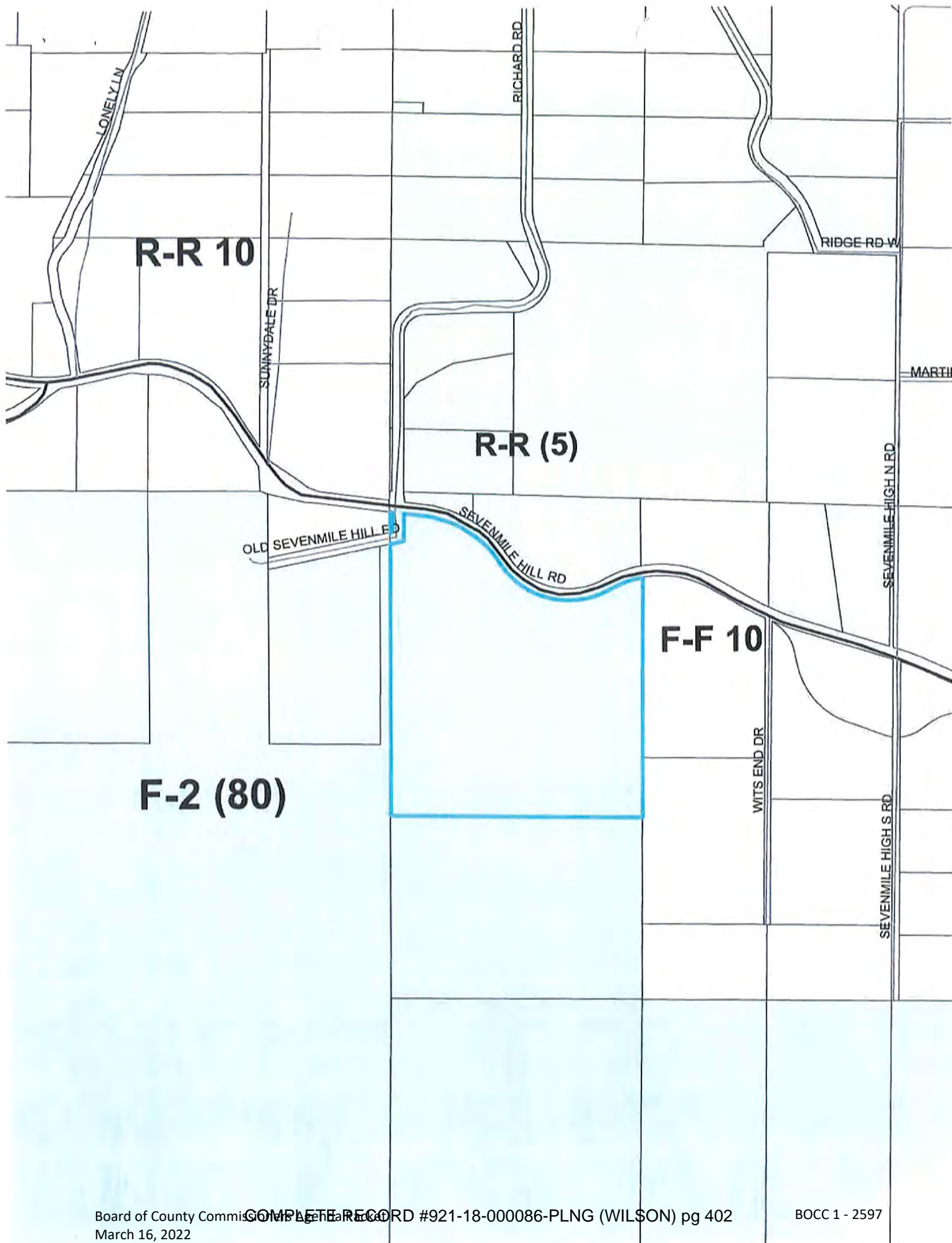






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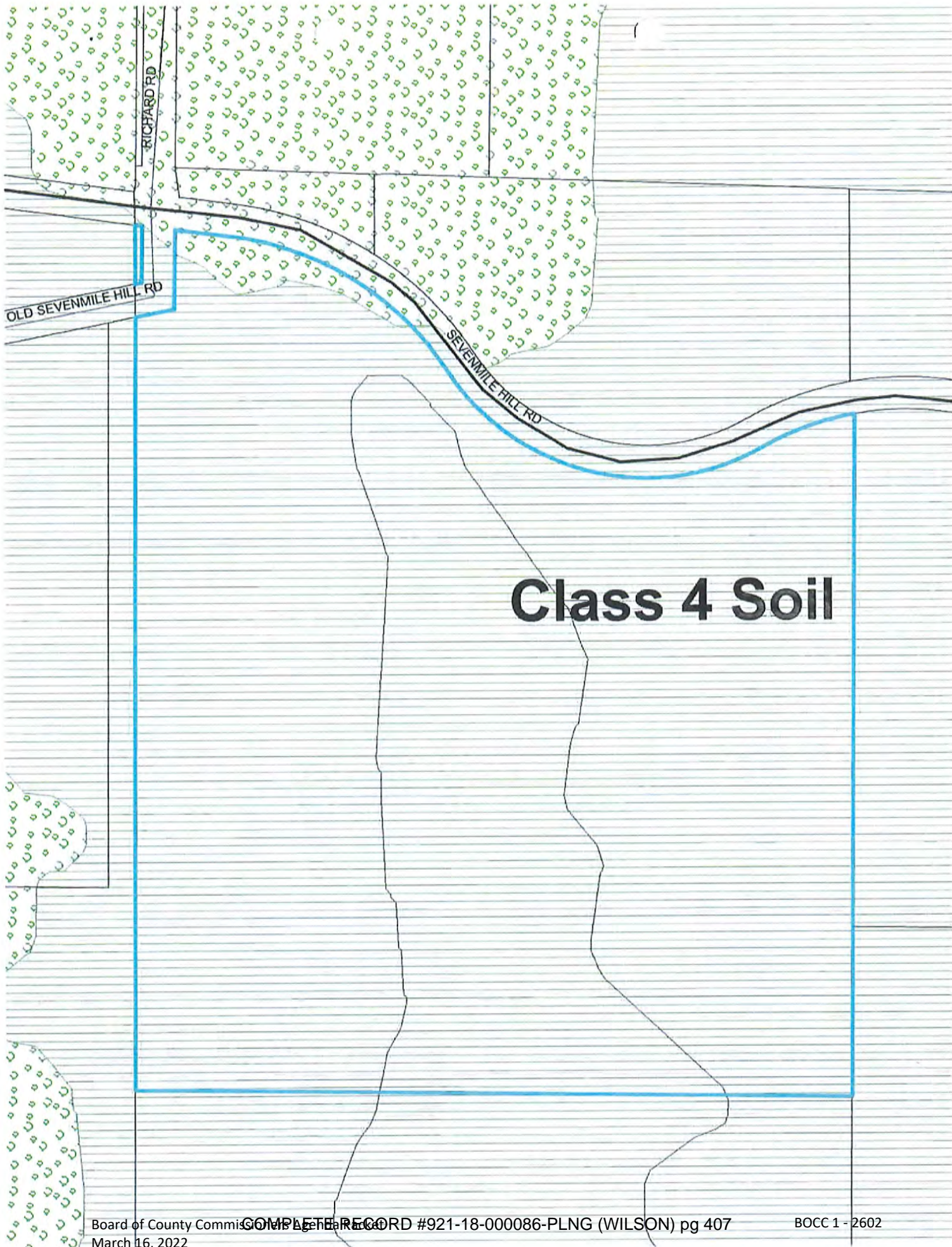




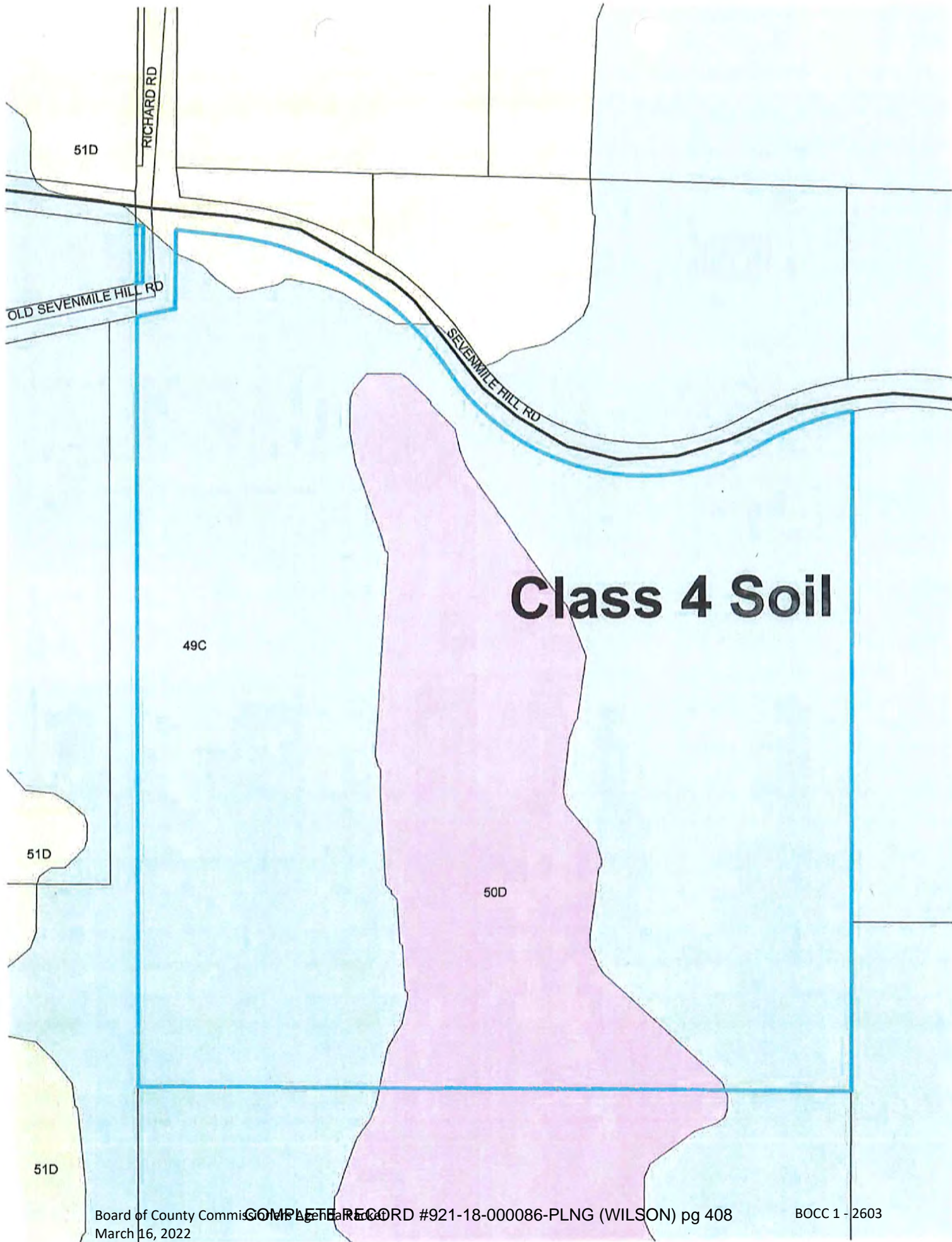




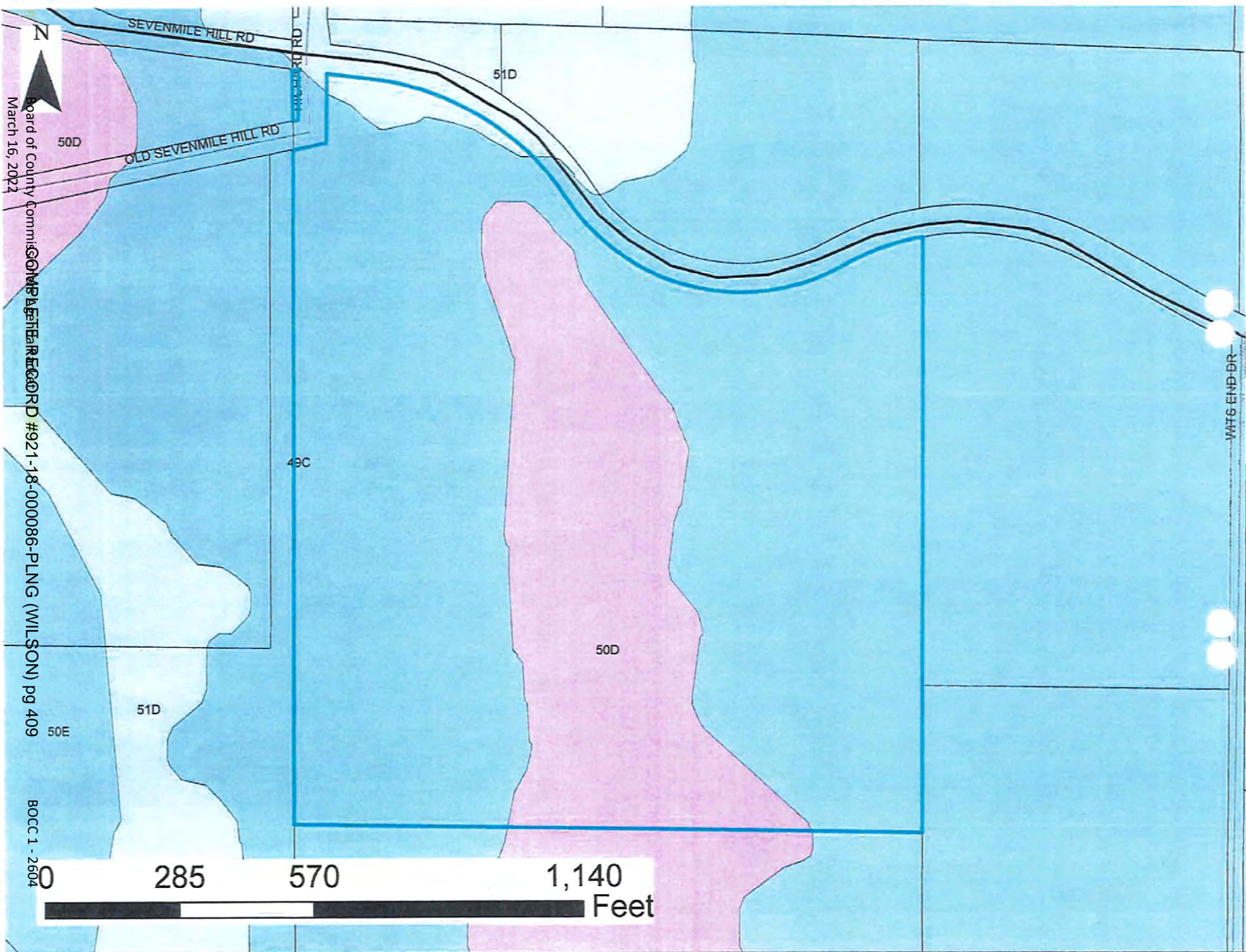












Board of County Commissioners  
March 16, 2022  
COMPLAINT RECORD #921-18-000086-PLNG (WILSON) pg 409

BOCC 1 - 2604





**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

**PLANNING COMMISSION RECOMMENDATION  
to The Wasco County Board of Commissioners**

FILE # 921-18-000086-PLNG

**BOARD OF COMMISSIONERS HEARING DATE:** June 5, 2019, 10:15 AM

**NEWSPAPER PUBLISH DATE:** May 15, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**PLANNING COMMISSION  
RECOMMENDATION:**

Approval, with conditions

**APPLICANT/OWNER:**

David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY  
LOCATION:**

The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:**

F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:**

EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Planning Commission Recommendation and Board of Commissioners Options
- B. Maps
- C. Staff Report
- D. Exhibits

## ATTACHMENT A

### PLANNING COMMISSION RECOMMENDATION

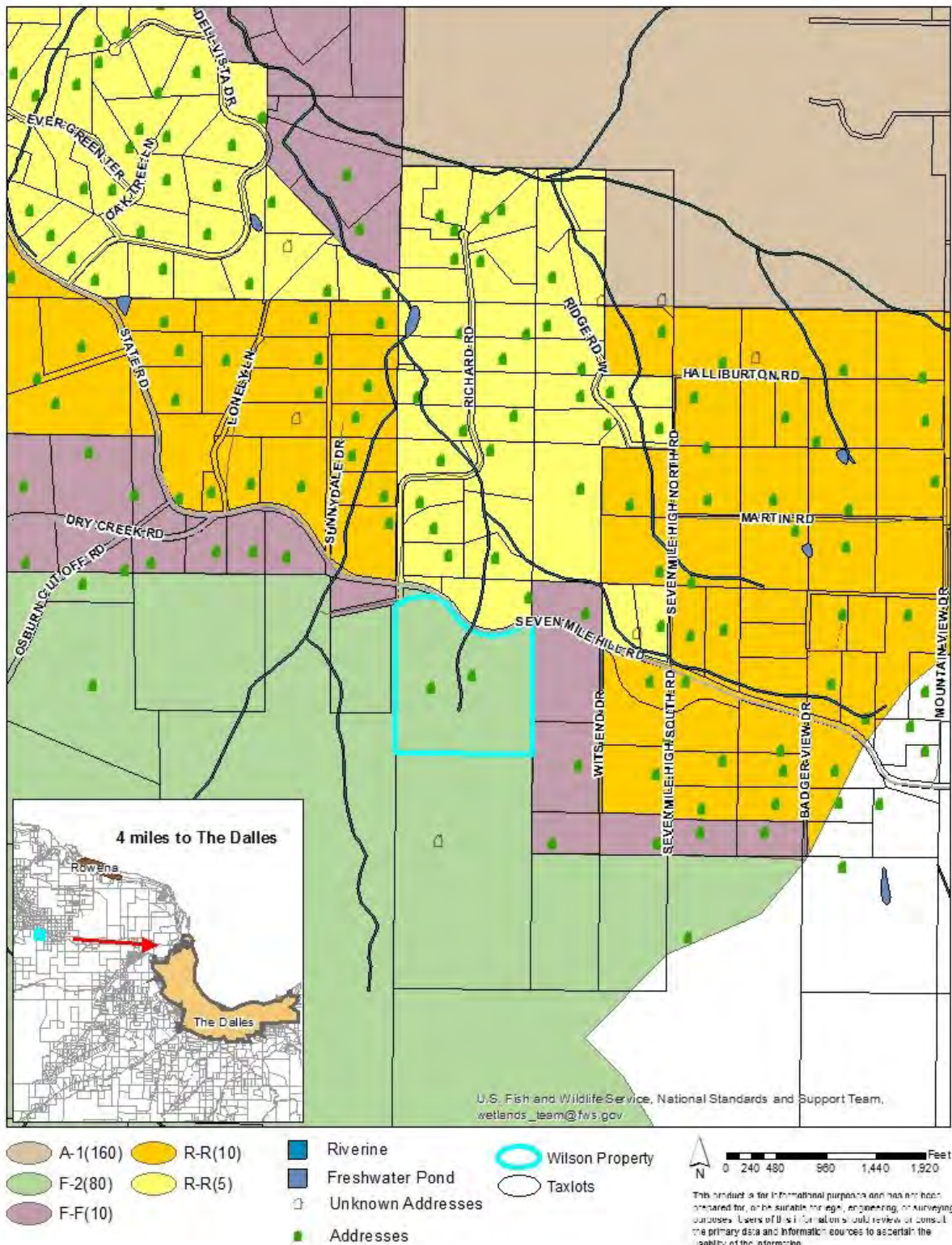
The full staff report with all proposed findings of fact and conclusions of law can be viewed online (at [http://www.co.wasco.or.us/departments/planning/active\\_landuse\\_applications.php](http://www.co.wasco.or.us/departments/planning/active_landuse_applications.php) - the actions table is sorted alphabetically by the name of the applicant/owner. The information will be available until the end of the appeal period) as **Attachment C** and will be available for public review at the Wasco County Planning Department for review at least 20 days prior to the June 5, 2019 hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **PLANNING COMMISSION RECOMMENDATION**

On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend **APPROVAL** of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

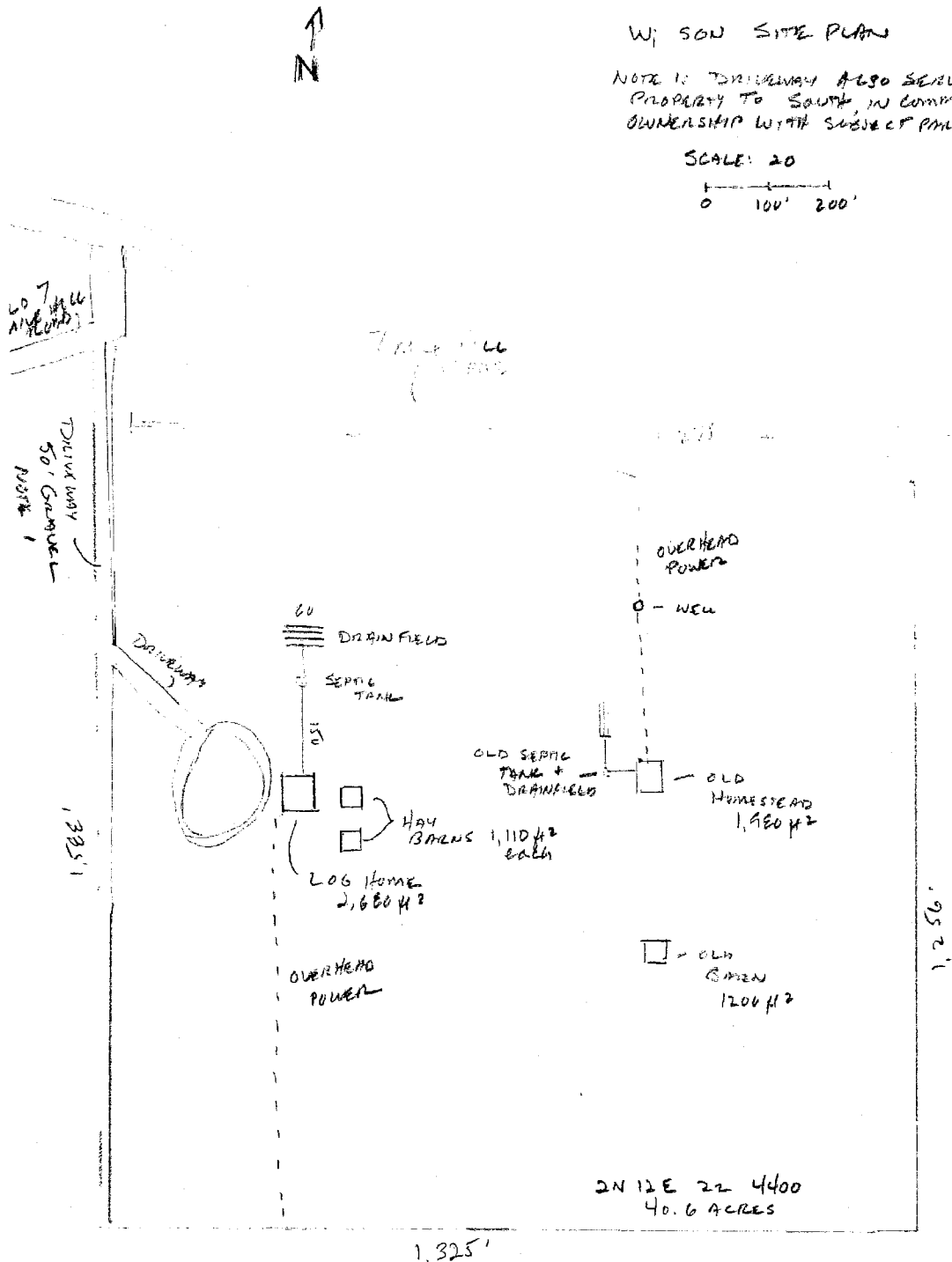
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan





## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Board of Commissioners

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Planning Commission Recommendation:** Approval, with conditions

**Board of Commissioners Hearing Date:** June 5, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

- PLALEG-13-08-0002 (Rezone)
- PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)
- CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)
- PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)
- PLAPAR-17-05-0002 (Partition and Agricultural Structure)
- PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile

Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).



The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to

low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

\* \* \*

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

\* \* \*

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*



- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The subject parcel has several features that lead it to be “Physically Developed.” A driveway runs along the western property line, accessing the single family dwelling and accessory structure on the western portion of the parcel, as well as providing access to the single family dwelling located on the parcel directly to the south (also owned by the applicant). In the center of a property, an old farm house stands (no longer used as a dwelling), with an additional driveway feature bisecting the property. In this area there are further accessory structures including a pump house and an old barn. The property is served by two wells. Two wells would be capable of serving four dwellings as each well is permitted to serve two dwellings each. The applicant submitted well records for these to demonstrate their capacity. To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability

- This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under “potential for habitat elements”, hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the house at about 1650’ and 210’ below the high point to the southeast at 1760’. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant’s adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a “Dwelling in conjunction with agricultural use.” Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*“According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years...”*

The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000’ driveway, the old farmhouse in the center after a 400’ driveway and the old barn another 240’ further south, within 450’ of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. The property is also

served by two wells, and a pump house located in the north central portion of the parcel, approximately 190 feet south of the road. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**b. OAR 660-004-0028(2):** *“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.



The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

The immediately adjacent lands on both sides of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Seven Mile Hill Road are already F-F (10), or are Rural Residential zoning, with 5 or 10 acre minimum parcel sizes. This demonstrates how irrevocably committed the area is to residential use.

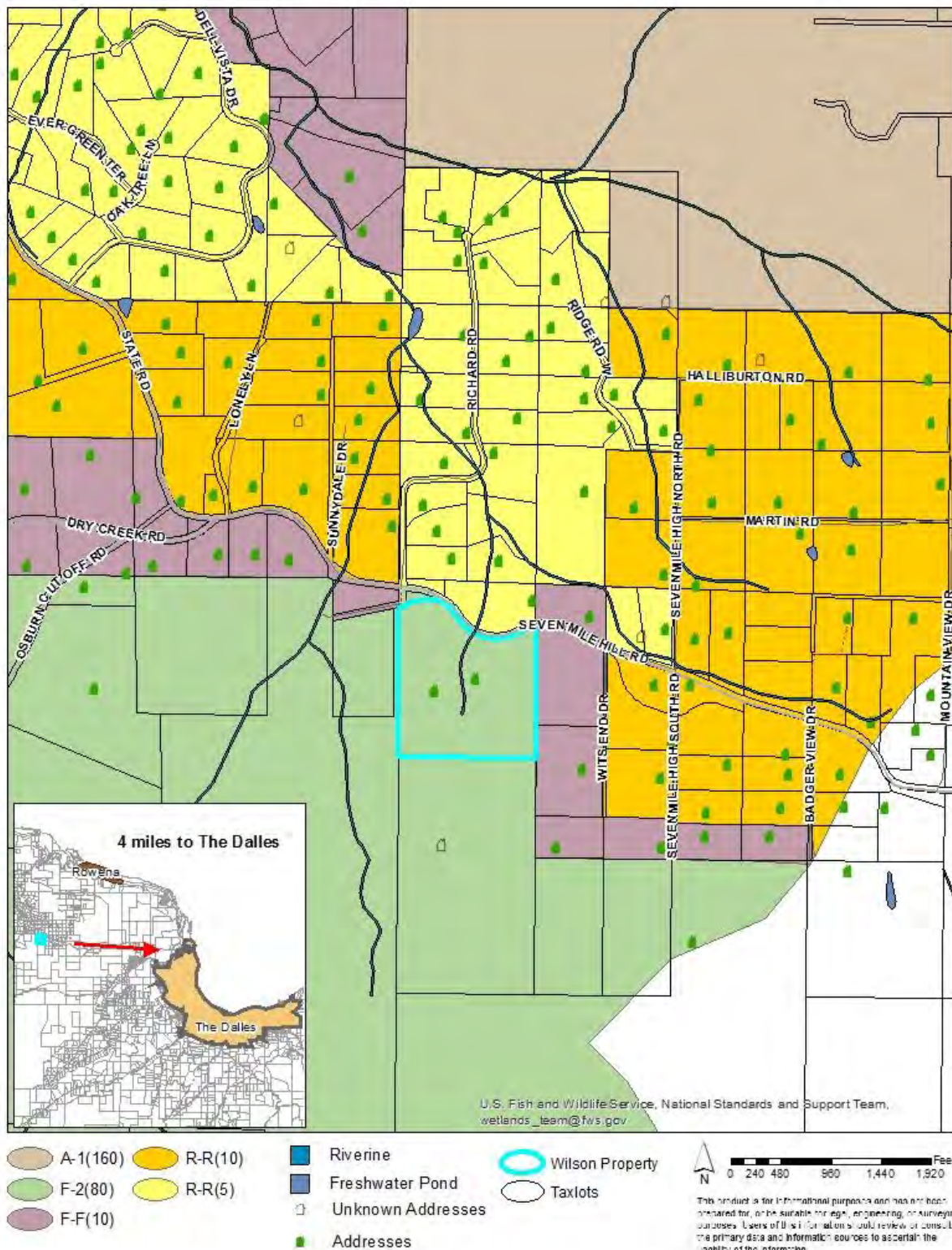


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.



*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and south west are resource zones while those to the north, north west, and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it, however, it is unique in its zoning. It is the only parcel on all of Seven Mile Hill Road that is zoned F-2 (80), Forest. All other parcels are either already the non-resource zone, F-F (10), or else are zoned Rural-Residential with five and 10 acre minimum lot sizes. This creates a unique situation where the subject parcel is enclosed on three of its sides by residentially zoned properties, most of which are used for residential purposes. If the subject parcel was used for a forestry operation it could be potentially disruptive to this residential community. This area is irrevocably committed to a residential use, and changing the zoning of the subject parcel to the same would enable this status quo to continue, limiting potential conflict with any future resource use at this location.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

(b) *Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

(c) *Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine "*the relationship between the exception area and the lands adjacent to it*" when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

"(a) Uses related to and in support of forest operations;

(b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;

(c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about its location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “1a : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral”

farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below. The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*

*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads*



*and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land’s actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are

residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

*(f) Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g.** *OAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h.** *OAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or

water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

OAR 660-004-0040 (5) and (6):

- (5) *The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) *A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) *A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

- (7) *After October 4, 2000, a local government’s requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division.”*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

- (8)(a) *The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule.”*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

- (b) *Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial



forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

*(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

*(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

*(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

*(A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

*(B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

*(C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

*(D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

*(E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco County LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners"

Association formed to maintain common open space and other common improvements.” Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

- (f) *Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) *In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule’s requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) *A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

(A) *The parcel to be divided has two or more permanent habitable dwellings on it;*

(B) *The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*

(C) *Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*

(D) *The partition would not create any vacant parcels on which a new dwelling could be established.*

(E) *For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) *For rural residential areas designated after the effective date of this rule, the affected county shall either:*

(A) *Require that any new lot or parcel have an area of at least ten acres, or*

(B) *Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'*"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

*OAR 660-004-0118 Planning and Zoning for Exception Areas*

(2) *For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

(a) *That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

(b) *That meet the following requirements:*

(A) *The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

(B) *The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in



a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as “to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space.” This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### *A. Intent and Purpose*

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

*B. A Comprehensive Plan Amendment May Take the Following Forms:*

(\*\*\*)

*5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:*

*Comprehensive Plan Revision may be initiated by:*

(\*\*\*)

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

(\*\*\*)

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

(\*\*\*)

#### *H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance is achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-



forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “*To maintain and improve the quality of the air, water and land resources of the state.*” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “*To protect people and property from natural hazards.*” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “*To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “*To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation. The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “*To provide for the housing needs of citizens of the state.*” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in

existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also

recognizes that the character of the neighborhood south of Sevenmile Hill Road has changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

*4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

*5. Proof of change in the inventories originally developed.*

The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

*6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**I. Transportation Planning Rule Compliance**

*1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed*



*to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*

- a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. Change standards implementing a functional classification system; or*
  - c. As measured at the end of the planning period identified in the adopted transportation system plan:*
    - (1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
    - (2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
    - (3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
- 2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
- a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
- 3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips

(ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a “significant impact” under OAR 660-12-0060, the Transportation Planning Rule (TPR).

**J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

*(\*\*\*)*

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission’s recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.”*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with the requirements in (1). This was submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing, meeting the requirements of (2). At that hearing, five Planning Commissioners were present for the vote, greater than the four needed to form a quorum, which meets the requirements of (3). They voted 4-1 to recommend approval of the proposal, meeting the requirements of (4). Notice of this recommendation was mailed out on May 9, and scheduled to be posted in The Dalles Chronicle on May 15. The Board of Commissioners hearing is scheduled for June 5, which is 21 days after May 15, within the 20-40 day requirement of newspaper notification noted in (2). It is also at least twenty (20) days after notice was mailed, as required in (5). Staff finds that Criteria (1)-

(5) were met and are being met for both the Planning Commission hearing and the Board of Commissioners hearing.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

***Section 9.010 – Application for Zone Change***

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

***Section 9.020 – Criteria for Decision***

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. *The original zoning was the product of a mistake; or*

**FINDING:** As discussed above in the Comprehensive Plan Chapter 11 Section H.3., the application materials assert that it was a mistake, stating that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads, leaving the subject property as the sole F-2 zoned property along the length of Seven Mile Hill Road, with the rest being Forest-Farm or Rural-Residential. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change. This land was zoned for Forestry initially, but has not been used for that purpose. Staff finds that the subject parcel is physically developed with residential uses, and irrevocably committed to that use, indicating that the zoning of this land to be used for Forestry, as determined by the Comprehensive Plan, was a mistake.

- B. *It is established that*

1. *The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards

that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found to be in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote



clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including “the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area,” all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The “specific zoning” includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”).  
“Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

Capacity for State Rd/7-Mile Hill Rd      1,500/day

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

*A. Special yards and spaces;*

*B. Fences and walls;*

*C. Special parking and/or loading provisions;*

*D. Street dedication and improvements or bonds in lieu of improvements;*

*E. Control of points of vehicular ingress and egress;*

*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**Section 9.080 - Action by County Governing Body**

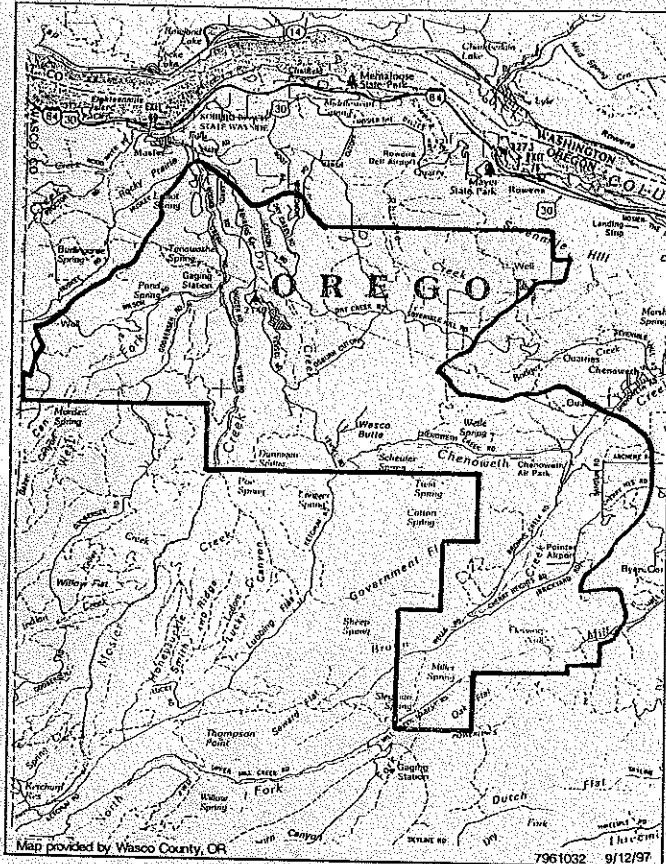
*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** The Planning Commission met on April 2, 2019 and recommended Approval. Due to a procedural oversight by staff, notification was not distributed to interested parties within ten (10) days of the hearing. However, this notification (which included a statement of the facts and reasons upon which it was based) was distributed to all interested parties, agencies, and those that signed in and spoke at the Planning Commission Hearing as required by mailing and/or email on May 9, 2019. A hearing that had been scheduled for May 15 was postponed to June 5 to meet the requirements of Section 9.080 to ensure the County Governing Body would not act for at least twenty (20) days from the date the Notice of Planning Commission Recommendation was mailed. The County Governing Body is the Board of Commissioners, who will meet to take action that they deem appropriate on this request on June 5, 2019, more than twenty (20) days after the Planning Commission Recommendation was mailed. Despite missing the ten day window, all individuals and agencies that needed to be notified were, and action was not taken by the Governing Body until sufficient time had passed. Staff finds that Sections 9.060, 9.070, and 9.080 were met.



2044

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
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**September 12, 1997**

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## **Appendices**

- Appendix 1. Background Materials and Standards Related to Action Items Identified in Section 2.0 (Policy Recommendations and Action Items)
- Appendix 2. Record of Community Involvement
- Appendix 3. Record of Goal Development for Project
- Appendix 4. Groundwater Evaluation Reports and Background Materials
- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites

## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### *Which County lands are involved in the study area?*

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

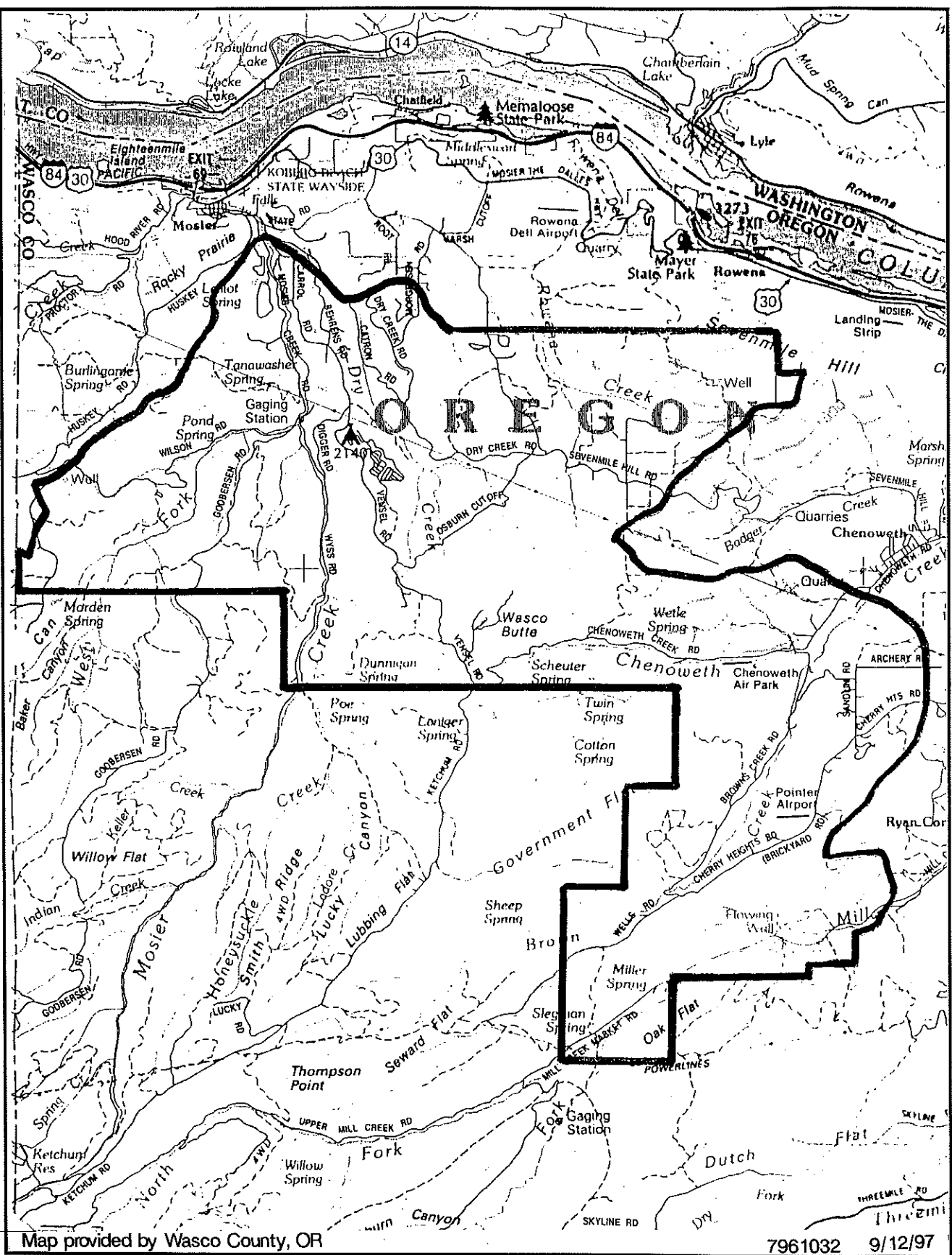
### **1.2 Purpose**

#### *What is the purpose of the process and this document?*

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



Location of the Wasco County Transition Lands Study Area, Oregon.

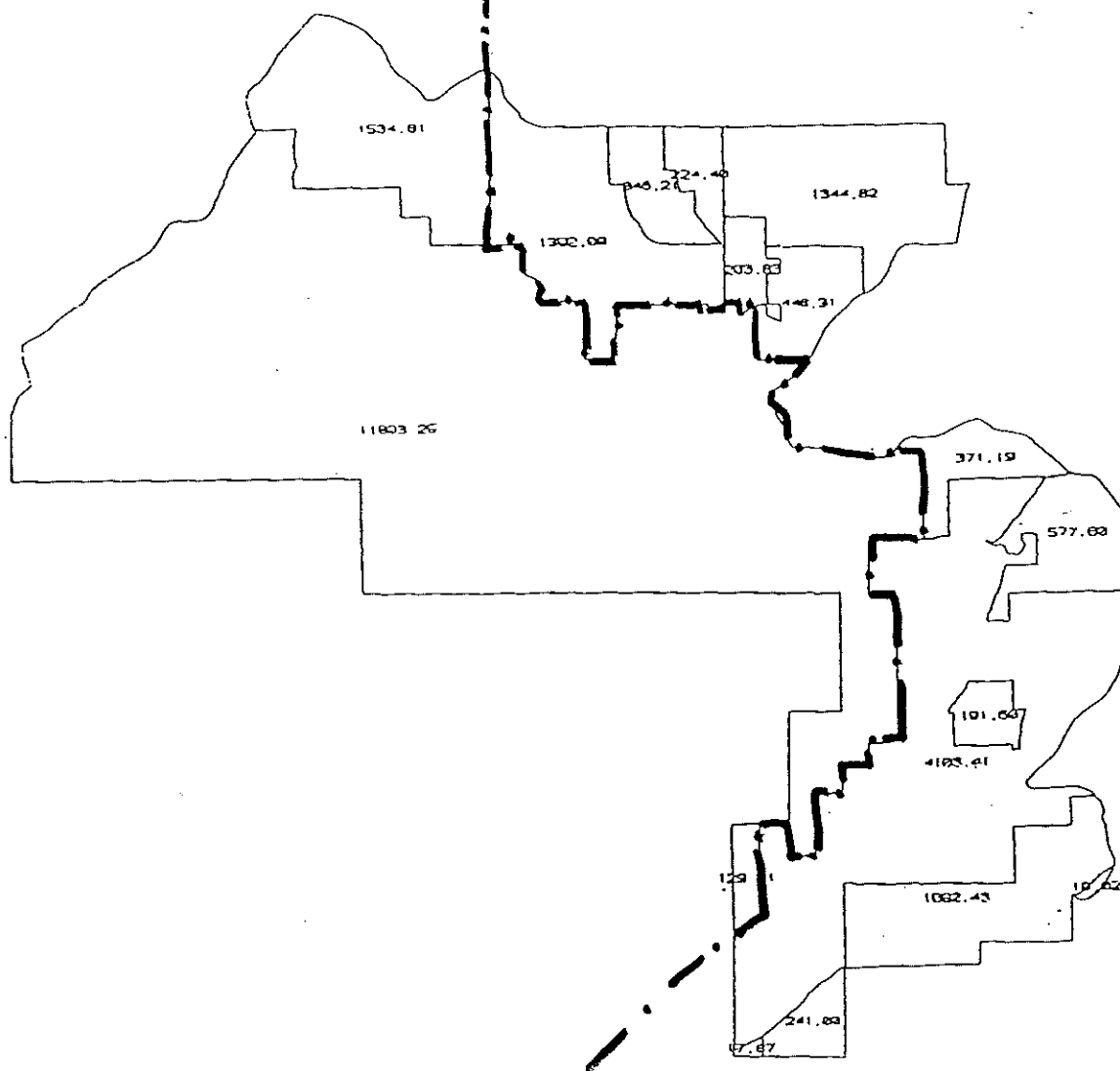
FIGURE  
1

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F.2 : ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. : RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?*

*What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.



2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

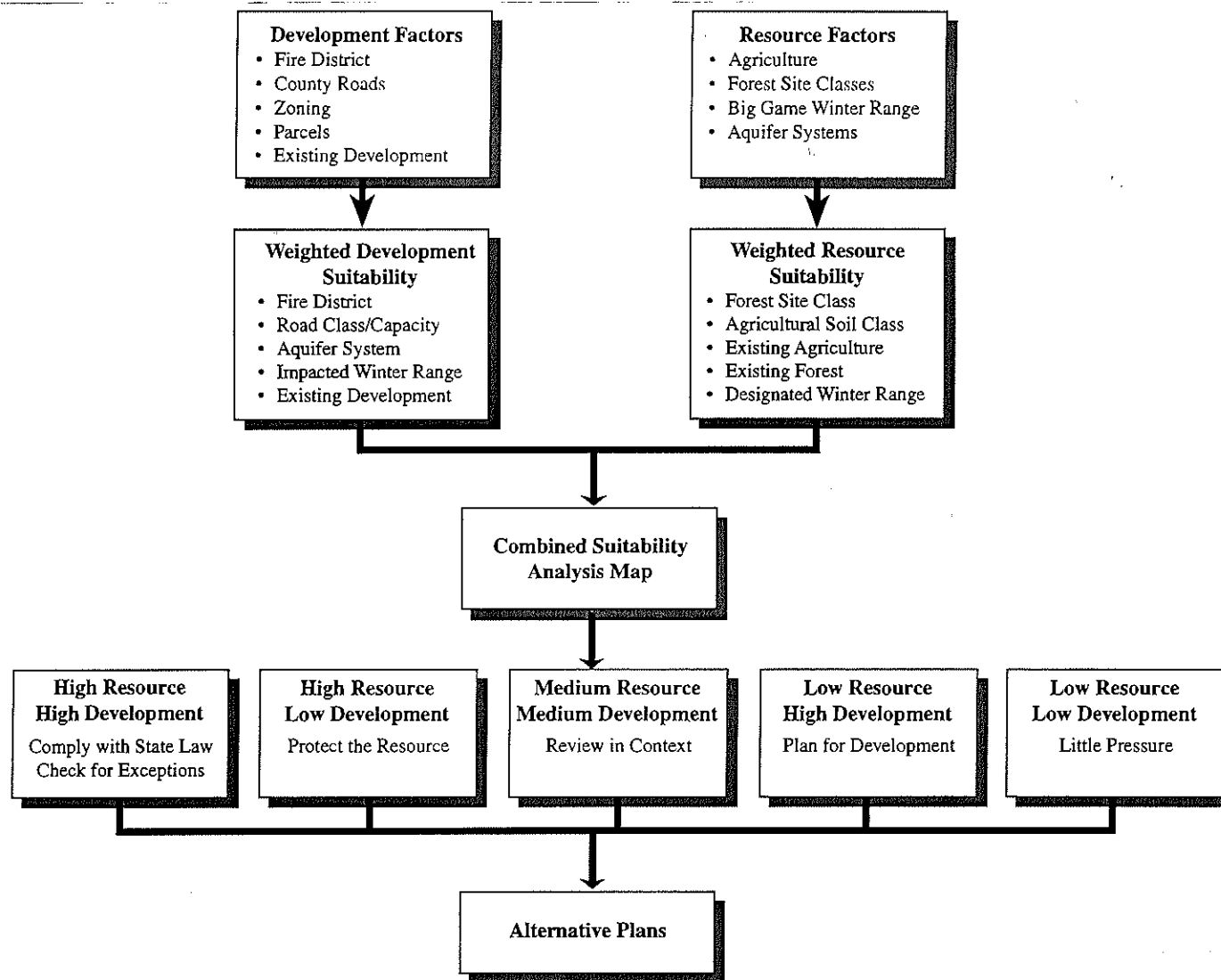
The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems



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Wasco County Transition Lands Study Area  
 Simplified Flow Diagram

FIGURE  
 4

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
 High Value (Class 1-2) = 2 pt.  
 Class 3 - 6 = 2 pt.  
 Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
 Class 6 = 1 pt.  
 Class 5 = 2 pt.  
 Class 4 = 3 pt.  
 Existing Forest Use  
 ≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
 Revised "Recipe" Diagram

FIGURE  
5a



# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 3: Big Game Winter Range Availability

## 4: Fire Districts/Response Time

SOURCE MAPS

Big Game Winter Range	Big Game Winter Range boundary from Comprehensive Plan
Impacted Winter Range	Impacted winter range inventory from ODFW
Low Elevation Winter Range	Low elevation winter range inventory from ODFW
Rivers and Streams	Surface water features coverage

Fire Hazard	Extreme and High fire hazard
Fire Districts	Wasco County Rural Fire District (RFD) boundaries Mosier RFD Oregon Department of Forestry
Response Time	Fire response time (in minutes) by section and Wasco Co. RFD

ANALYSIS MAPS

Big Game Winter Range

1 pt.

Fire District Coverage

1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource  
Weighted Composition

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5b



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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads

Roads in TLSA

Road Capacity

Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning

Zoning

Developed  
Parcels

Existing Developed (house)

Aquifer Units

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.  
†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

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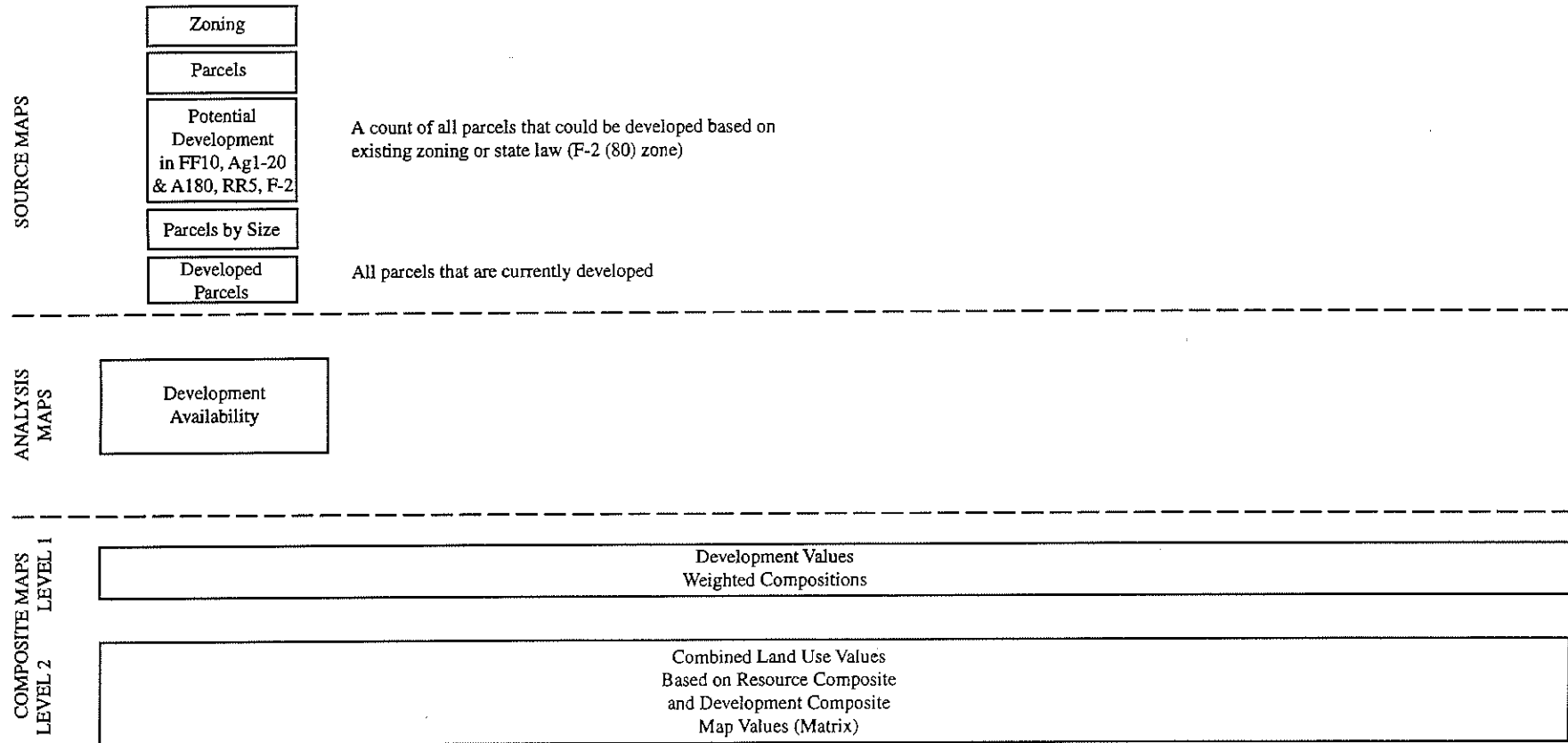
Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

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## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d



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### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.



Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

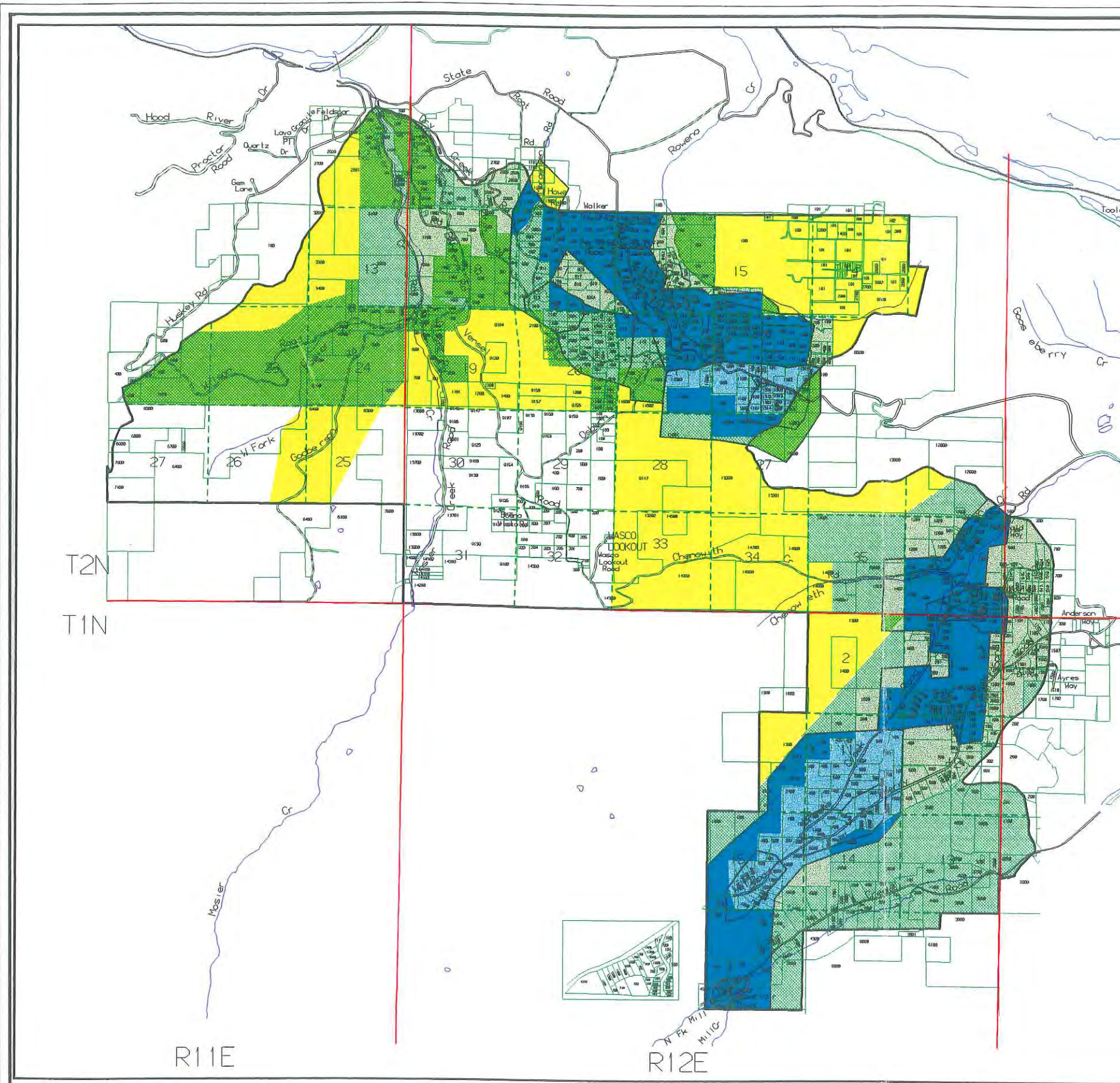
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

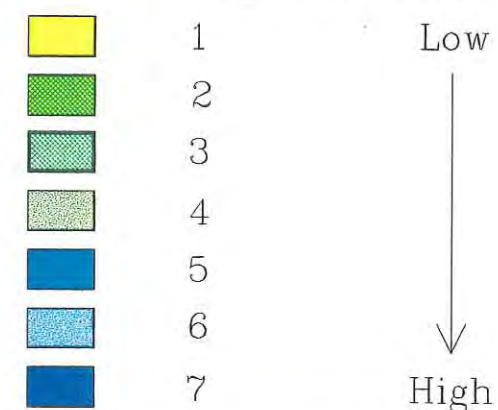




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



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WASCO COUNTY  
Planning and Economic Development



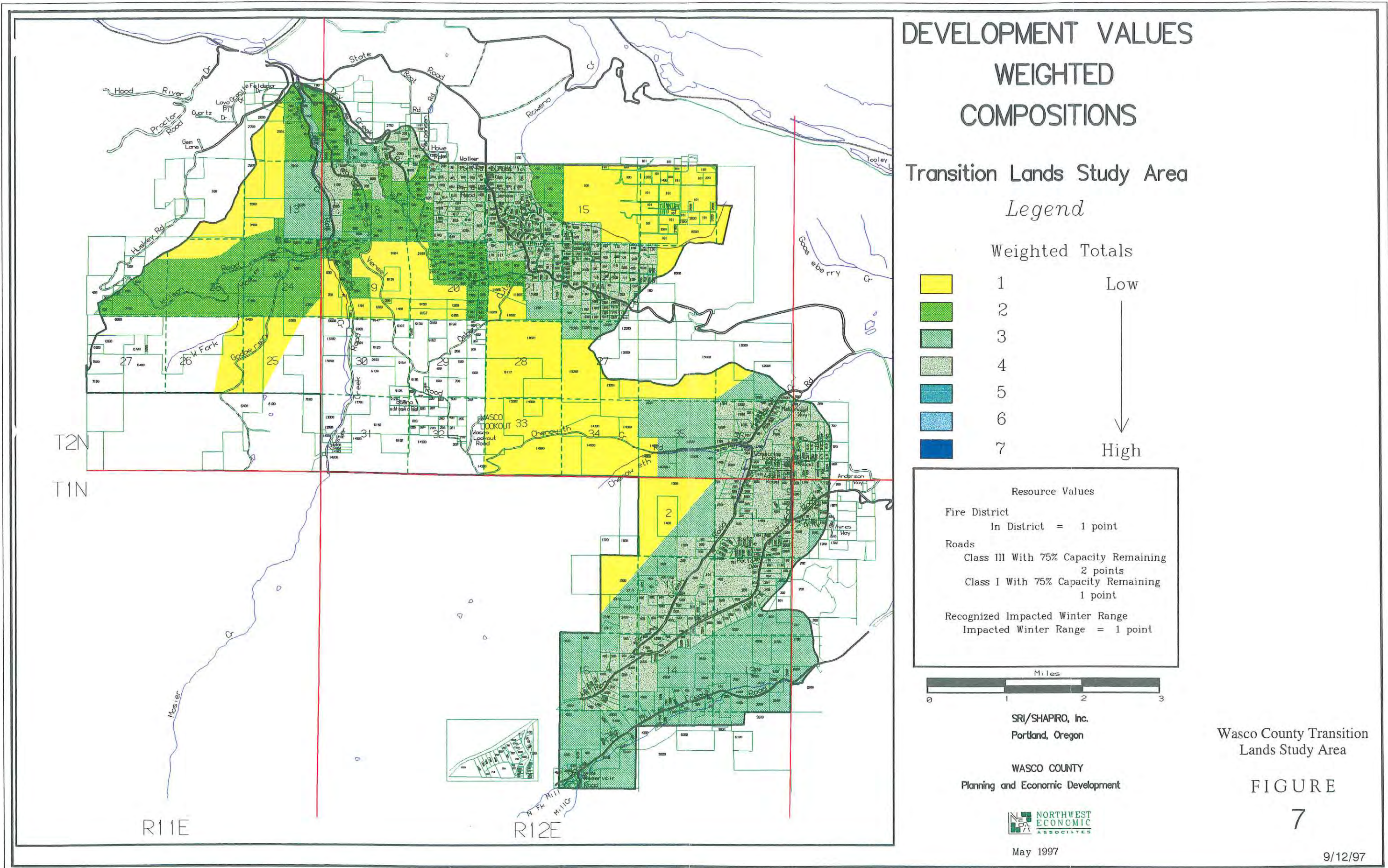
May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
6

9/12/97



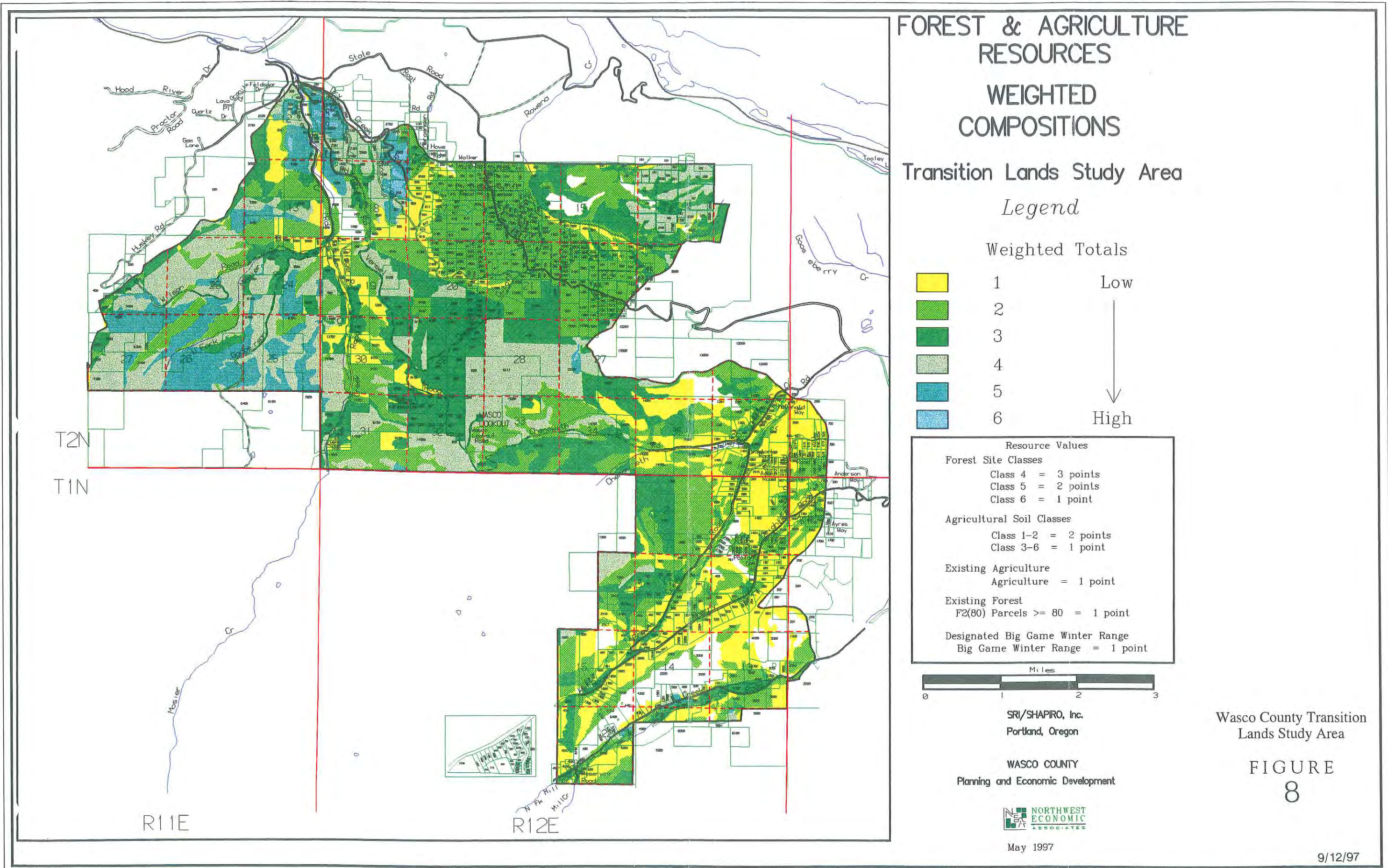


Map from Northwest Economic Associates, 1997

7961032

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INCORPORATED





Map from Northwest Economic Associates, 1997

7961032





# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill	Mill Creek-Cherry Heights
FF-10 = 125	FF-10 = 256
RR-5 = 52	RR-5 = 50
Ag = 8	Ag = 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

Tables from Wasco County, OR, 1997

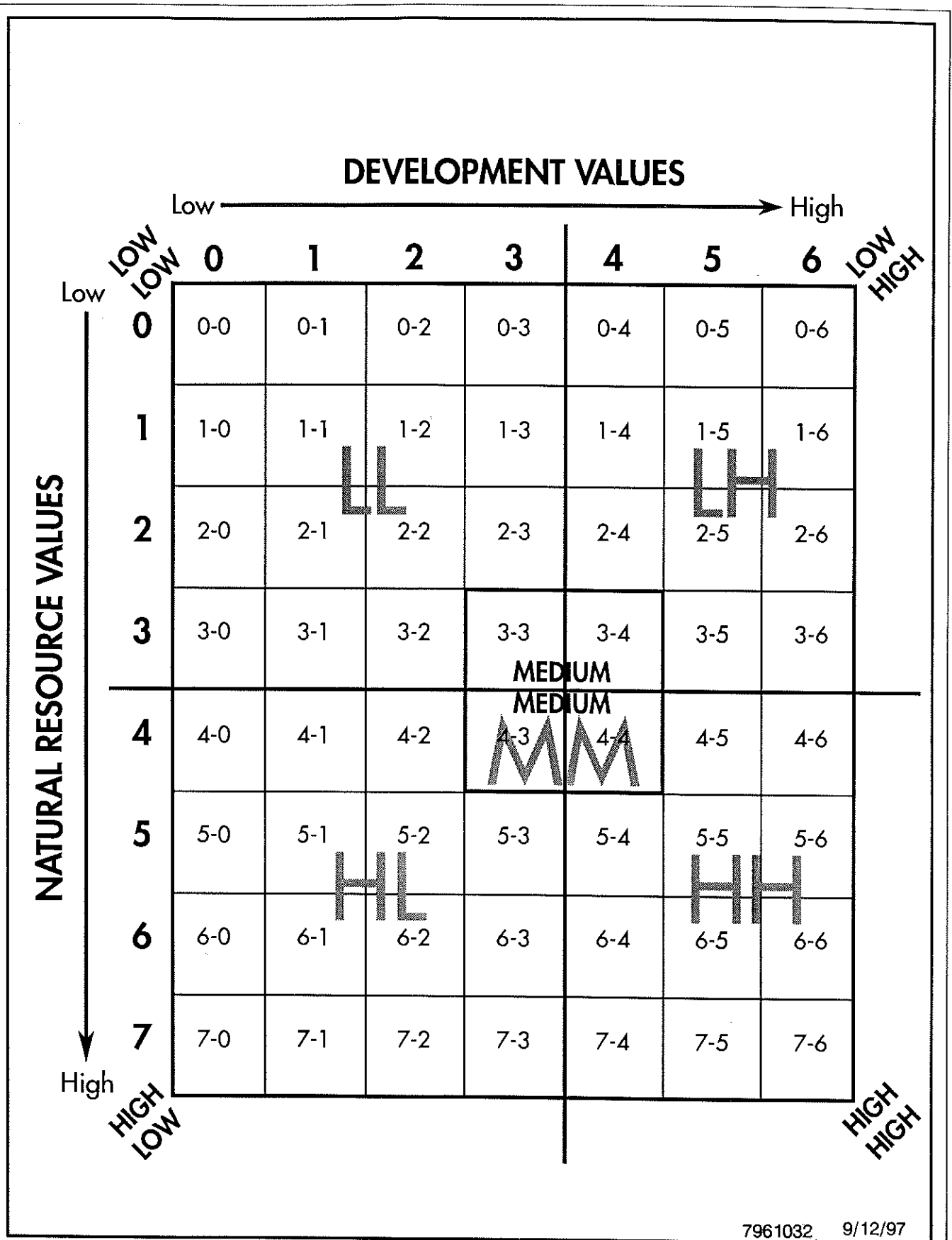
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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9



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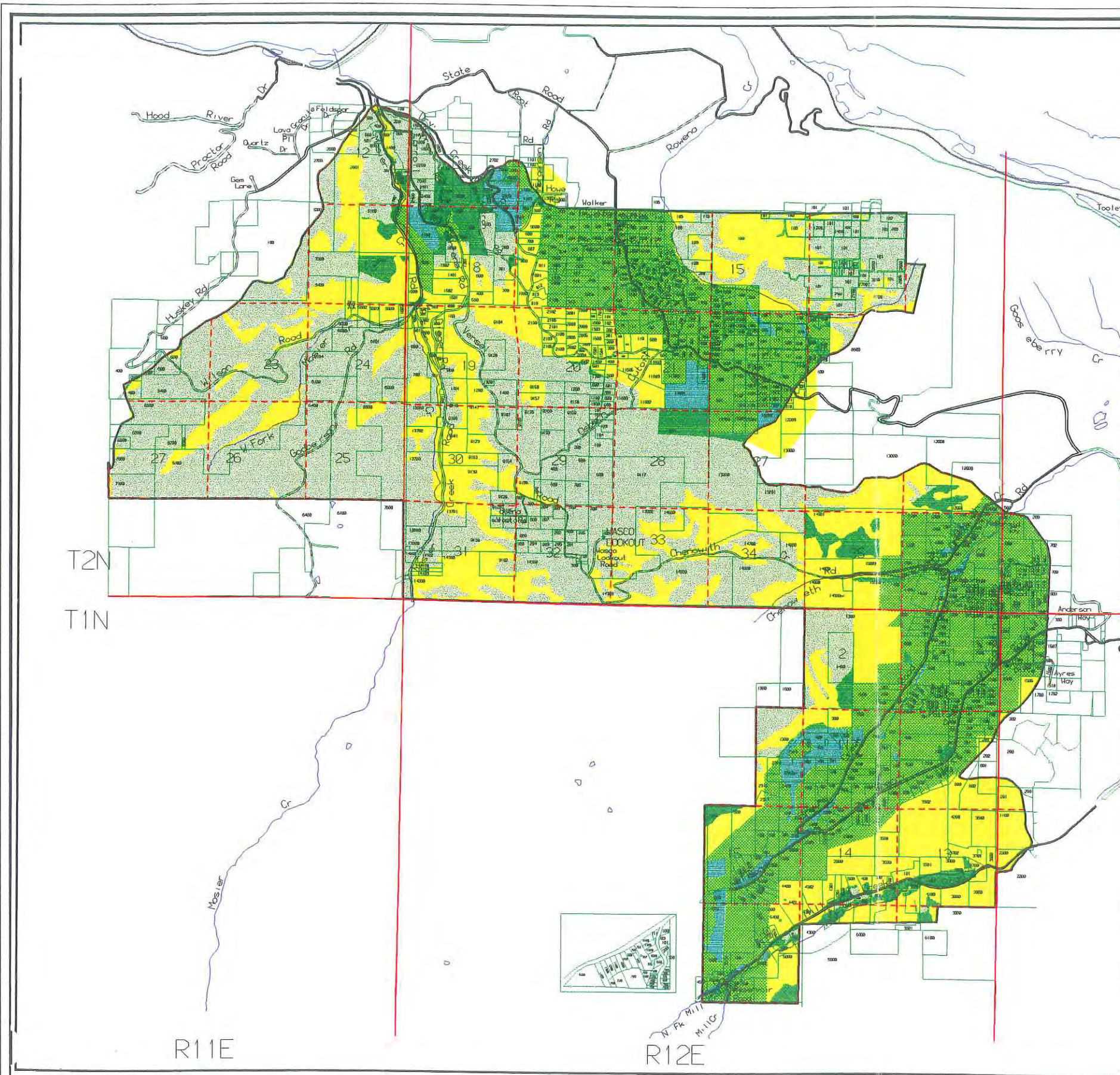
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Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

**FIGURE  
10**

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# COMBINED LAND USE VALUES (based on resource composite & development composite map values)

## Transition Lands Study Area

### Value Comparison

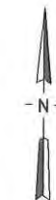
Forest & Agriculture Values      Development Values

L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7

F&A-Dev Medium Ranges

3-3, 3-4, 4-3, 4-4

0 1 2 3 4 5 6 7  
Low High



Miles  
0 1 2 3

WASCO COUNTY  
Planning and Economic Development



June 1997

Wasco County Transition  
Lands Study Area

FIGURE  
11

9/12/97



- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

#### 5.1.1 Seven Mile Hill Area

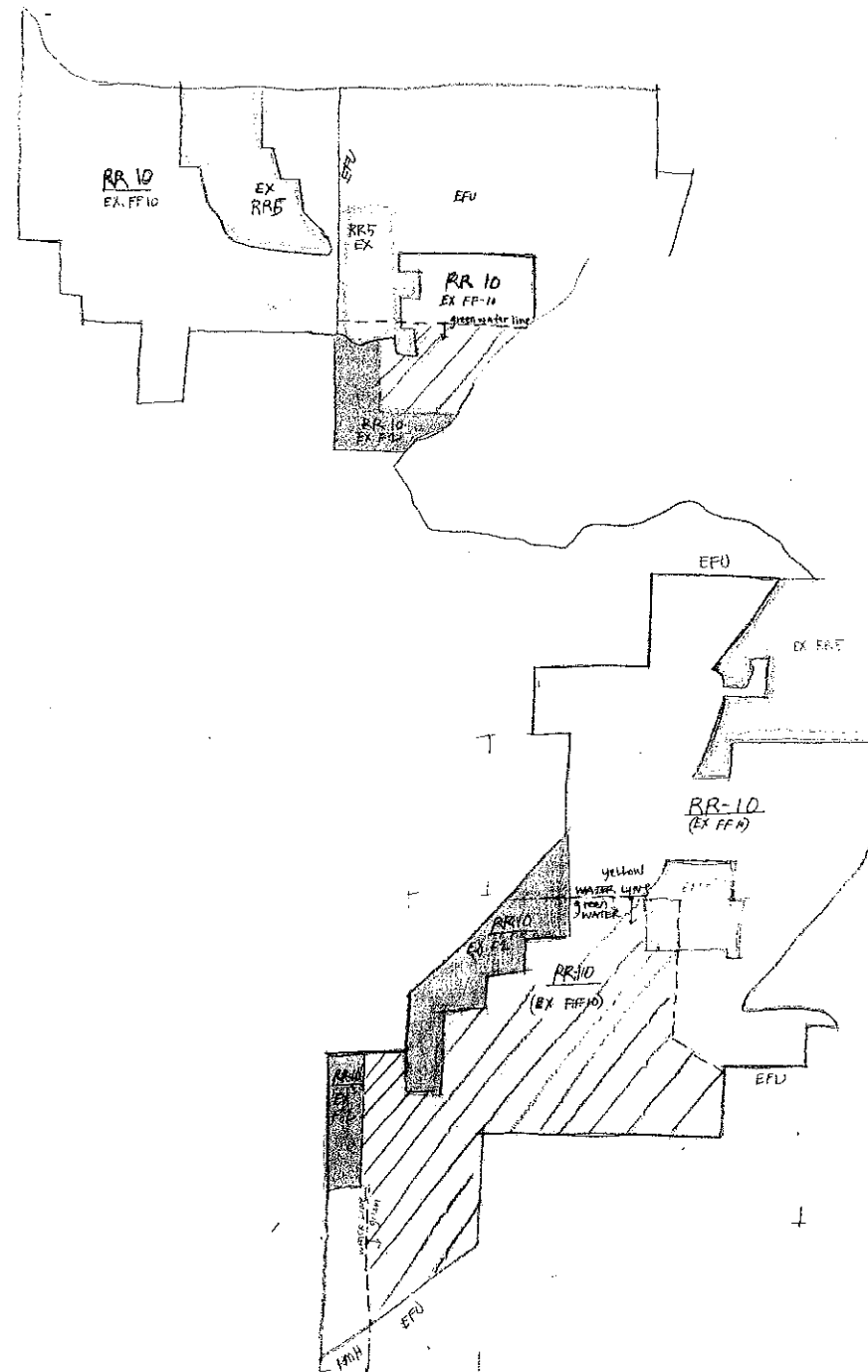
In the Seven Mile Hill Area, Alternative 1 would:




- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).



# ALTERNATIVE FOR MINIMUM DEVELOPMENT

(Same zoning w/ minor changes)



-  ALL EXISTING FF10 TO RR-10
-  WATER MONITORING AREAS FOR POTENTIAL INCREASE IN DENSITY (areas where current density spacing is working, other areas will be monitored, but not being counted for density increases)
-  PROPOSED MINOR INCLUSIONS OF RESOURCE LAND TO RR-10 (RES)

## MINIMUM DEVELOPMENT

### PROS:

- Rezone only very limited resource zoned lands with low resource values, retaining areas of higher resource value.
- Retain existing ten acre minimum.
- No increase in potential impacts on BGWR.
- Allows further testing and monitoring of aquifer systems prior to any increase in density - "we'll never be able to promise water but may understand the odds better."
- Doesn't increase potential service needs (roads and fire protection).
- Retains familiar 10 acre land use pattern.

### CONS:

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Alternative 1 - Minimum Development

FIGURE  
12

# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend



IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

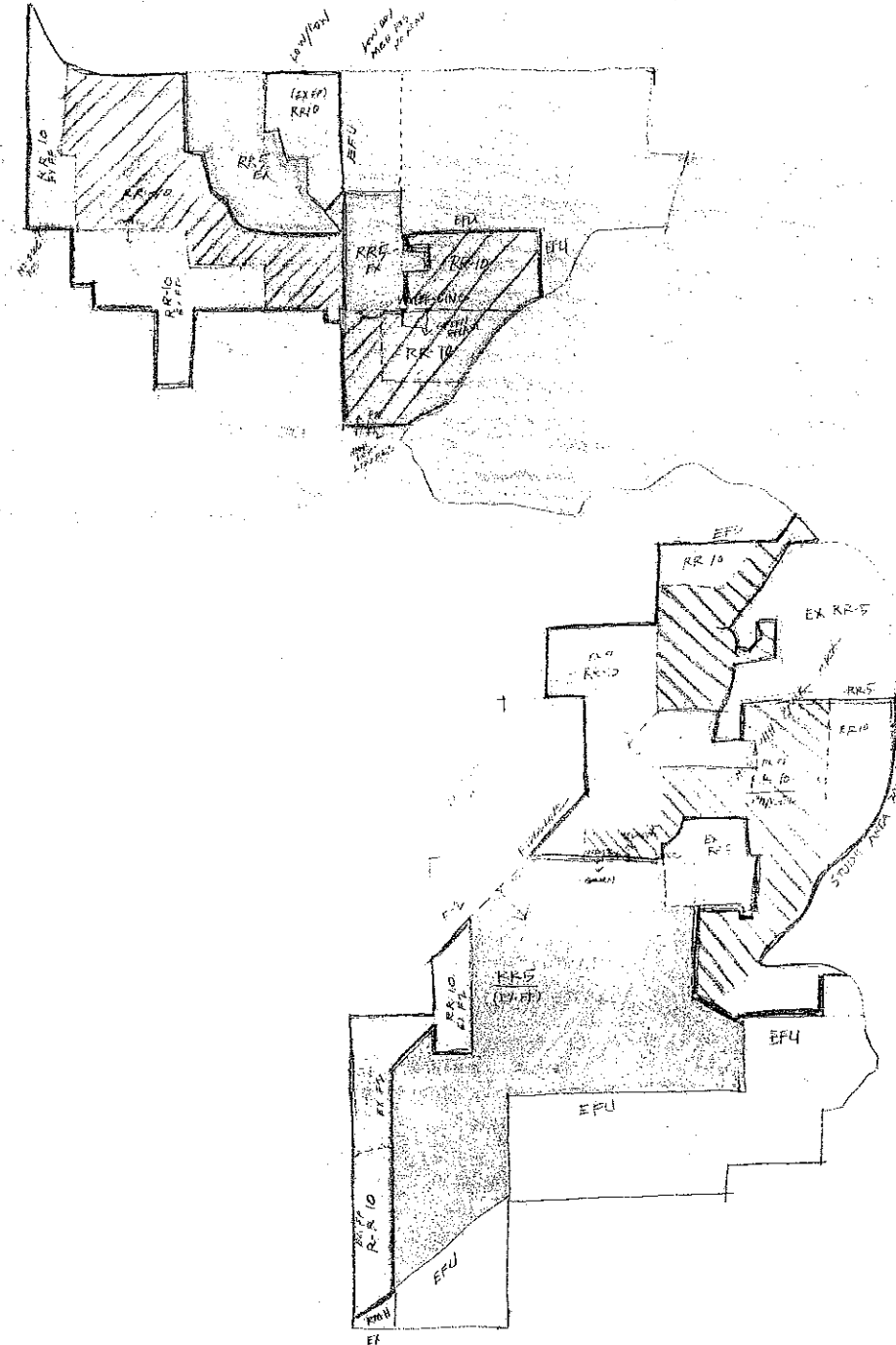
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



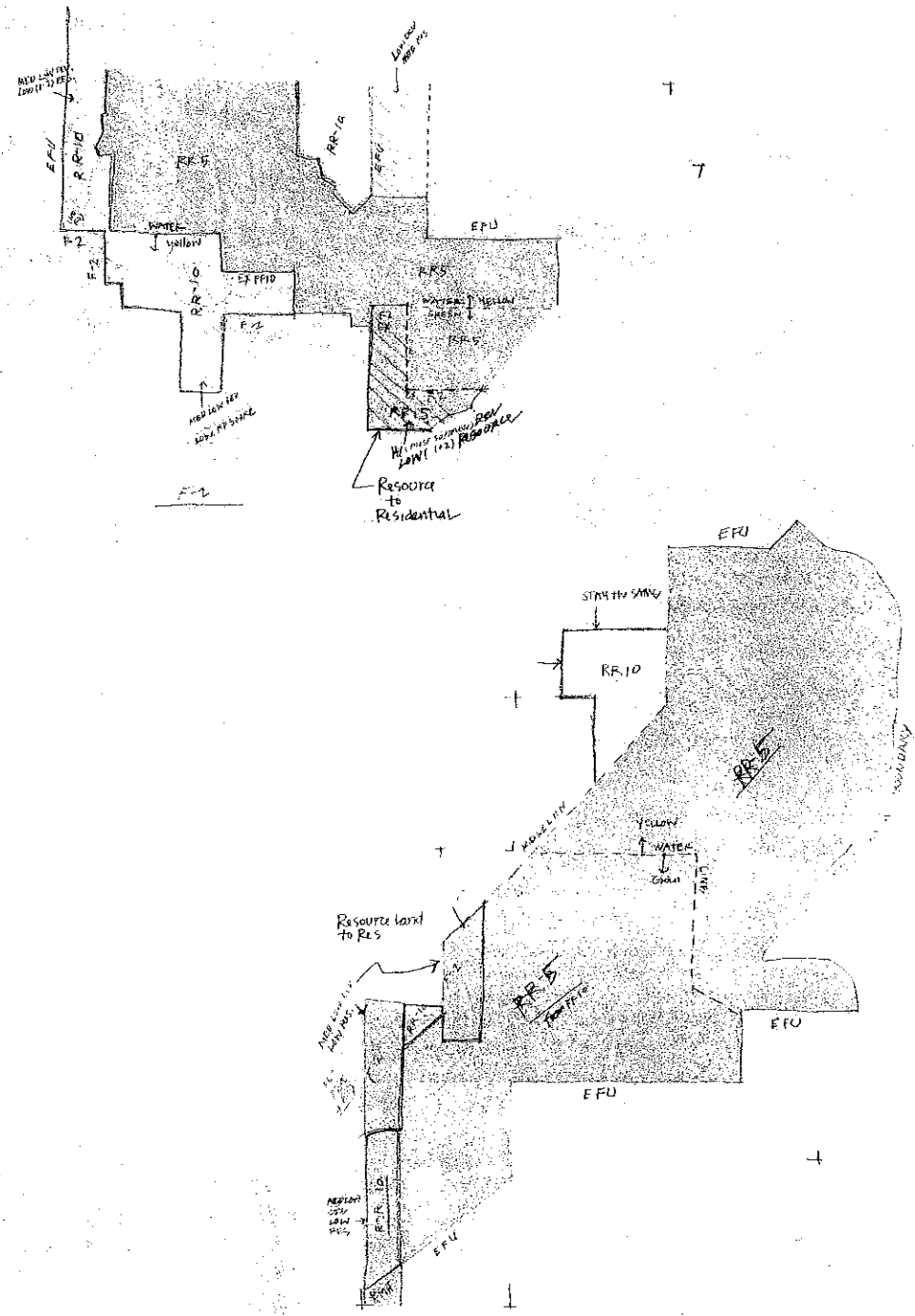
Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

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FIGURE  
13

# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
  - Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat- quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.



Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

## **6.1 Transfer of Development Rights (TDR) Alternative**

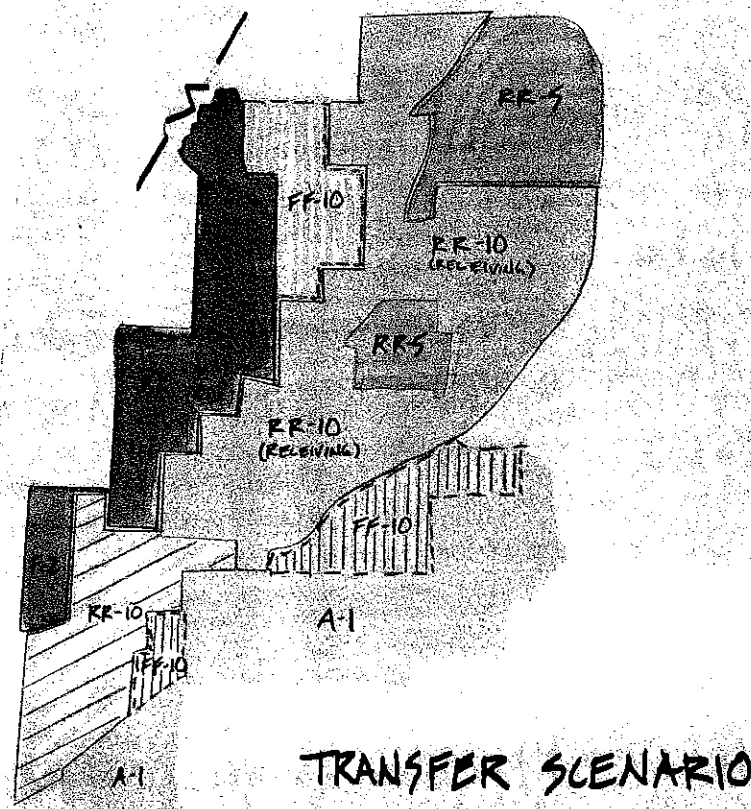
The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.





Map from Wasco County, OR, 1997

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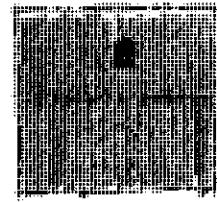
Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

FIGURE  
15

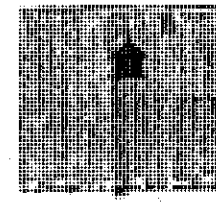


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INCORPORATED

VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



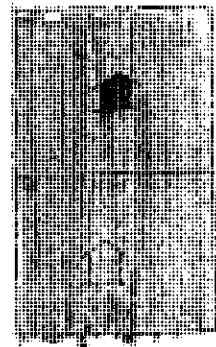
5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

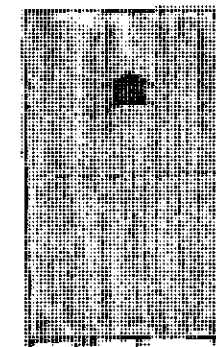
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 20 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

BROWN'S CREEK  
CHERRY HT'S

20AL WITH HOUSE (160,000<sup>00</sup>)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)  
MOSIER  
7 MILE  
HILL

(170,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSIER  
7 MILE HILL)

Figure from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16

### 6.1.2 Mill Creek/Cherry Heights Area

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### 6.1.3 Intent and Impacts of the TDR Alternative

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

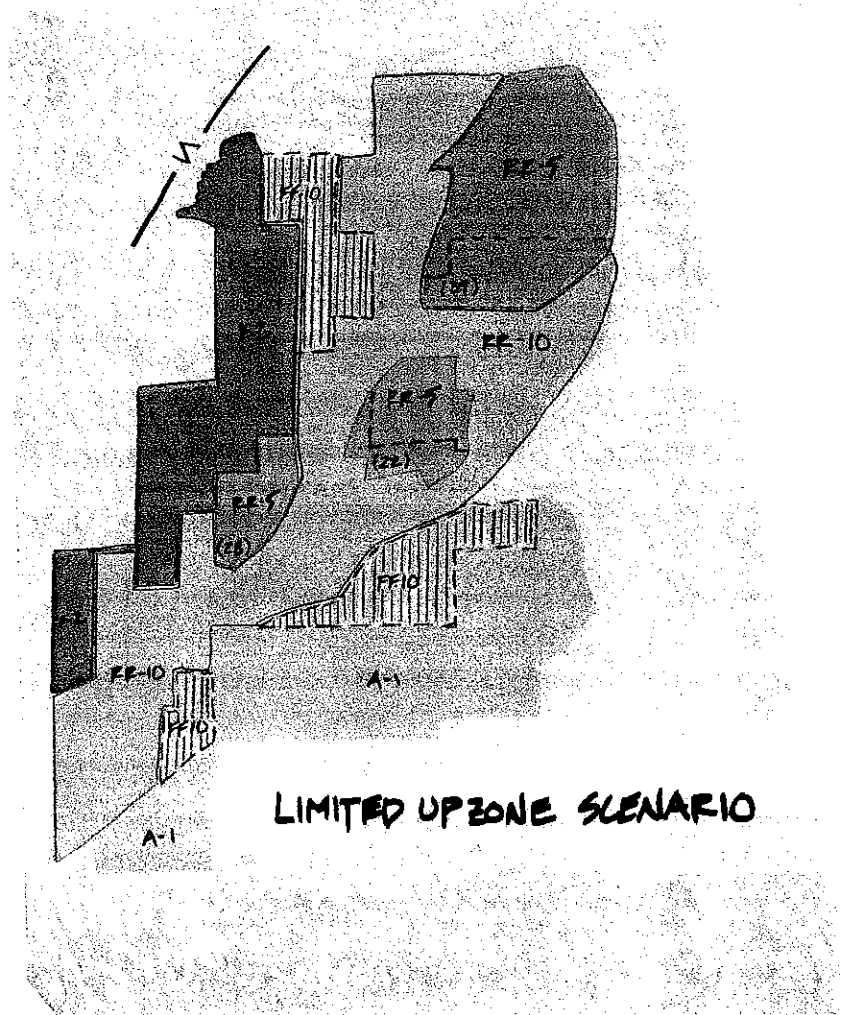
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### 6.2 Limited Upzone Alternative

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### 6.2.1 Seven Mile Hill Area

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

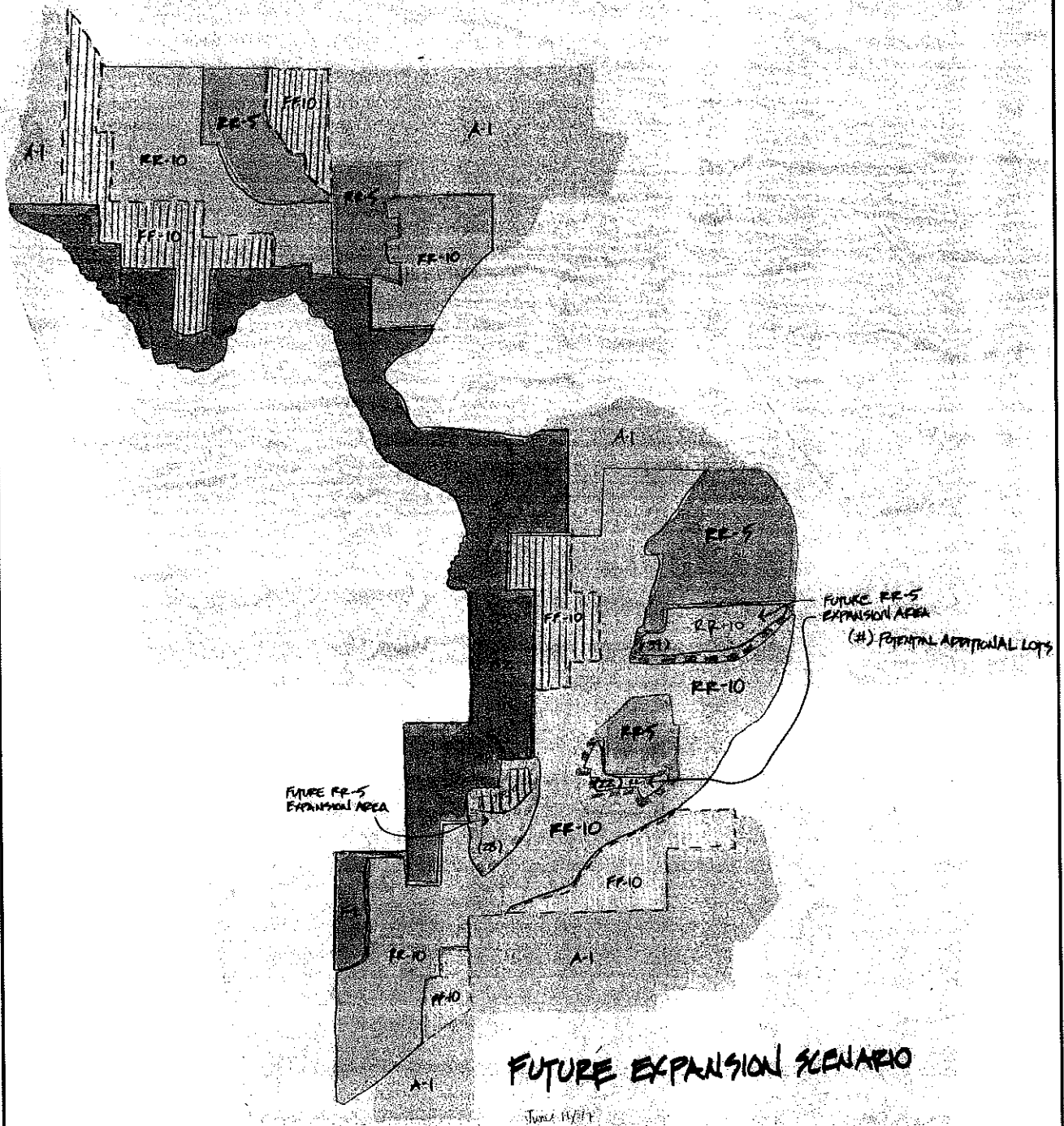
## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.



Map from Wasco County, OR, 1997

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# Wasco County Transition Lands Study Area Future Expansion Alternative

FIGURE  
18



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## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in "receiving areas" at higher densities that zoning would indicate.

## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

## EXHIBIT 2



**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR)  
Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

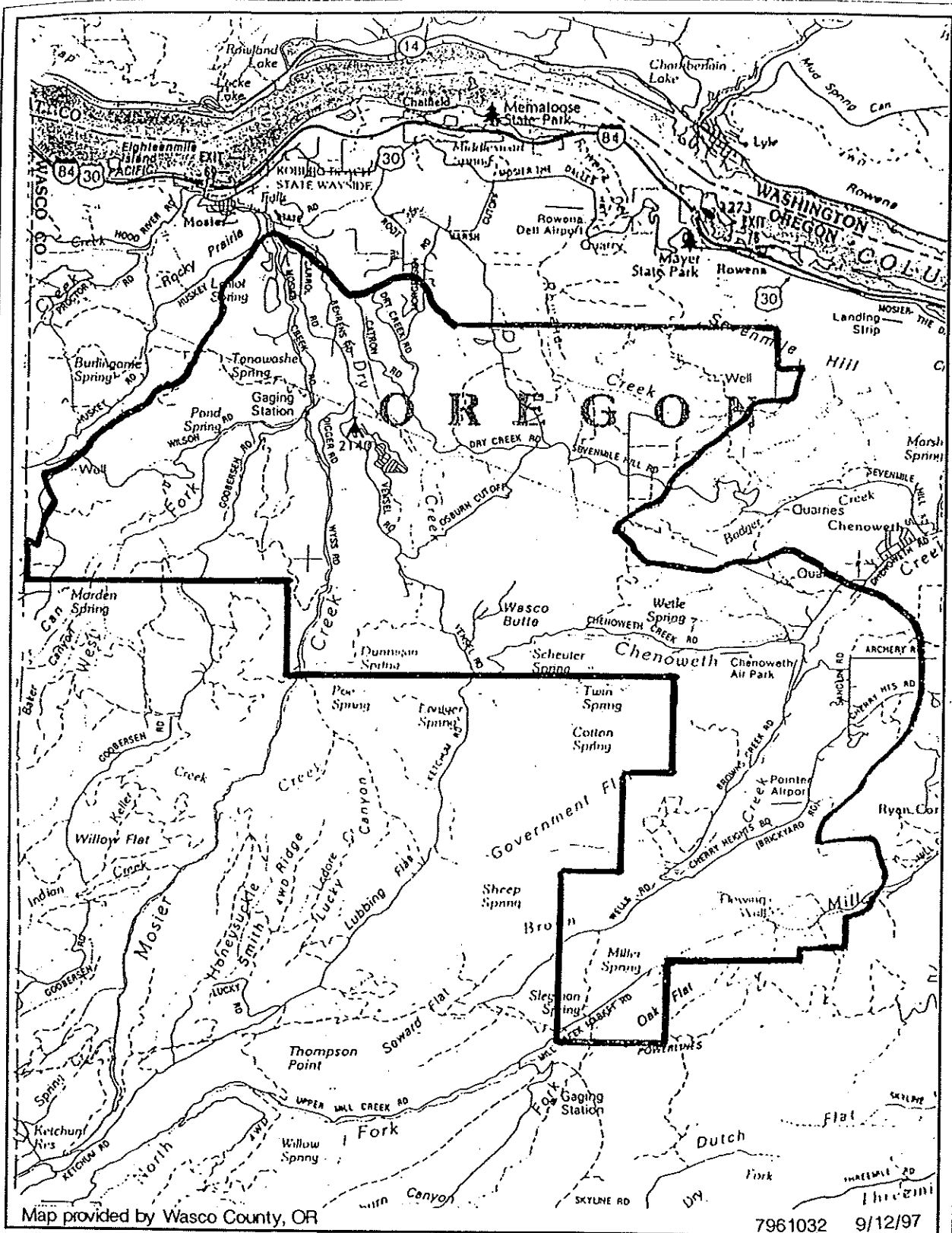
Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**



Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

**SRI/SHAPIRO/AGCO**  
INCORPORATED

# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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page 1

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below.

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not



approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.

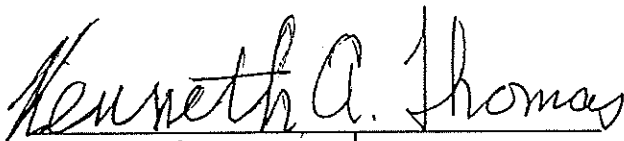
15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

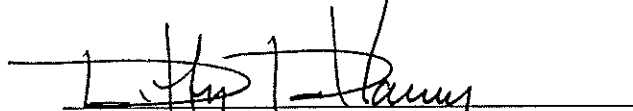
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

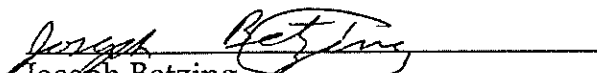
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing





**JERVEY** Geological  
Consulting

810 FELDSPAR DR. / P.O. BOX 328  
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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervey

**EXHIBIT 4**





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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervy

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

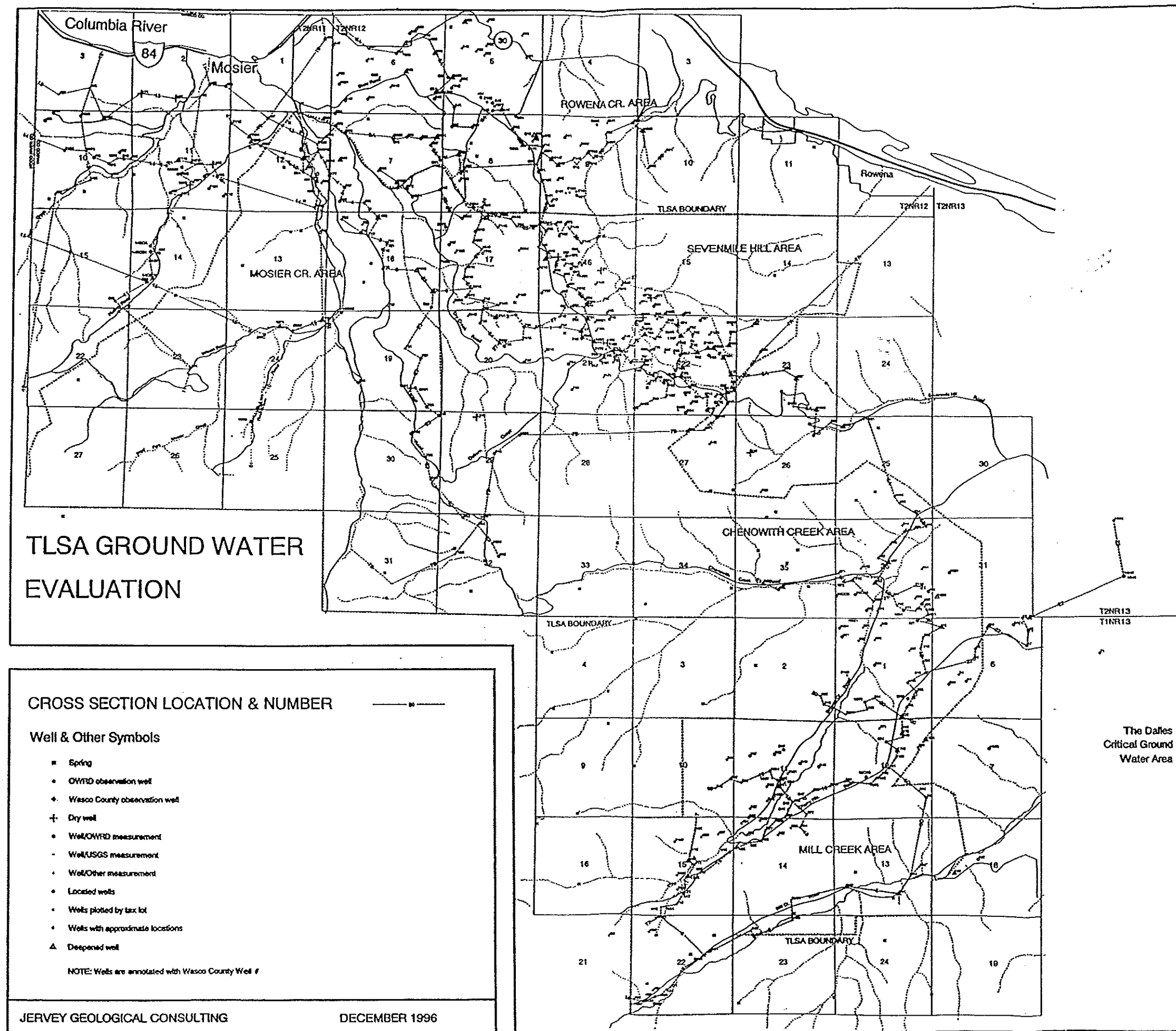
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year

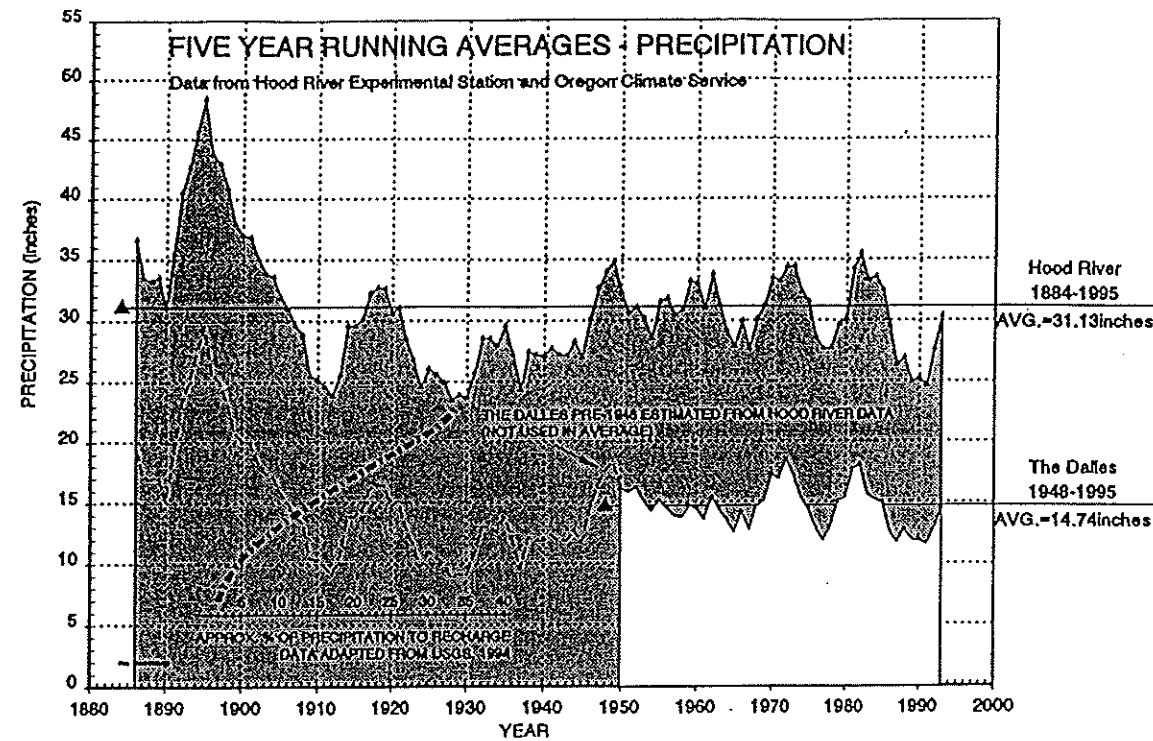


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

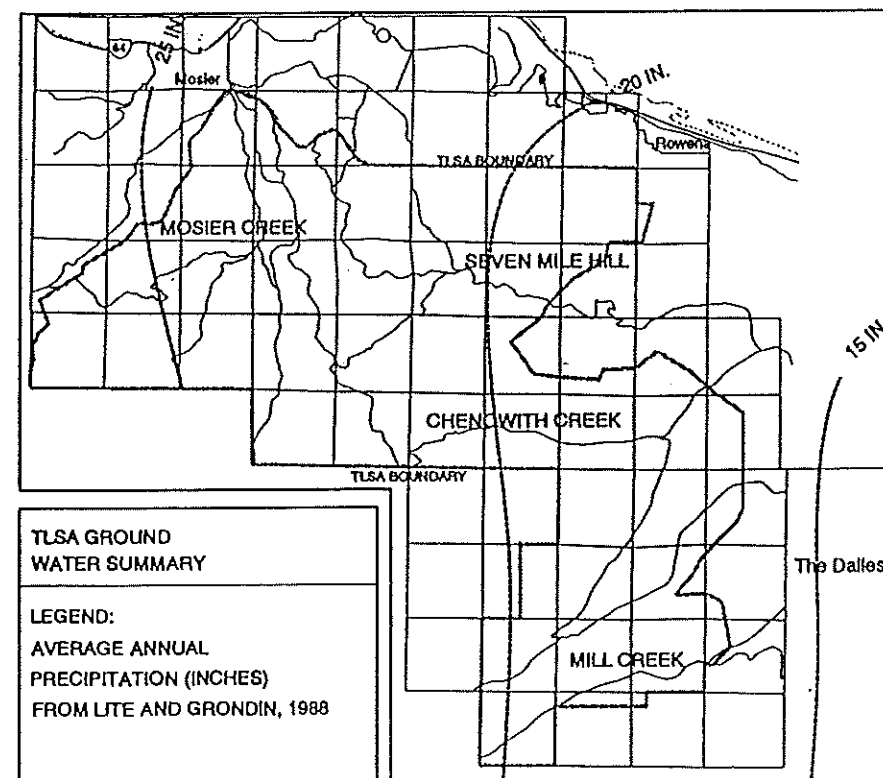


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).



CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				99,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

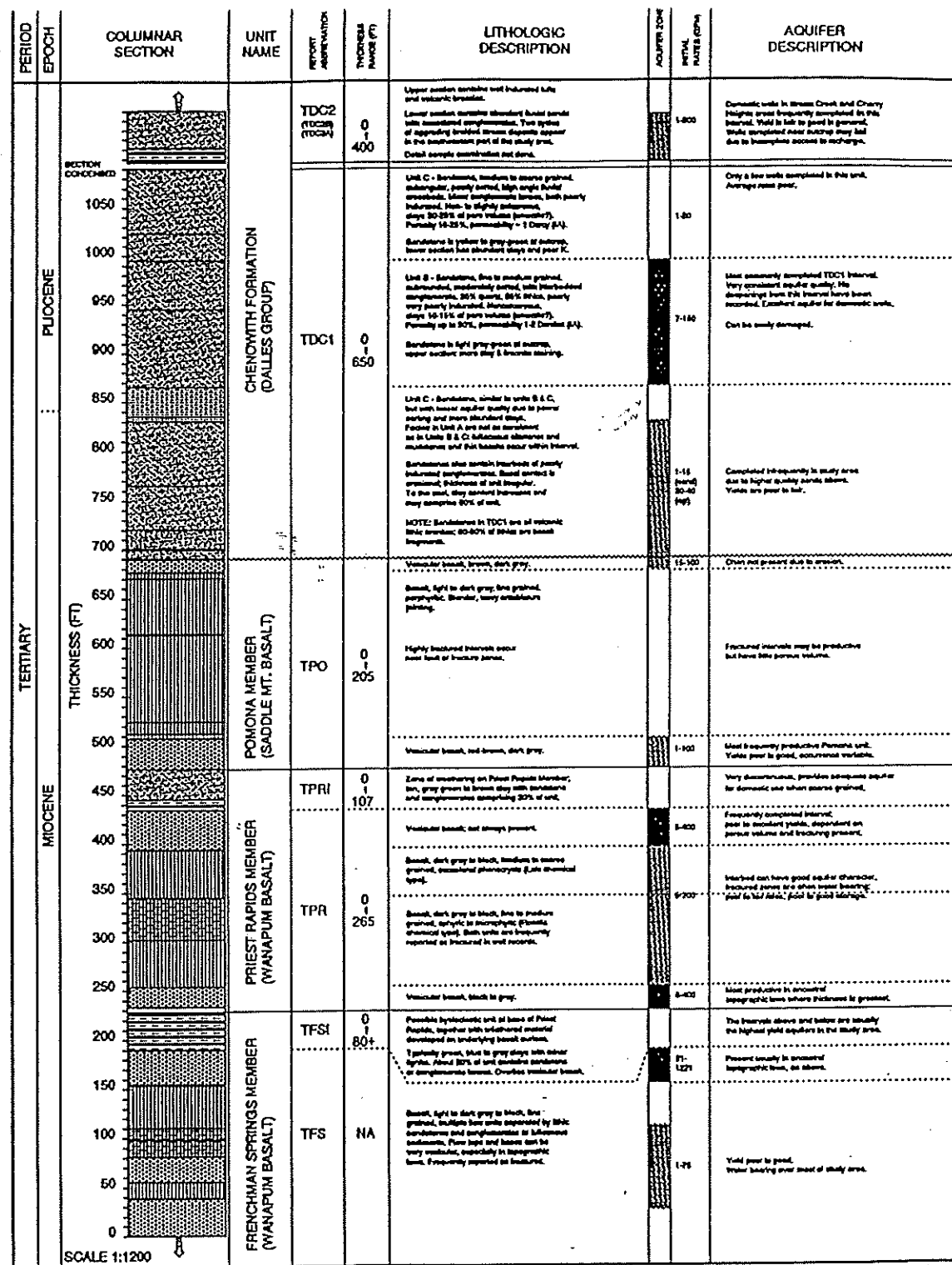
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

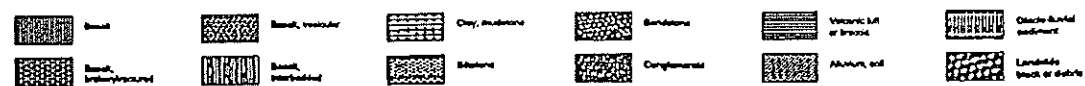


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).

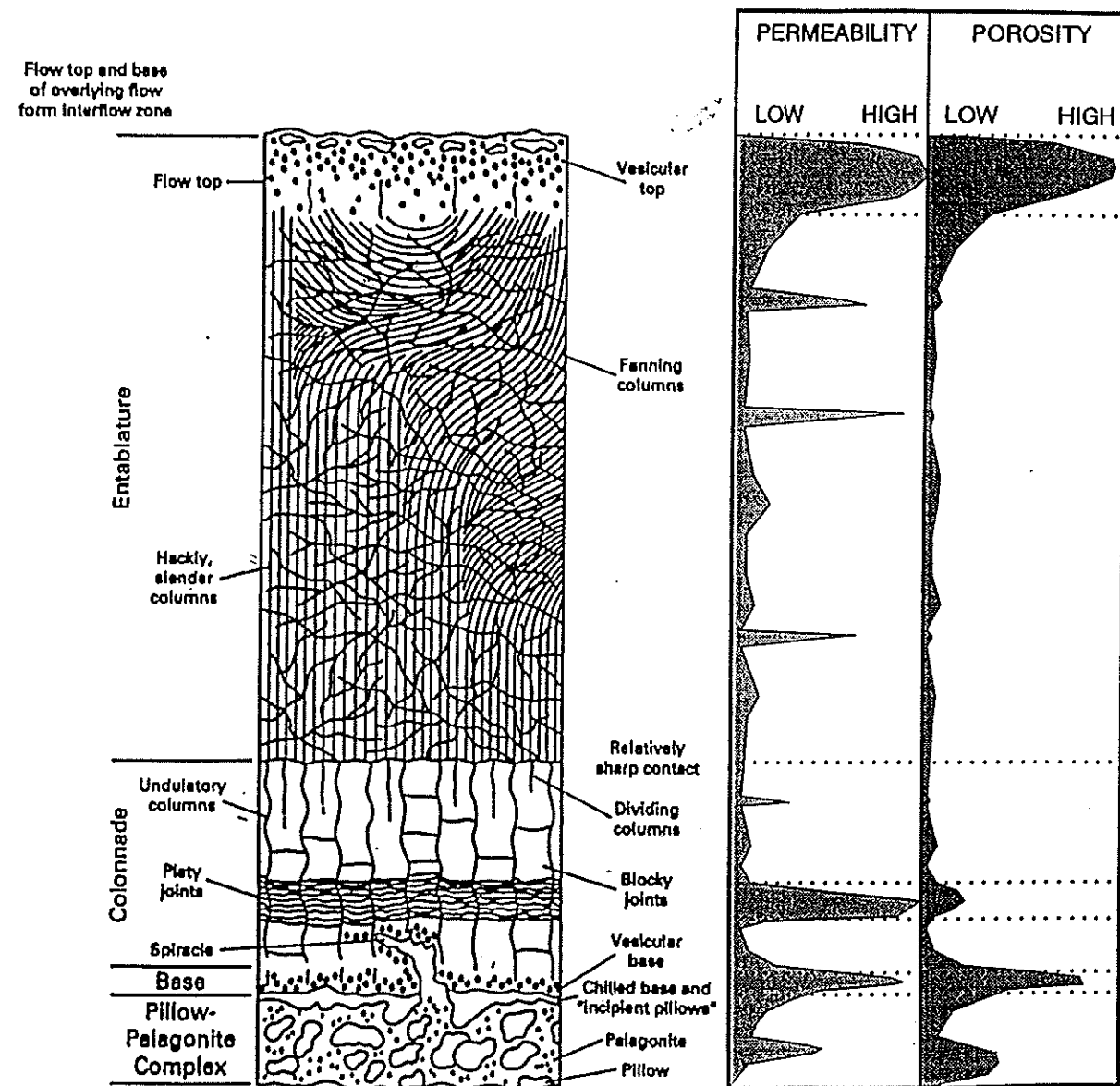


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).



general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

#### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

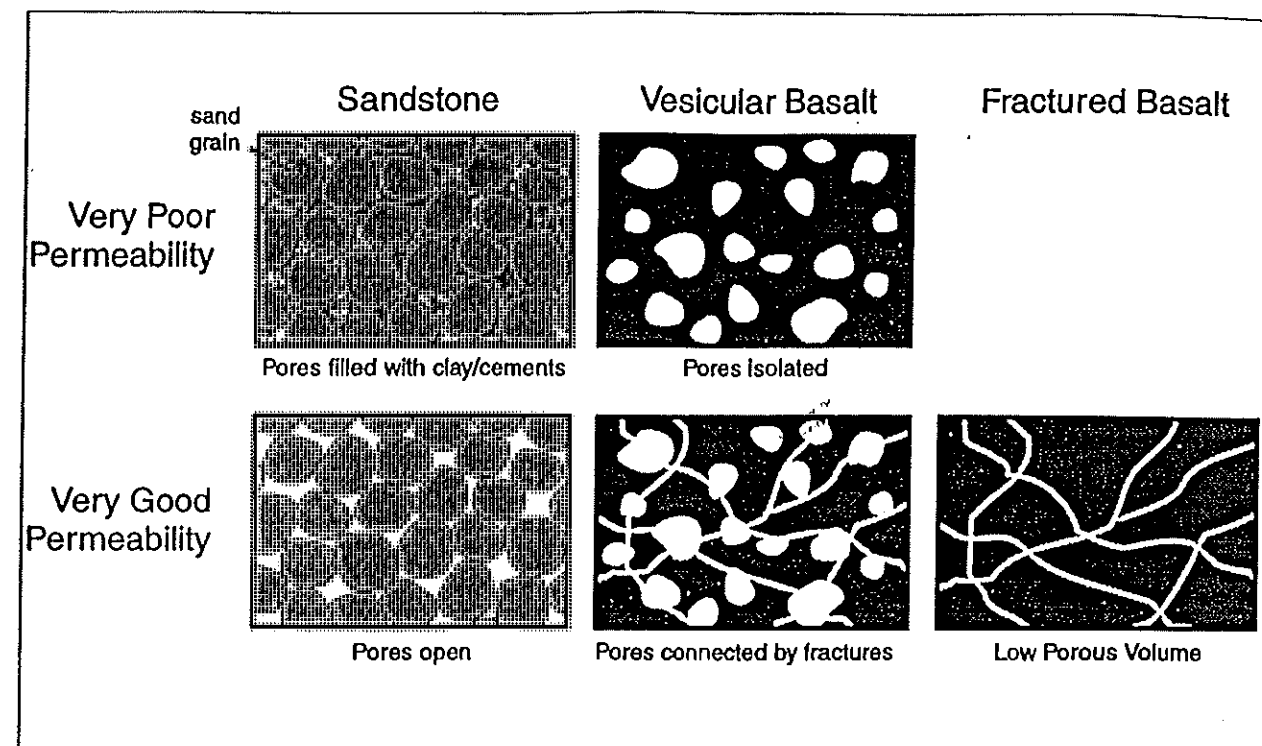


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

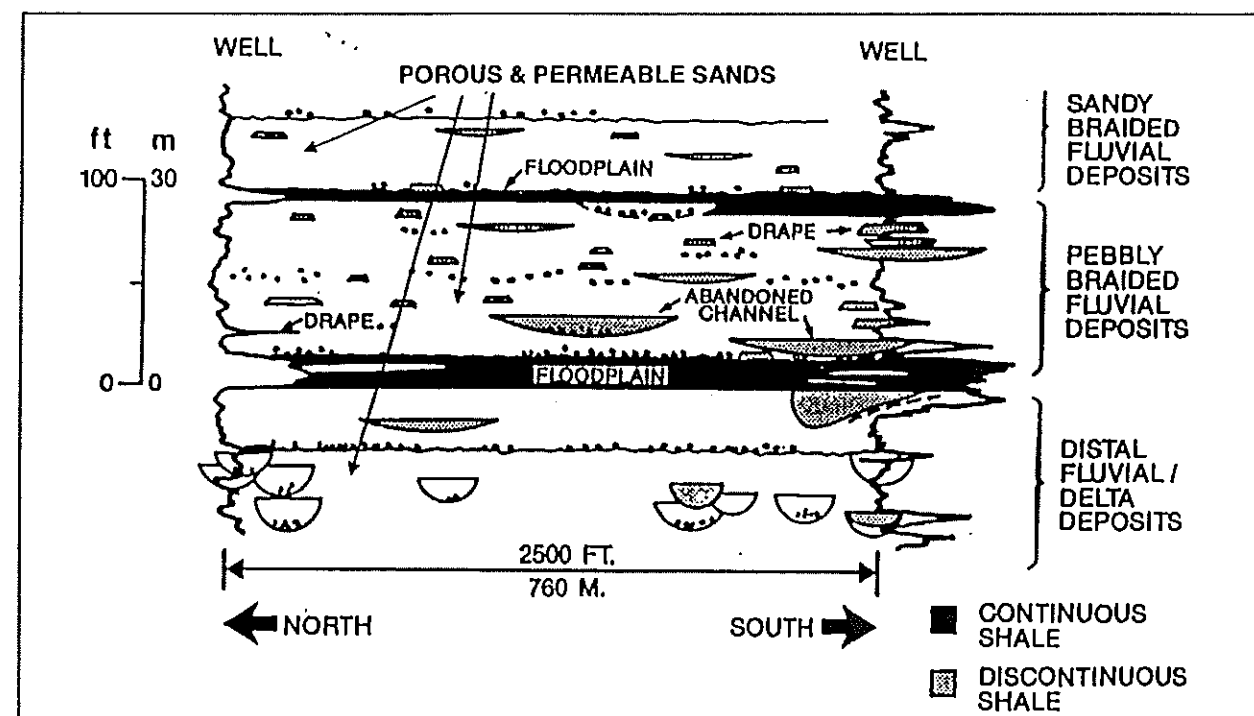


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

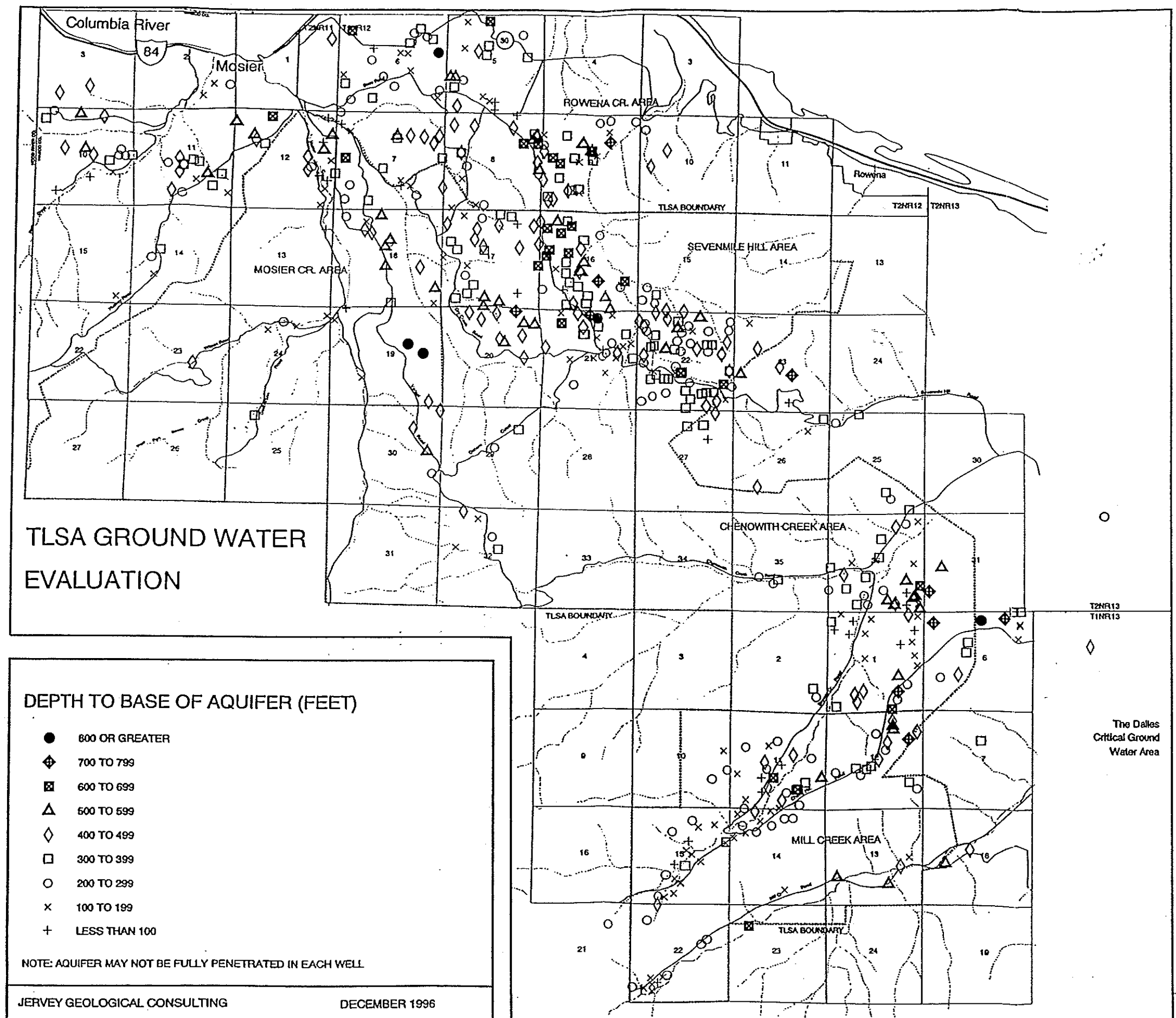
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

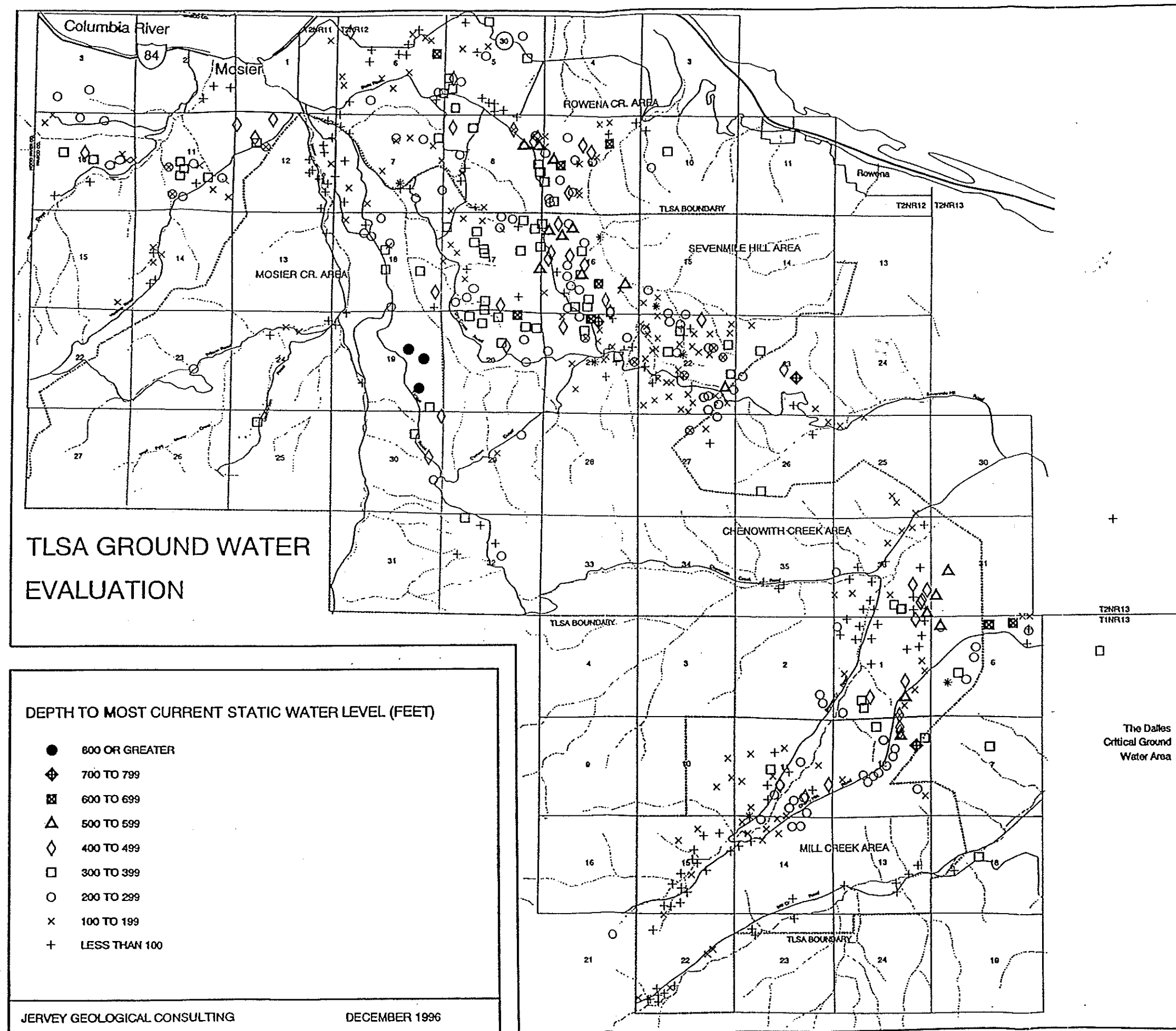
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

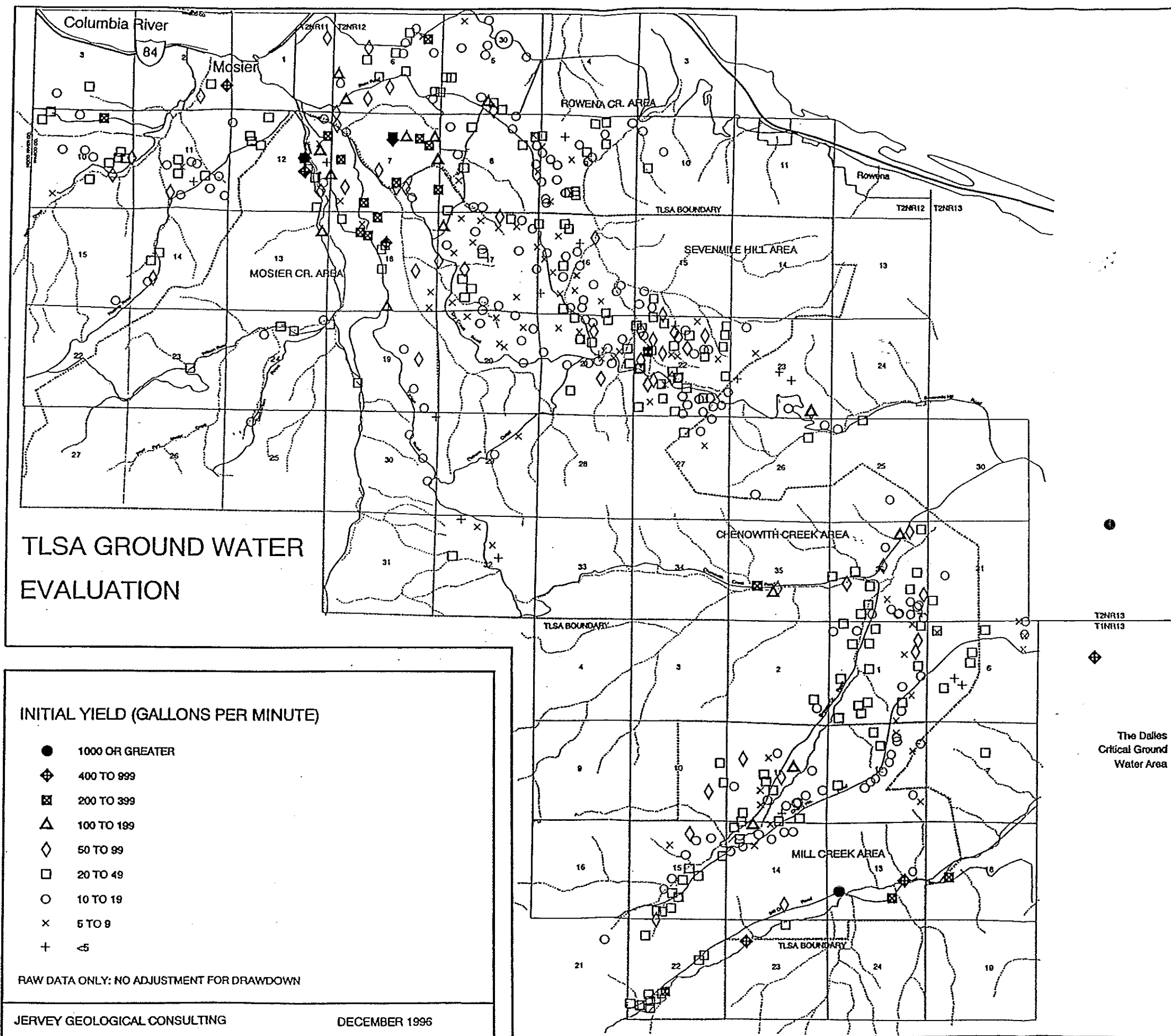
The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

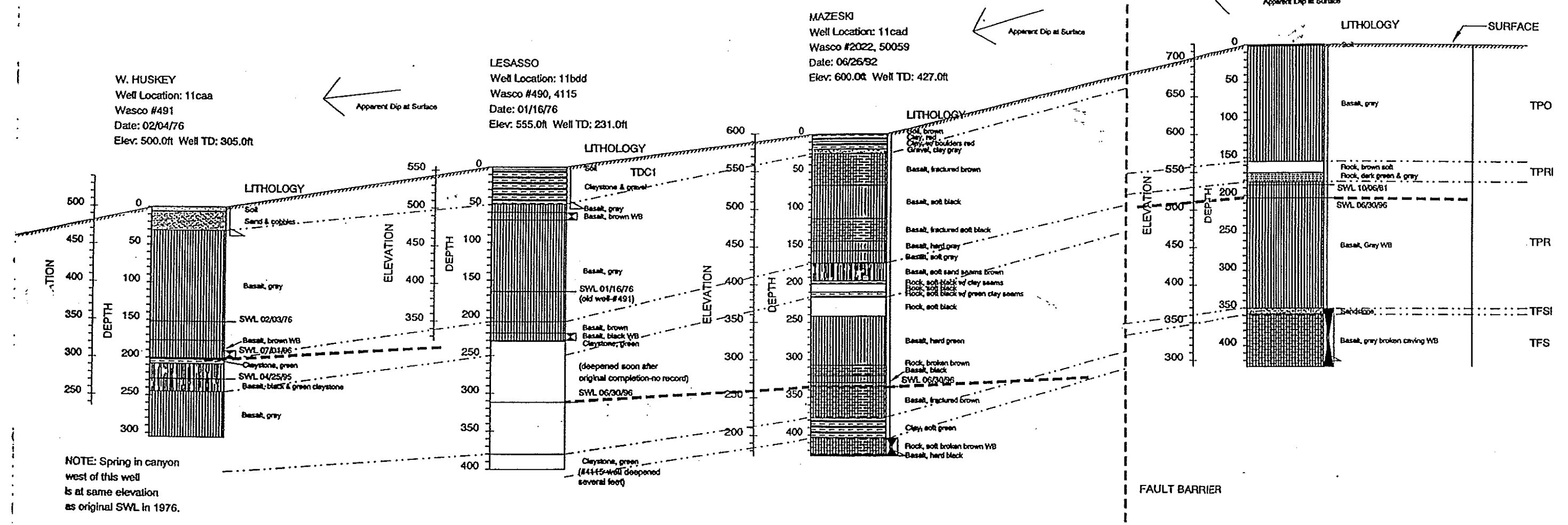
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



NOTE: Spring in canyon west of this well is at same elevation as original SWL in 1976.

TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt

as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepening (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not



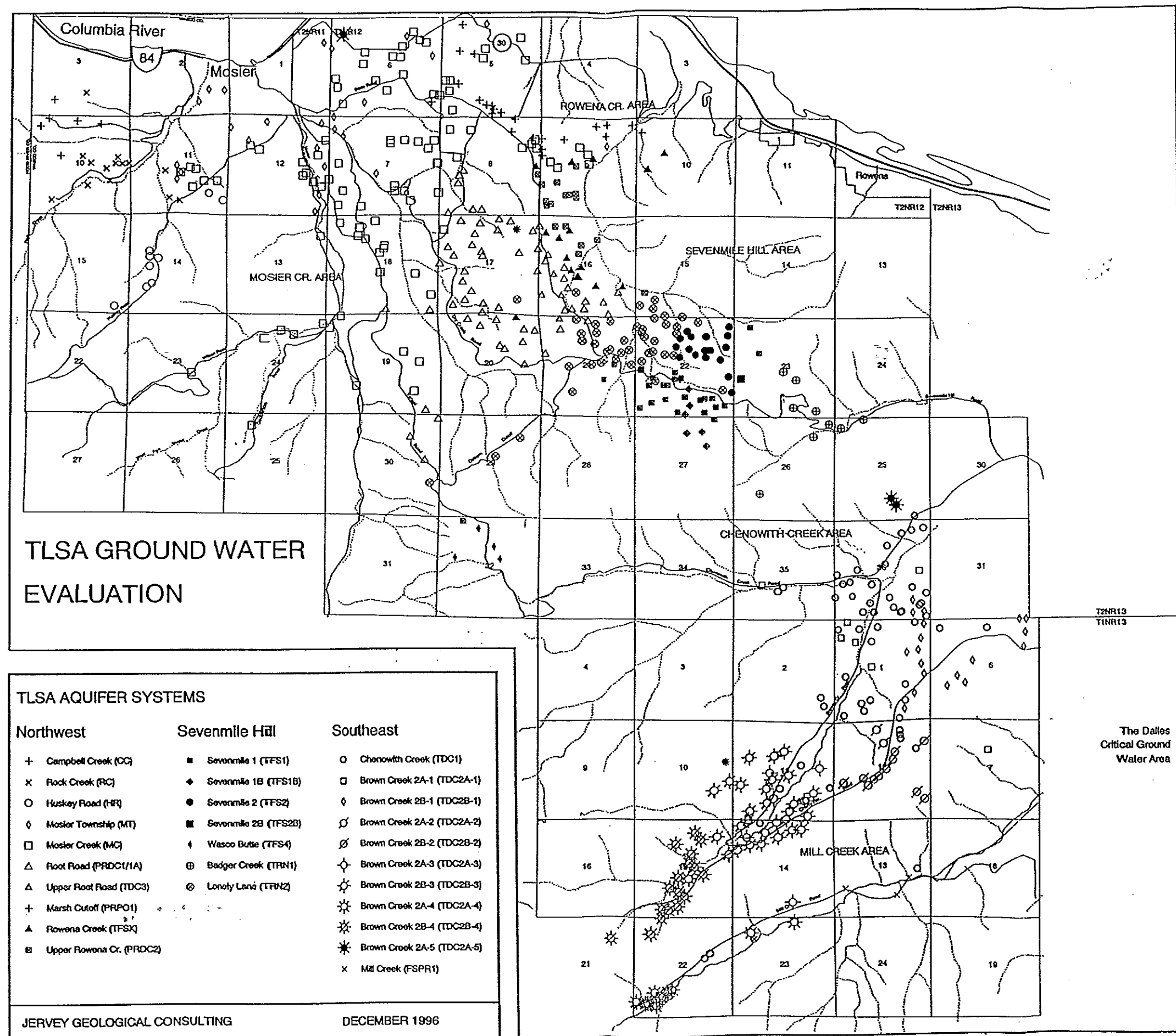
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH H2O	# OF DEEPEENINGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	P	COMMENT	
NORTHWEST TLSA														
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61 1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TFR	14	719	286	30	545	174	113	0	1	0	4	-26	56
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0	* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58 HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61 HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60 2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60 SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56 SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59
SEVENMILE HILL														
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57 HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53 ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52 SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*	* SIMILAR TO TRN2?
SOUTHEAST TLSA														
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56 1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.



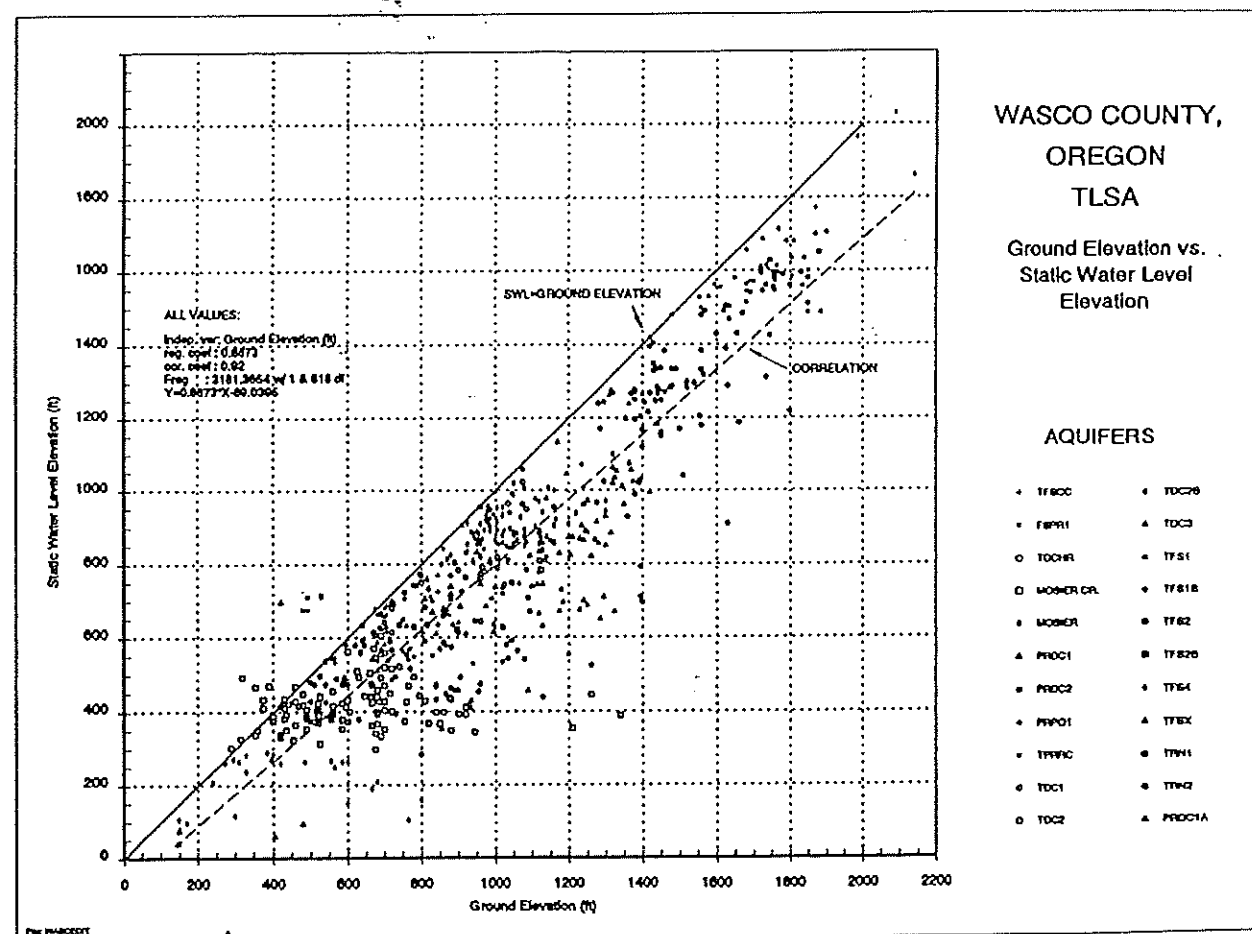


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

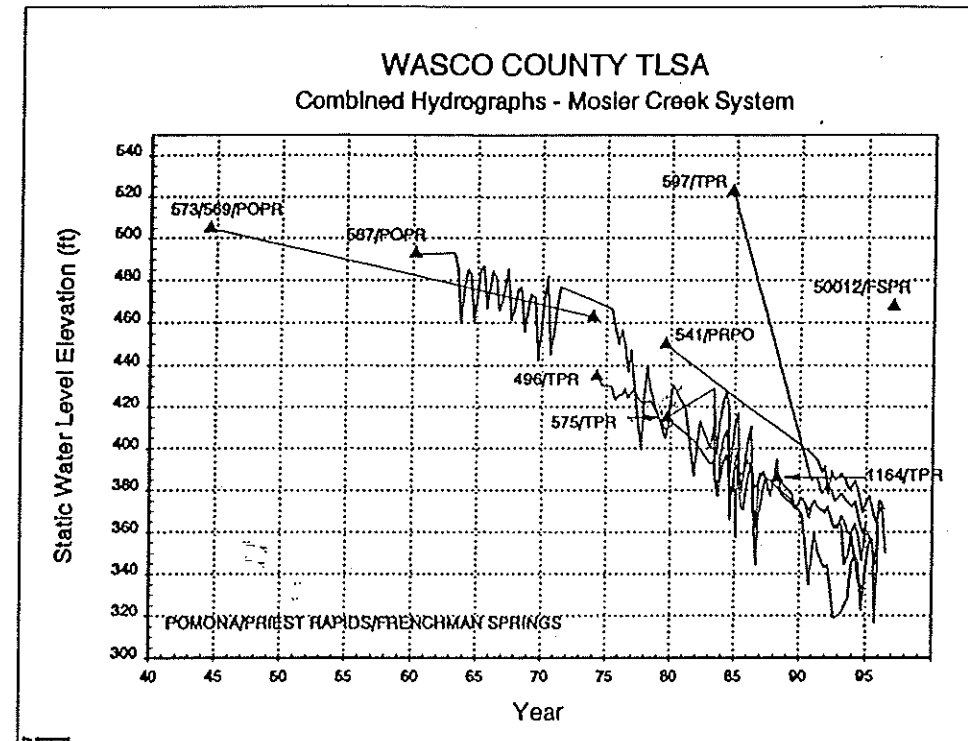


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

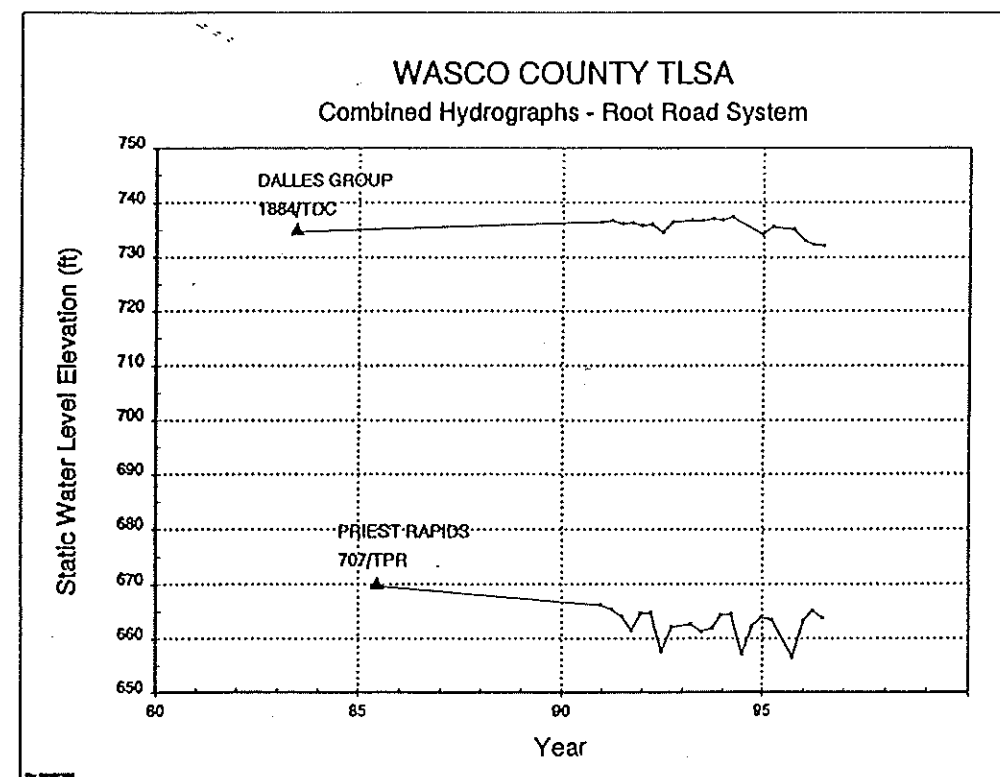


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.



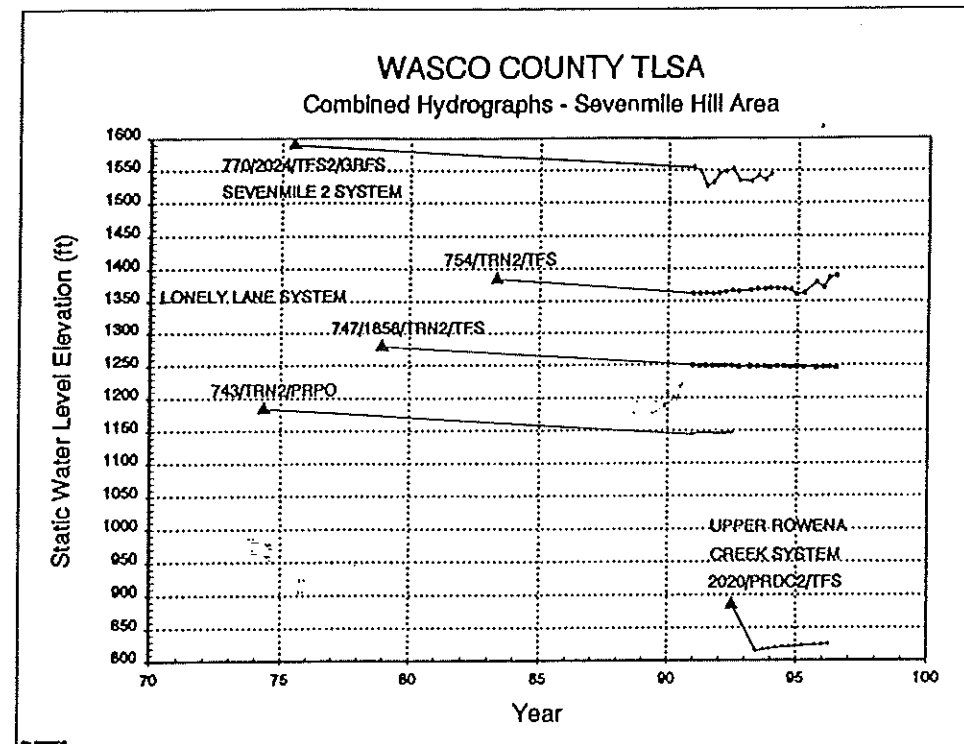


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

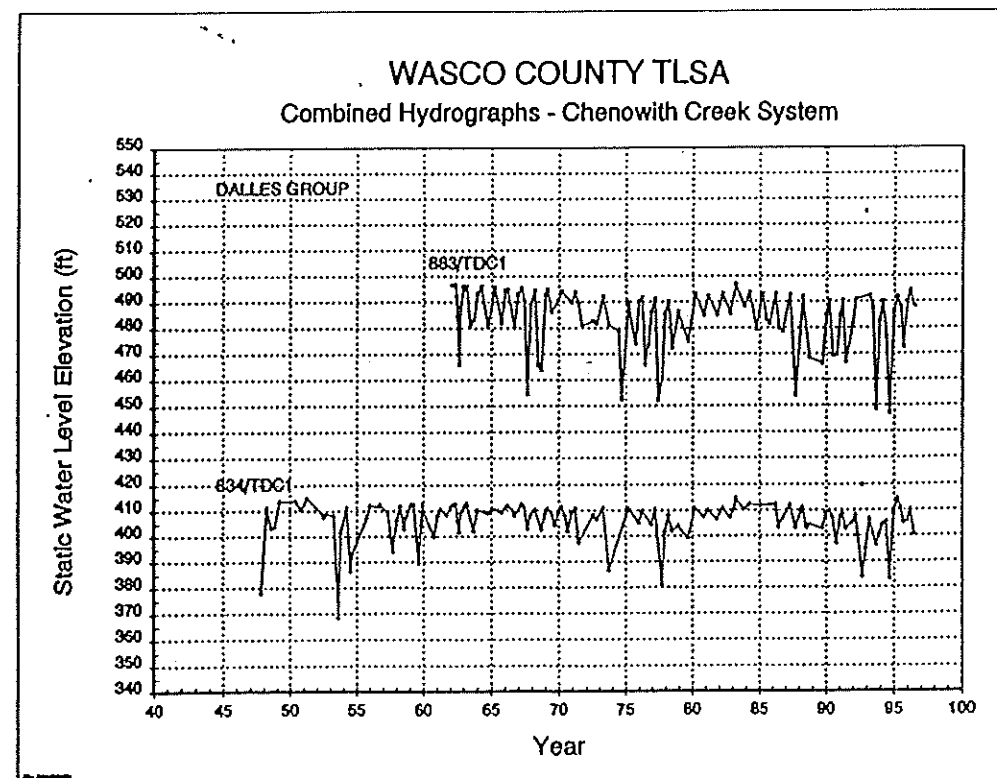


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

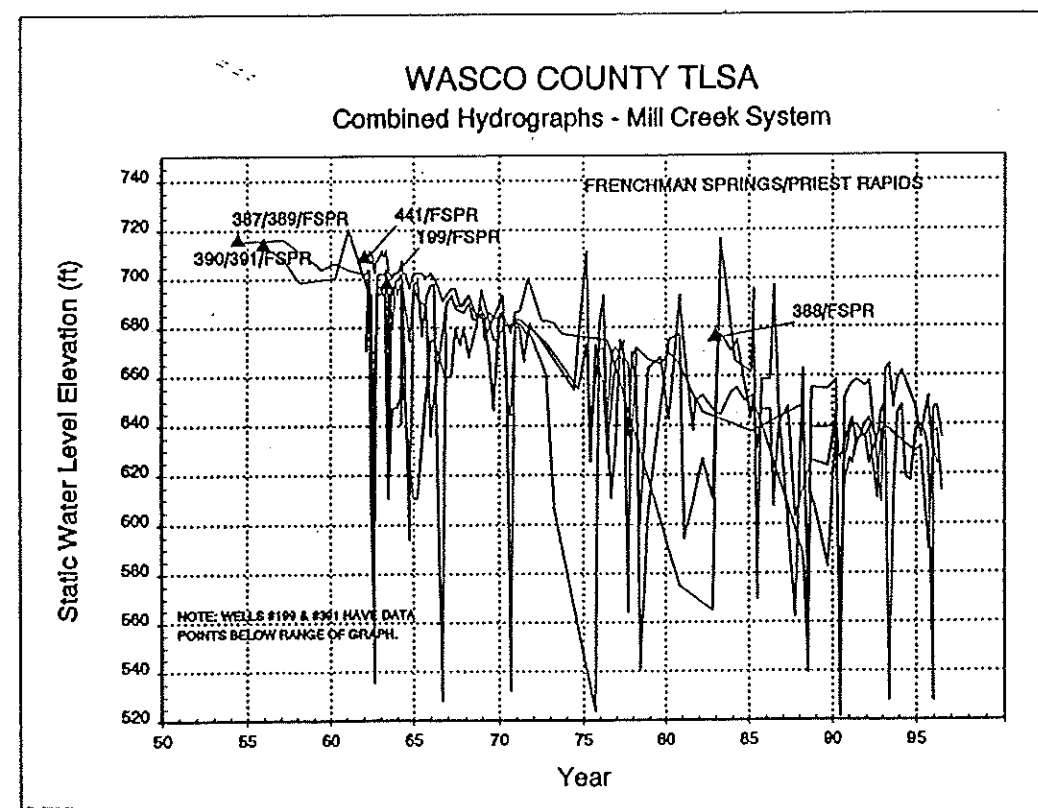


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no

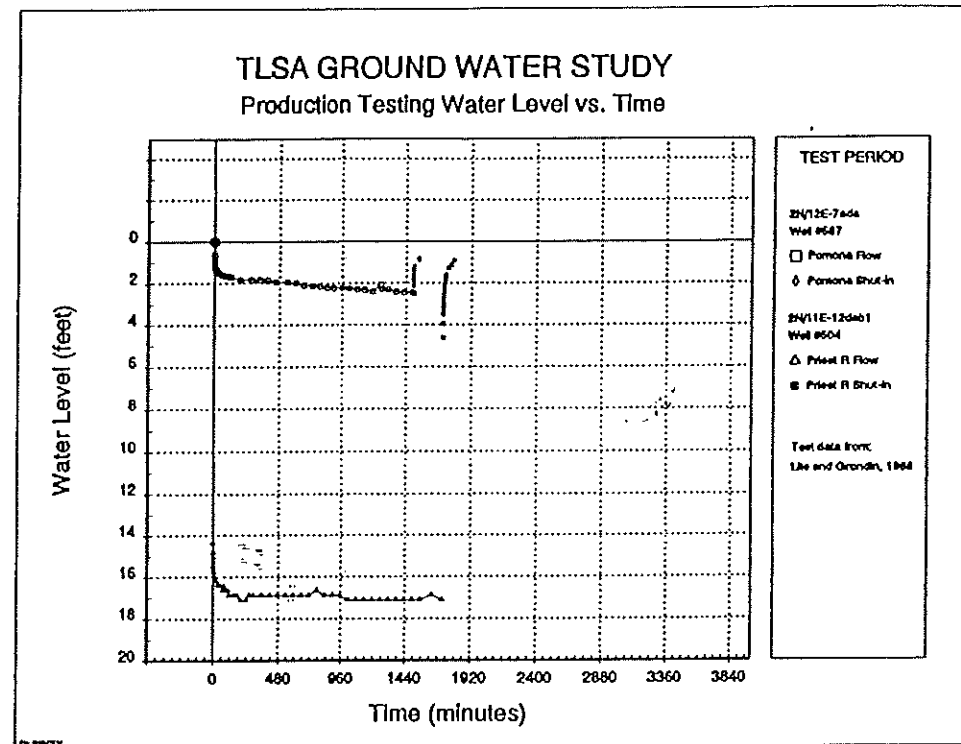


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

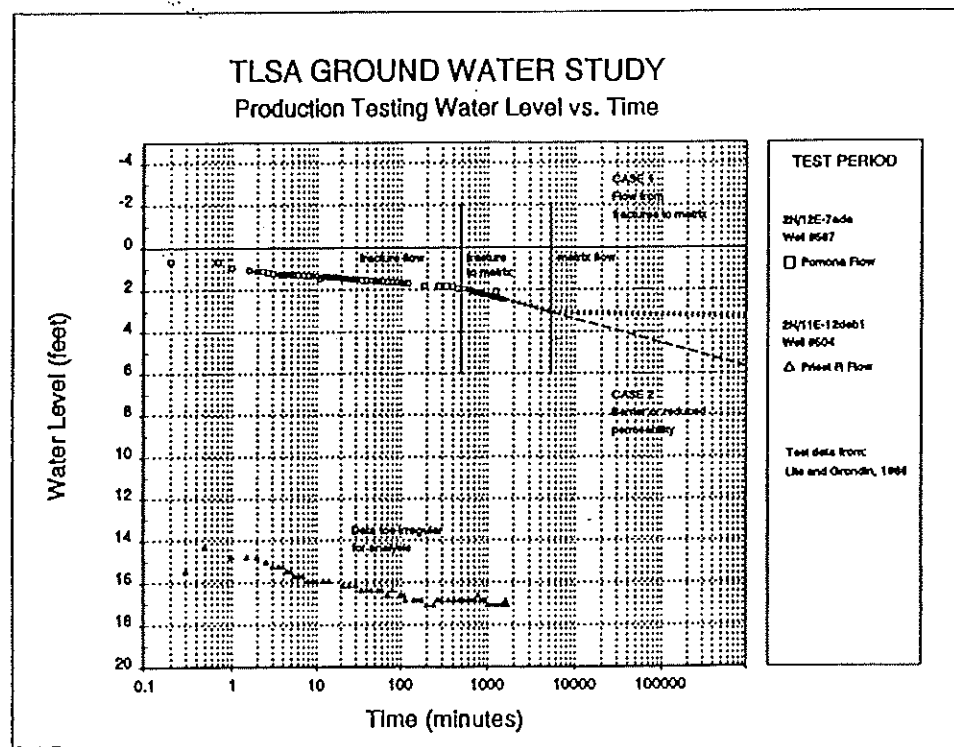


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).



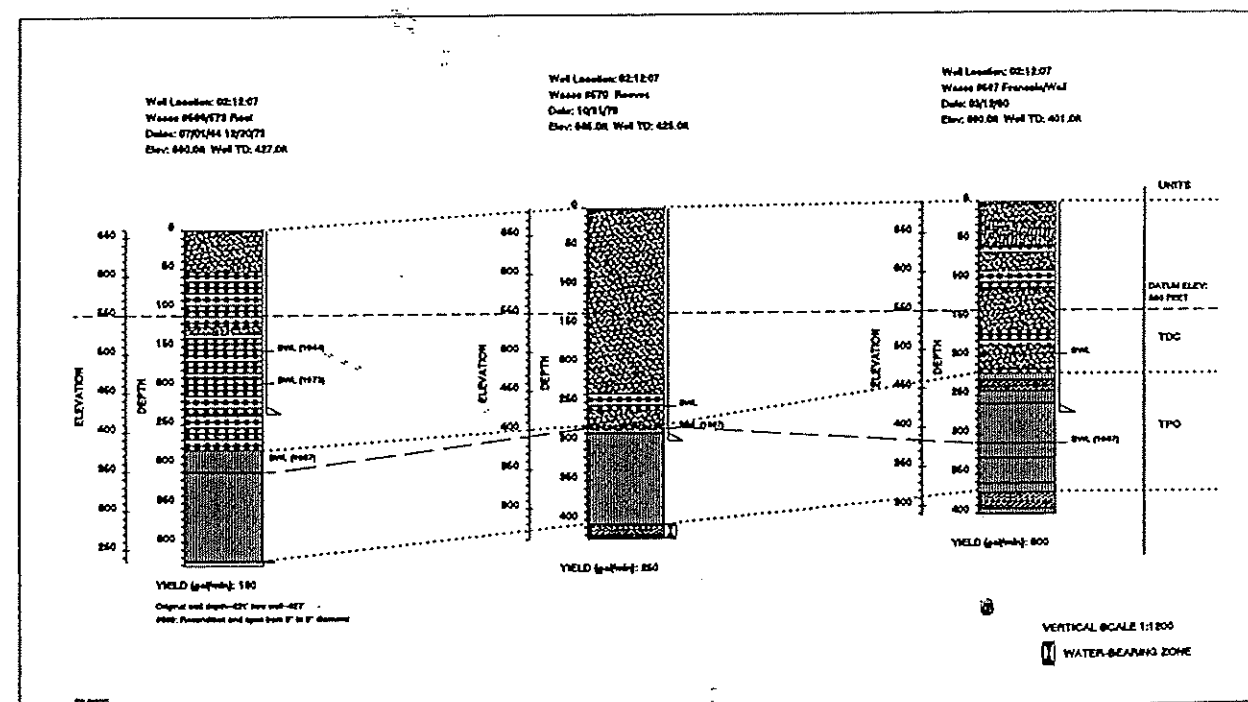


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

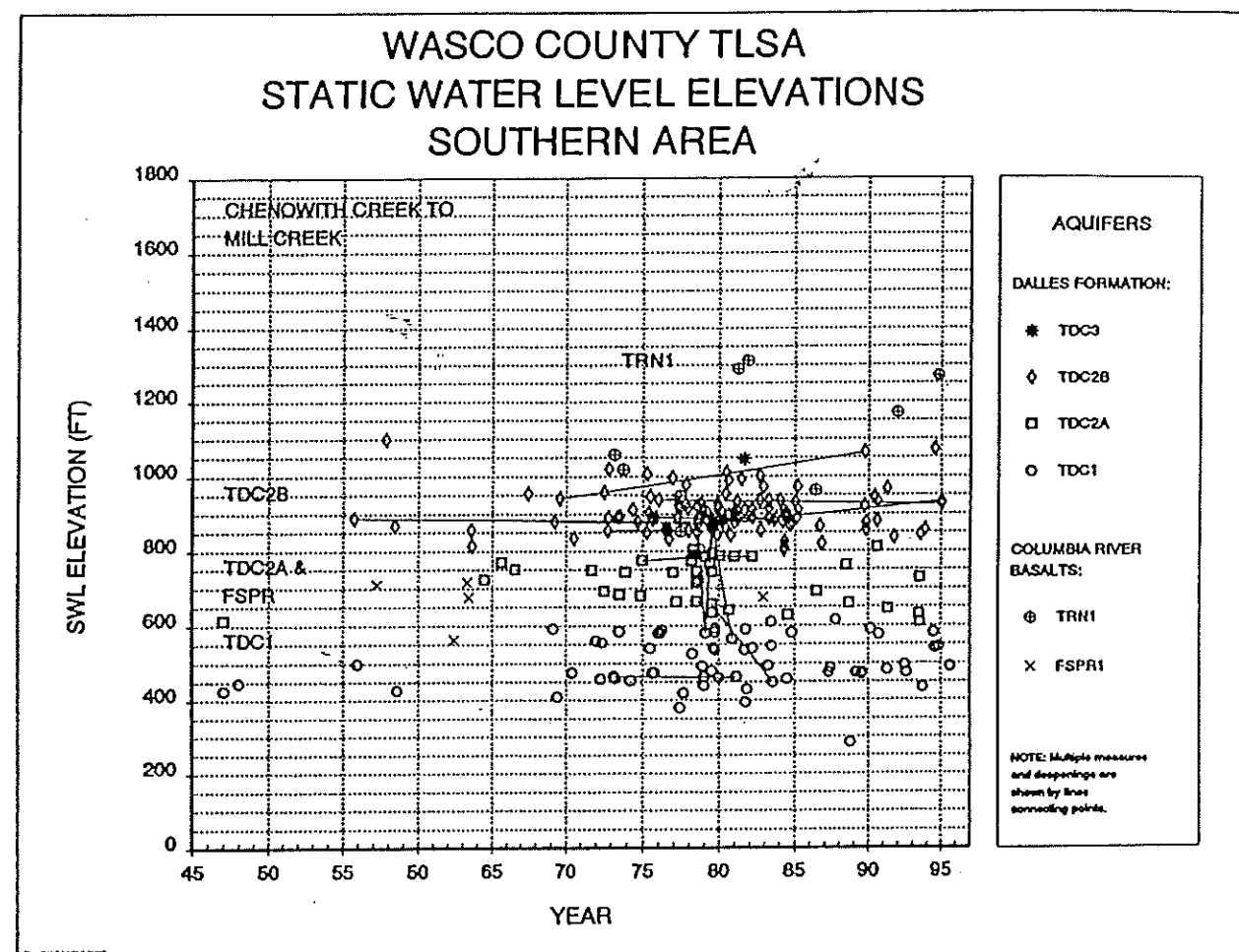


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

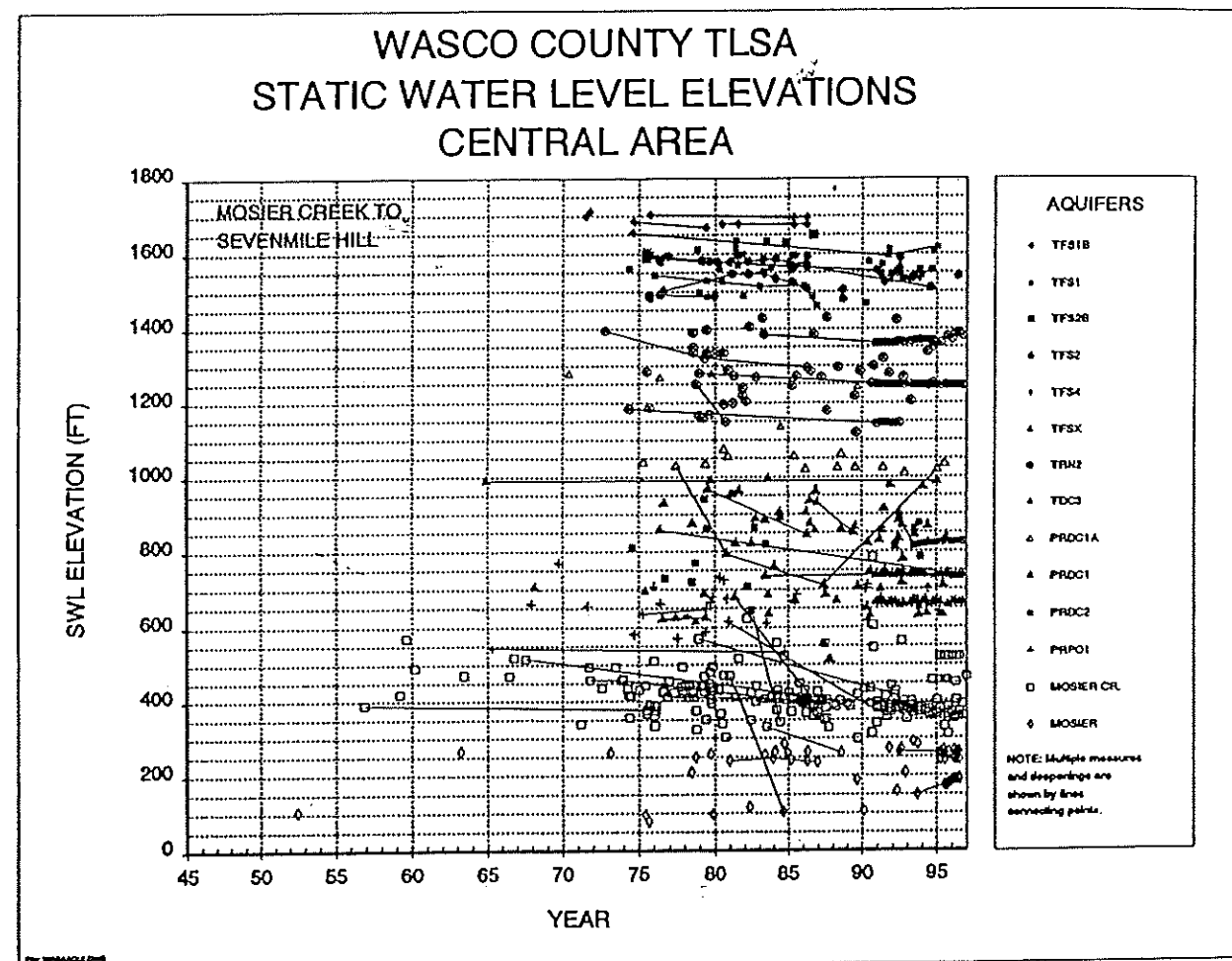


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.

significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPENED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A



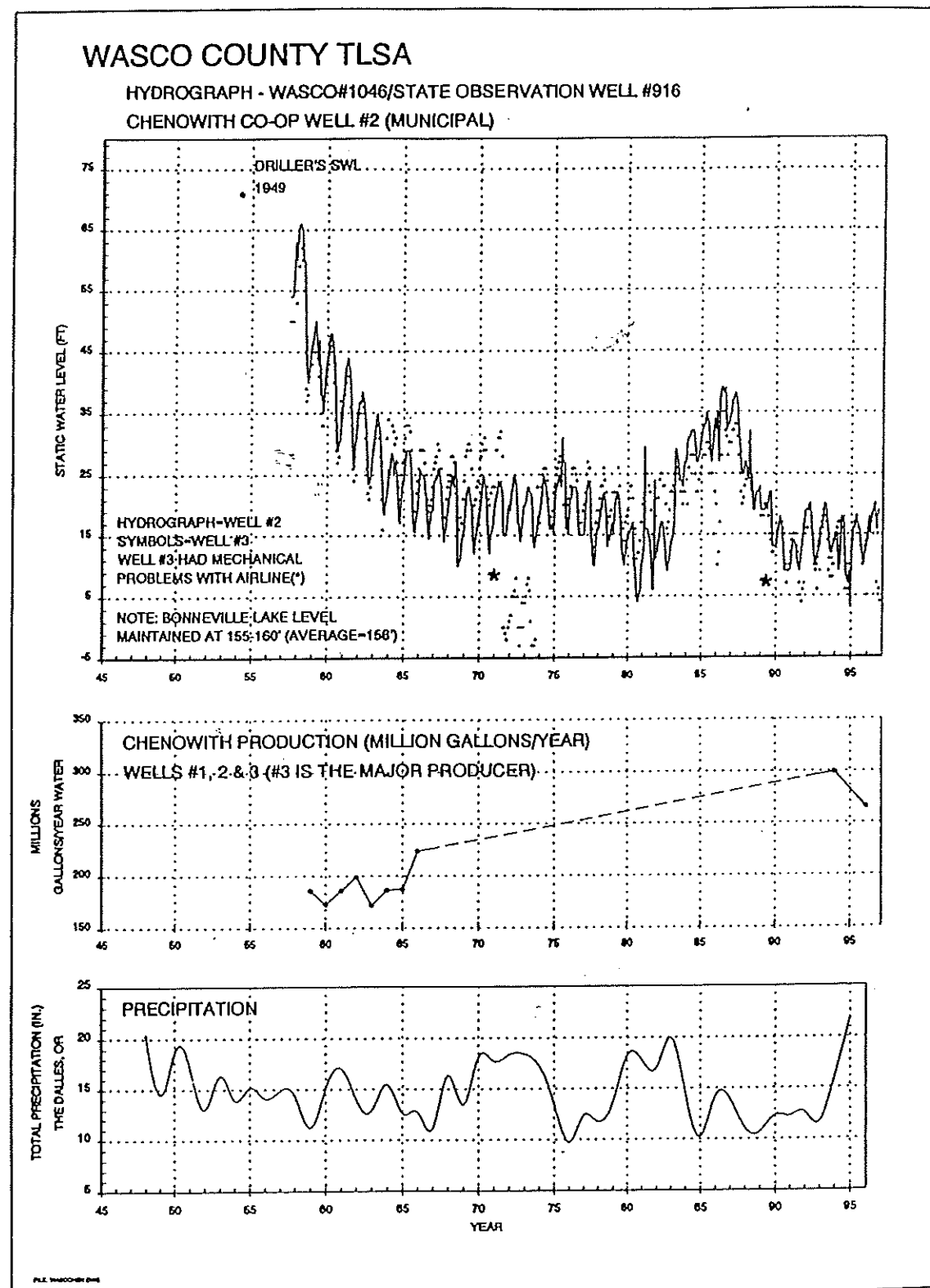


Figure 14. Chenowith Co-op water well data, 1949-1996.

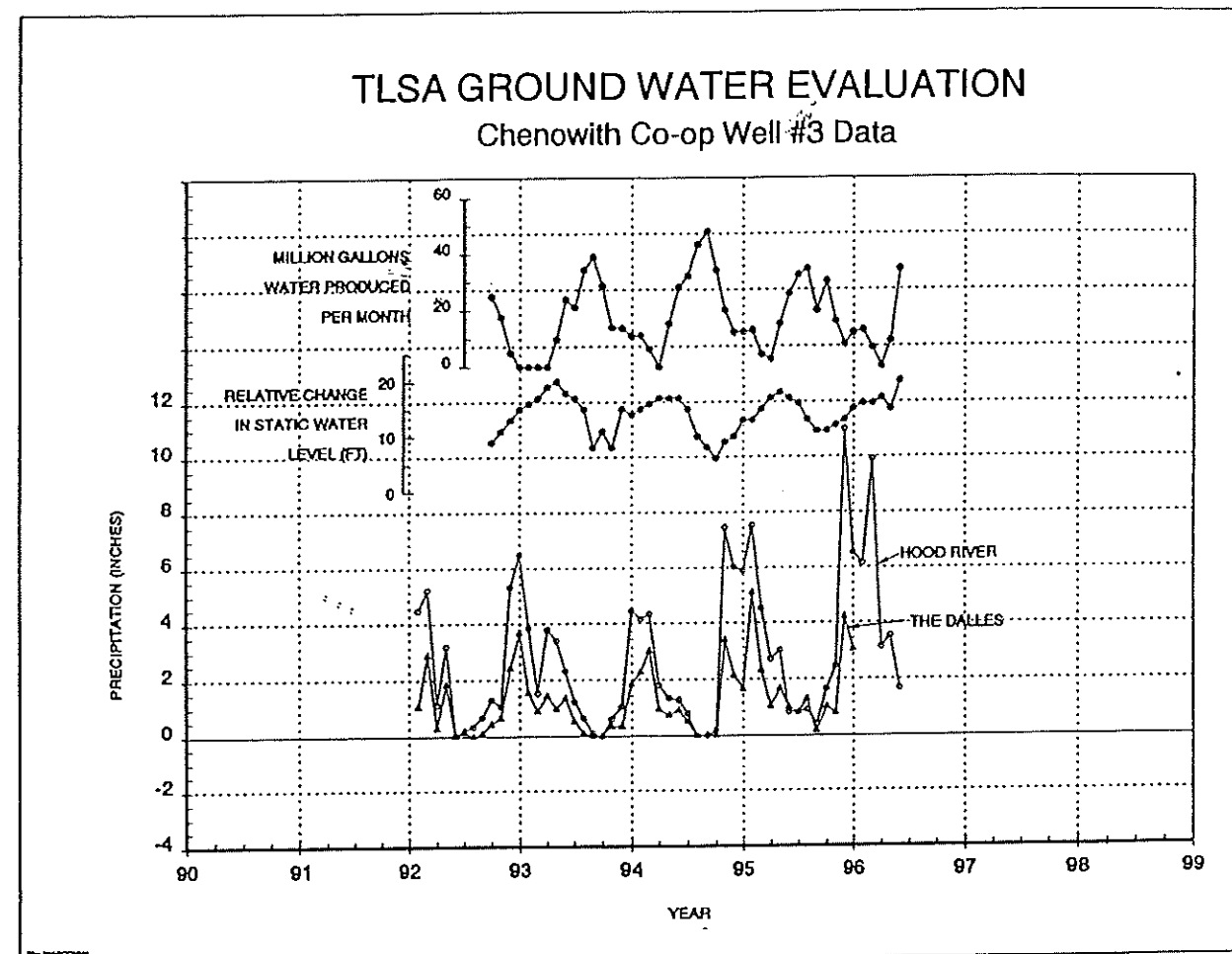


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

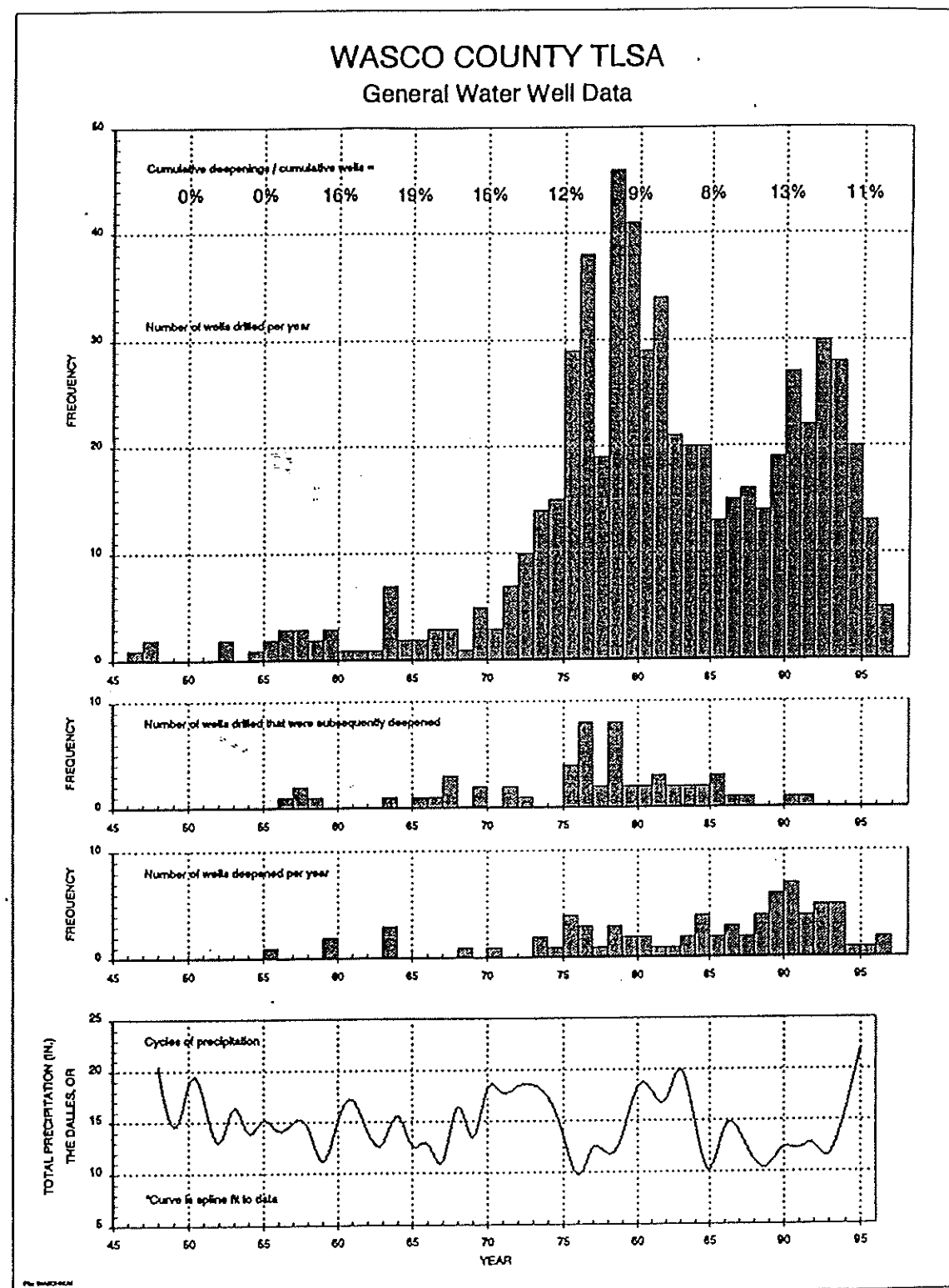


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.



The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

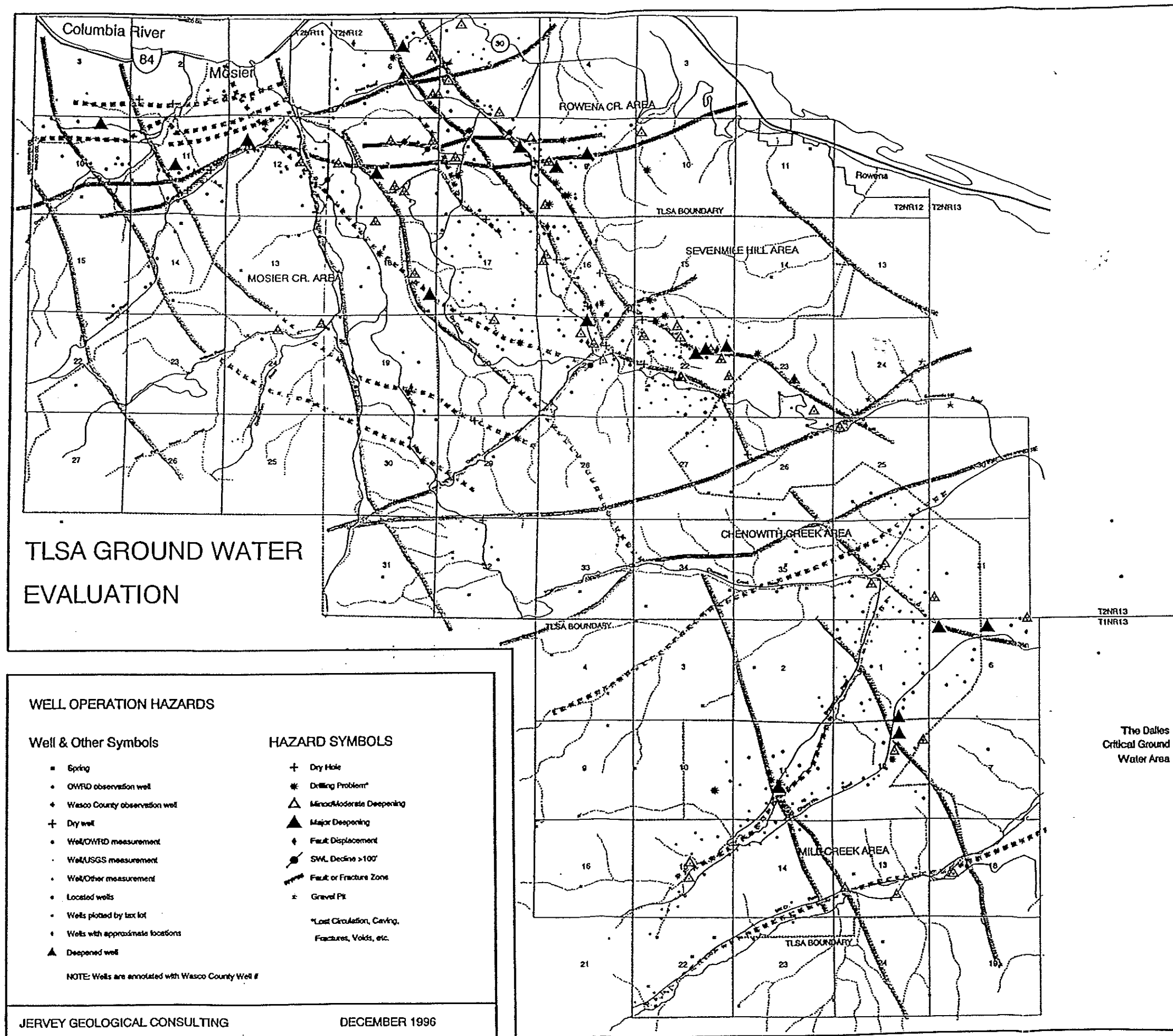




Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

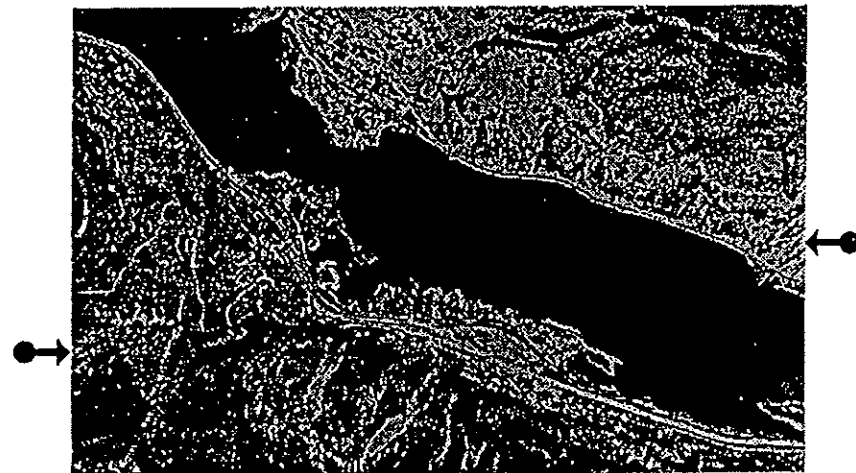


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

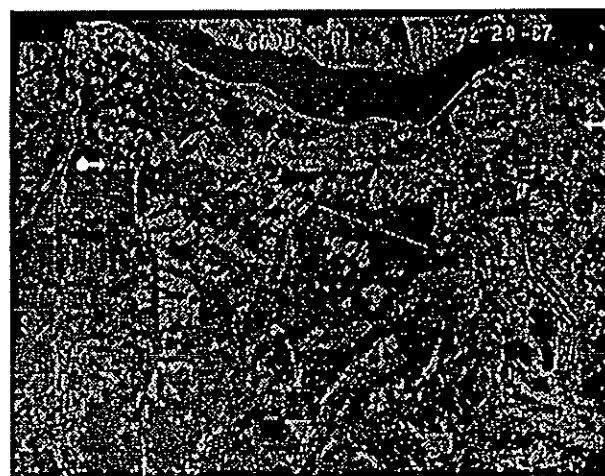


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

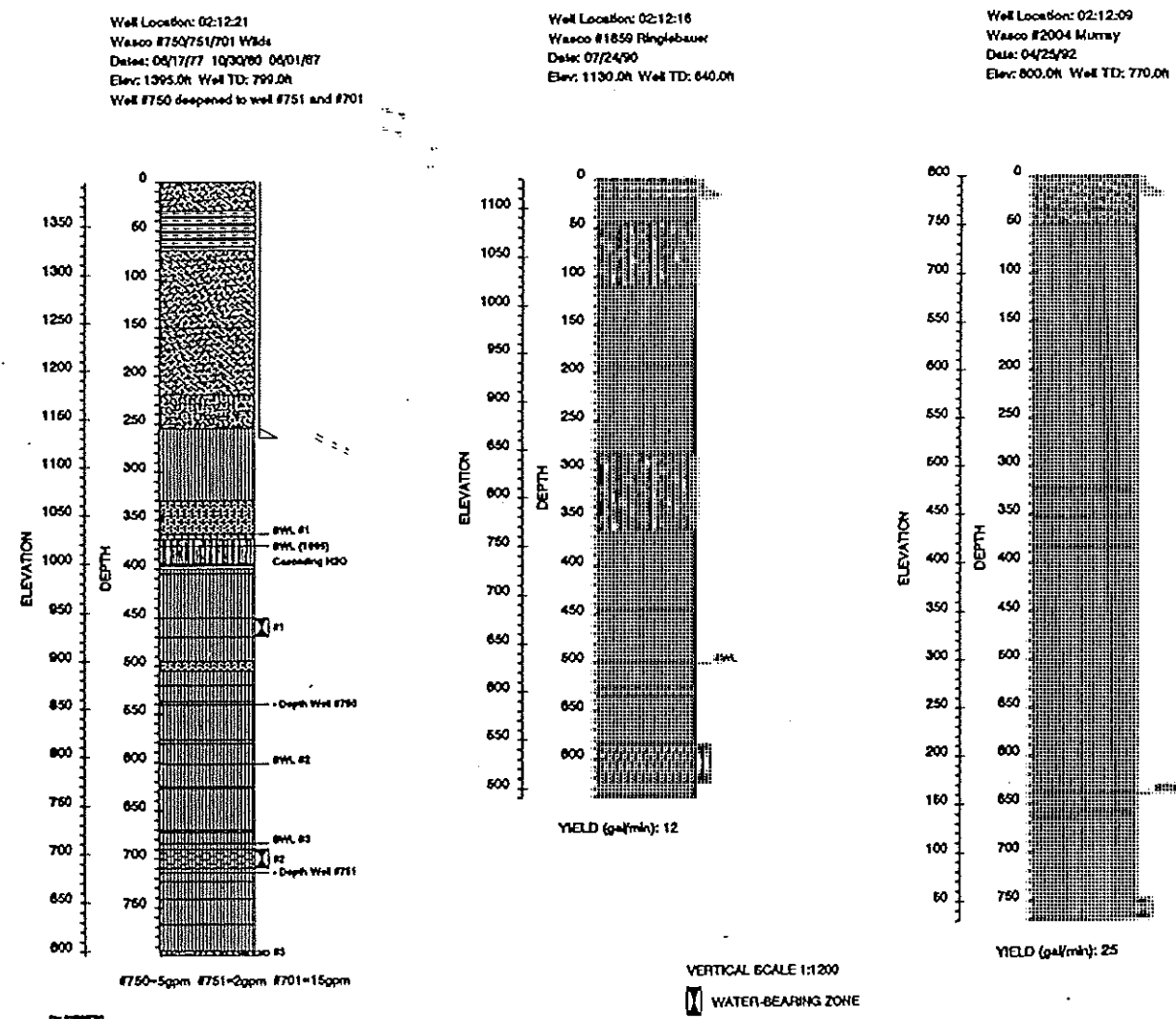


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.



- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

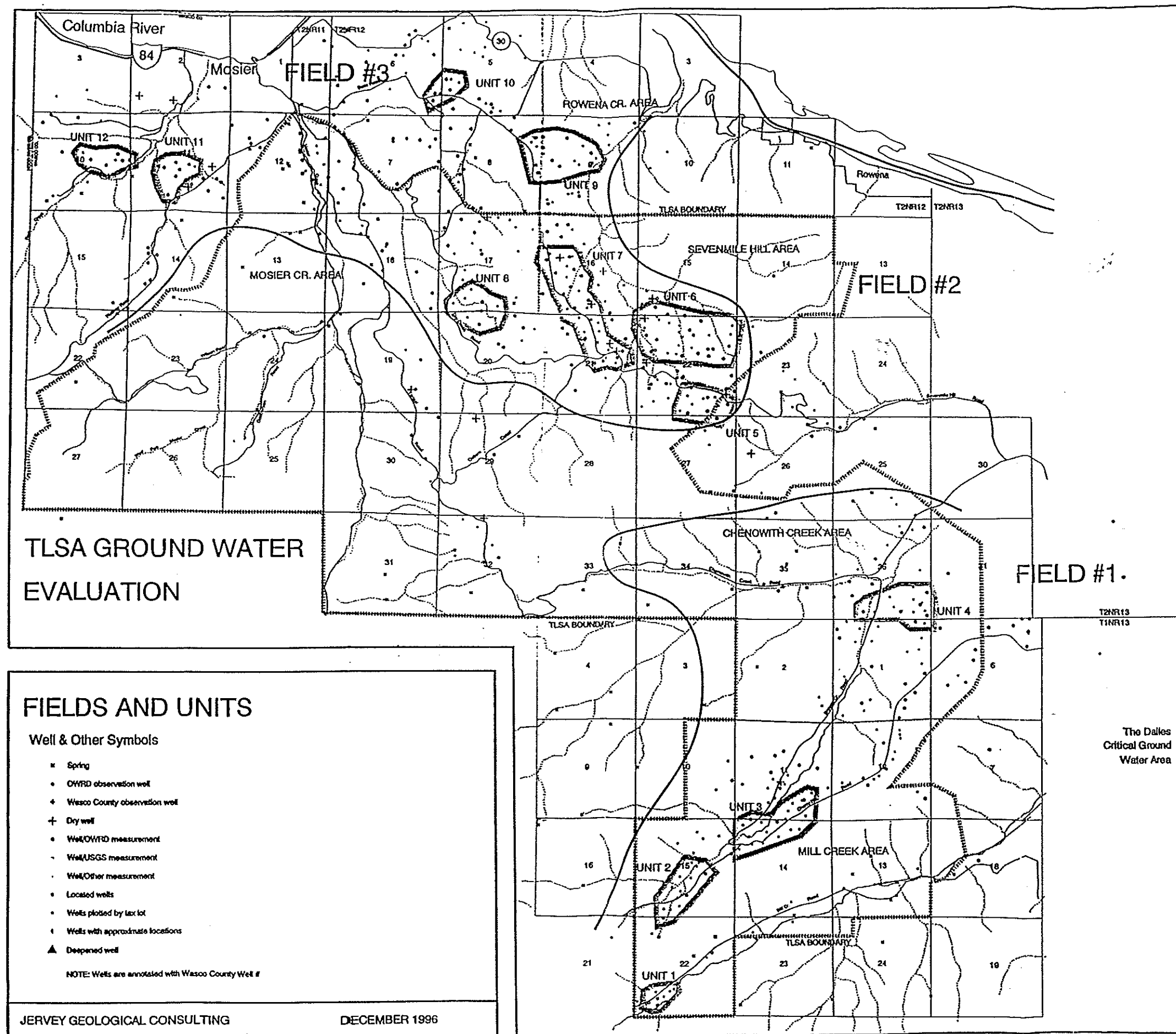
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.



# REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by landowners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		AVERAGE WELL DISTANCE FEET	AVERAGE LOWER 1/3 WELL DISTANCE FEET	DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	PER ACRES WELL				
1	TDC2A	8	49	6	388	318	3
2	TDC2A&D	12	142	12	604	416	4
3	TDC2B	19	212	11	653	478	5
4	TDC1&2B	17	177	10	708	491	5 HIGH
5	TPS1&1B	12	123	10	602	393	4
6	TFB2/TRN2	33	342	10	599	386	3 HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3 HIGH
8	PRDC1	9	138	15	798	580	8
9	PRPO1 HC TPSX	18	216	12	-	-	- HIGH
10	HC	7	68	10	-	-	-
11	MT/RC	7	97	14	-	-	-
12	RC	7	91	13	-	-	-

Table 3. Summary of well spacing in TLISA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.



**ACKNOWLEDGEMENTS**

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

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**PUBLIC AGENCIES/PRIVATE COMPANIES**

Larry Toll/Staff Wasco County Watermasters Office	Jerry Schmidt Oregon Water Consultants, Inc.
Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenowith Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

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Harry Douthit	Clyde Root

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY					
				(PCT)	4	10	40	200		INDEX				
0-7 IL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		IML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 IWB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY	BULK (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS K	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY	STEEL	CONCRETE
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	TOTAL (IN)	GRP	FROST ACTION
NONE			>6.0							10-60	HARD			MODERATE

SANITARY FACILITIES														
CONSTRUCTION MATERIAL														
SEPTIC TANK	SEVERE-PERCS SLOWLY				ROADFILL				FAIR-AREA RECLAIM, THIN LAYER					
ABSORPTION FIELDS														
SEWAGE LAGOON AREAS	SEVERE-SLOPE				SAND				IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK				GRAVEL				IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE				TOPSOIL				FAIR-SLOPE					
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER				POND RESERVOIR AREA				SEVERE-SLOPE					

BUILDING SITE DEVELOPMENT														
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE				EMBANKMENTS, DIKES AND LEVEES				SEVERE-PIPING					
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE				EXCAVATED PONDS, AQUIFER FED				SEVERE-NO WATER					
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE				DRAINAGE				DEEP TO WATER					
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE				IRRIGATION				SLOPE, ERODES EASILY					
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION				TERRACES AND DIVERSIONS				SLOPE, ERODES EASILY					
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE				GRASSED WATERWAYS				SLOPE, ERODES EASILY					



		RECREATIONAL DEVELOPMENT	
CAMP AREAS	MODERATE-SLOPE, DUSTY	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	MODERATE-SLOPE, DUSTY	PATHS AND TRAILS	SEVERE-ERODES EASILY

[illegible]

WOODLAND SUITABILITY									
ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY		SITE INDX	TREES TO PLANT
	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	COMMON TREES			
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	70	PONDEROSA PINE	
<p>Index of potential productivity @ avg. total ht. and 100 g.s.</p> <p>4 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac</p> <p>A = slight or no limitations.</p> <p>U.S. Avg = 41 ft<sup>3</sup>/ac/yr.</p>									

[illegible][illegible]

POTENTIAL NATIVE PLANT COMMUNITY	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	PLANT SYMBOL (NLSNP)
IDAHO FESCUE	FEID 45
BLUEBUNCH WHEATGRASS	AGSP 10
SANDBERG BLUEGRASS	POSE 5
NARROWLEAF BALSAMROOT	BASA3 2
ANTELOPE BITTERBRUSH	PUTR2 10
OREGON WHITE OAK	QUGA4 5
PONDEROSA PINE	PIPO 5

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FOOTNOTES

BOCC 1 - 2753



## SOIL INTERPRETATIONS RECORD

50D WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLASTICITY INDEX			
				(PCT)	4	10	40	200					
0-7	1L	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28	1L, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44	1L, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	1UB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK-SWELL POTENTIAL	EROSION FACTORS K, T, GROUP	WIND EROSION (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY		
											STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDROLYTIC	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY, SLOPE			FAIR-AREA RECLAIM, THIN LAYER, SLOPE			
ABSORPTION FIELDS				ROADFILL			
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL			POOR-SLOPE
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS			SEVERE-PIPING
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			DIKES AND LEVEES			SEVERE-NO WATER
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS			DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			AQUIFER FED			
LOCAL ROADS AND STREETS	SEVERE-SLOPE			DRAINAGE			SLOPE, ERODES EASILY
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			IRRIGATION			SLOPE, ERODES EASILY
				TERRACES AND DIVERSIONS			
				GRASSED WATERWAYS			SLOPE, ERODES EASILY



## RECREATIONAL DEVELOPMENT

SEVERE-SLOPE		SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS	
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

[illegible]

## WOODLAND SUITABILITY

[illegible]

# WINDBREAKS

[illegible]

## WILDLIFE HABITAT SUITABILITY

[illegible]

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)
IDAHO FESCUE	FEID	45
SANDBERG BLUEGRASS	POSE	5
BLUEBUNCH WHEATGRASS	AGSP	10
NARROWLEAF BALSAMROOT	BASA3	2
SANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	OUGA4	5
PONDEROSA PINE	PIPO	5
POTENTIAL PRODUCTION (LBS./AC. DRY WT):		
FAVORABLE YEARS		950
NORMAL YEARS		800
UNFAVORABLE YEARS		450

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**



GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.

## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty



Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.

Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:



<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0

Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.



A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	

Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.



These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.

#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.



Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.



The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.



Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:



Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.

## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.



selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other

important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

#### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.



XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.

FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.



## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

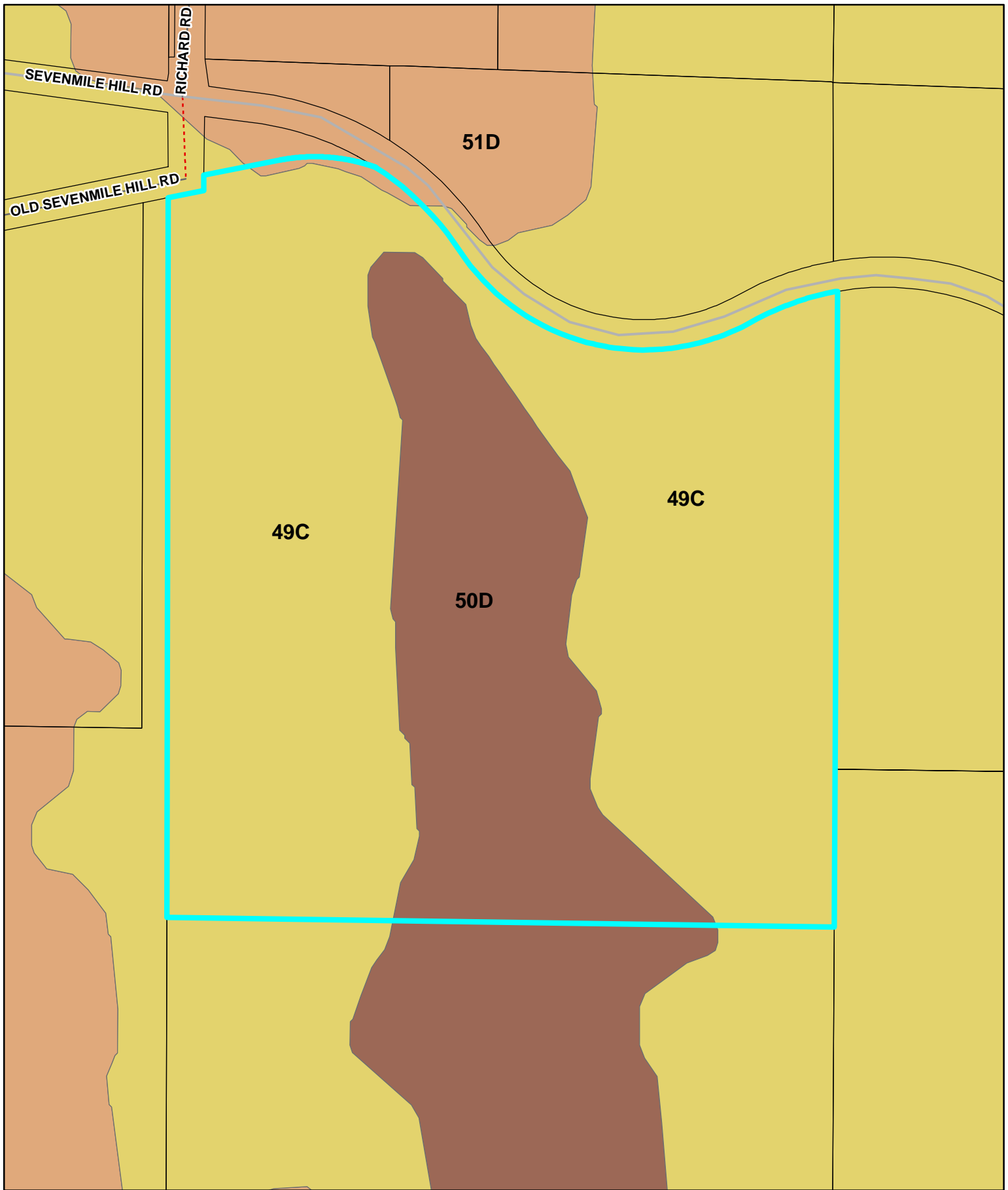
WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.


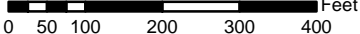
Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982

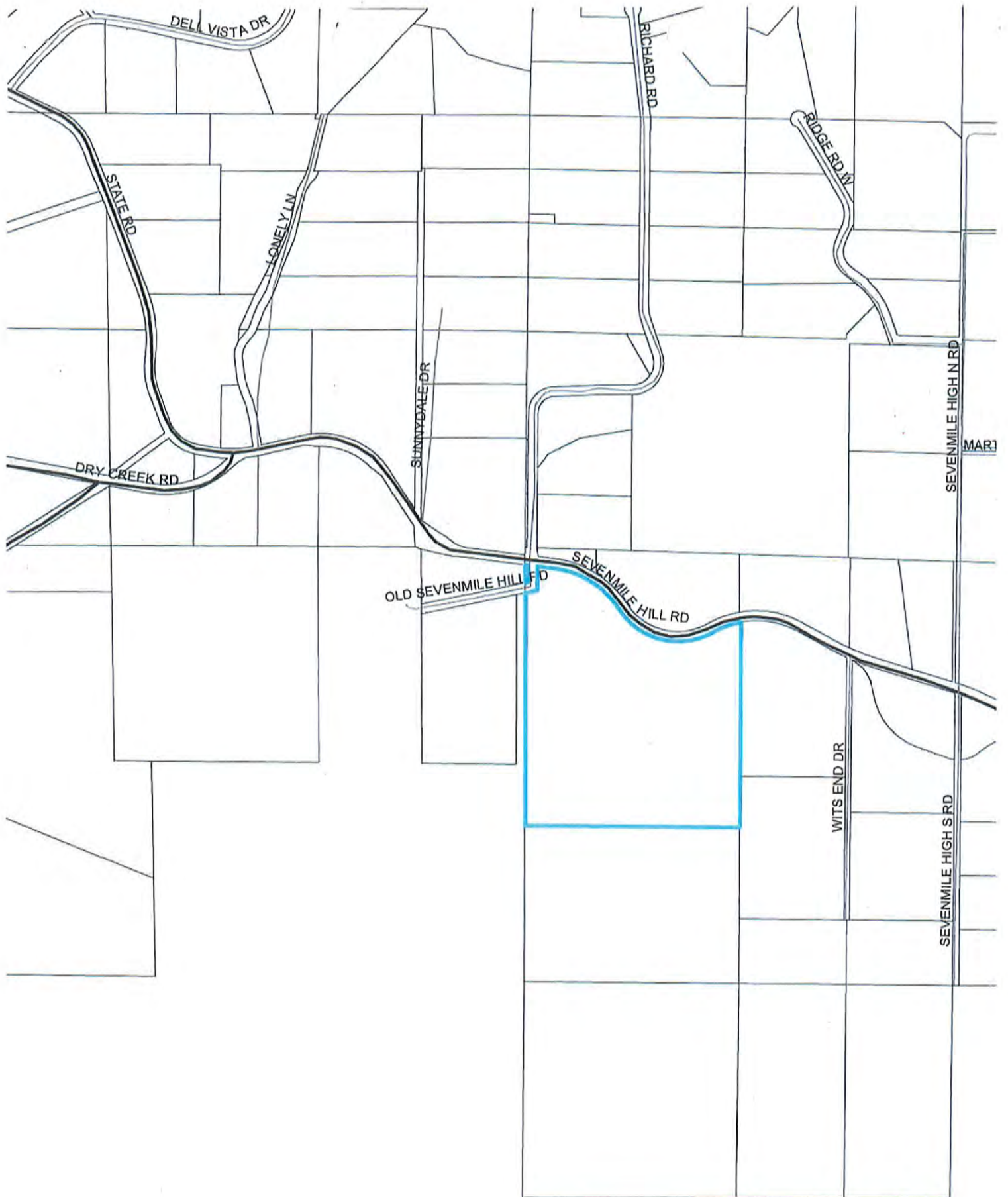


- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

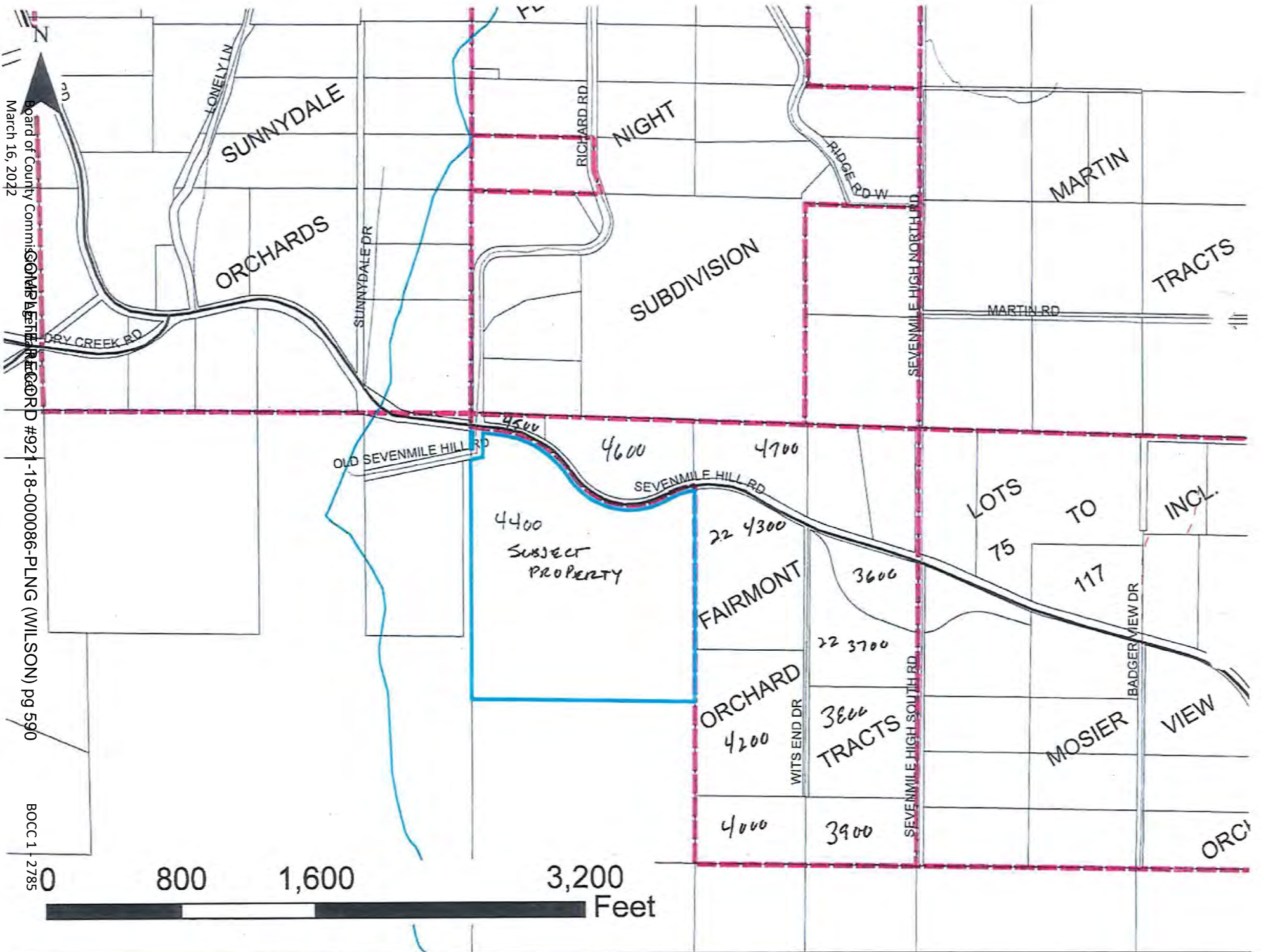
# Soil Map

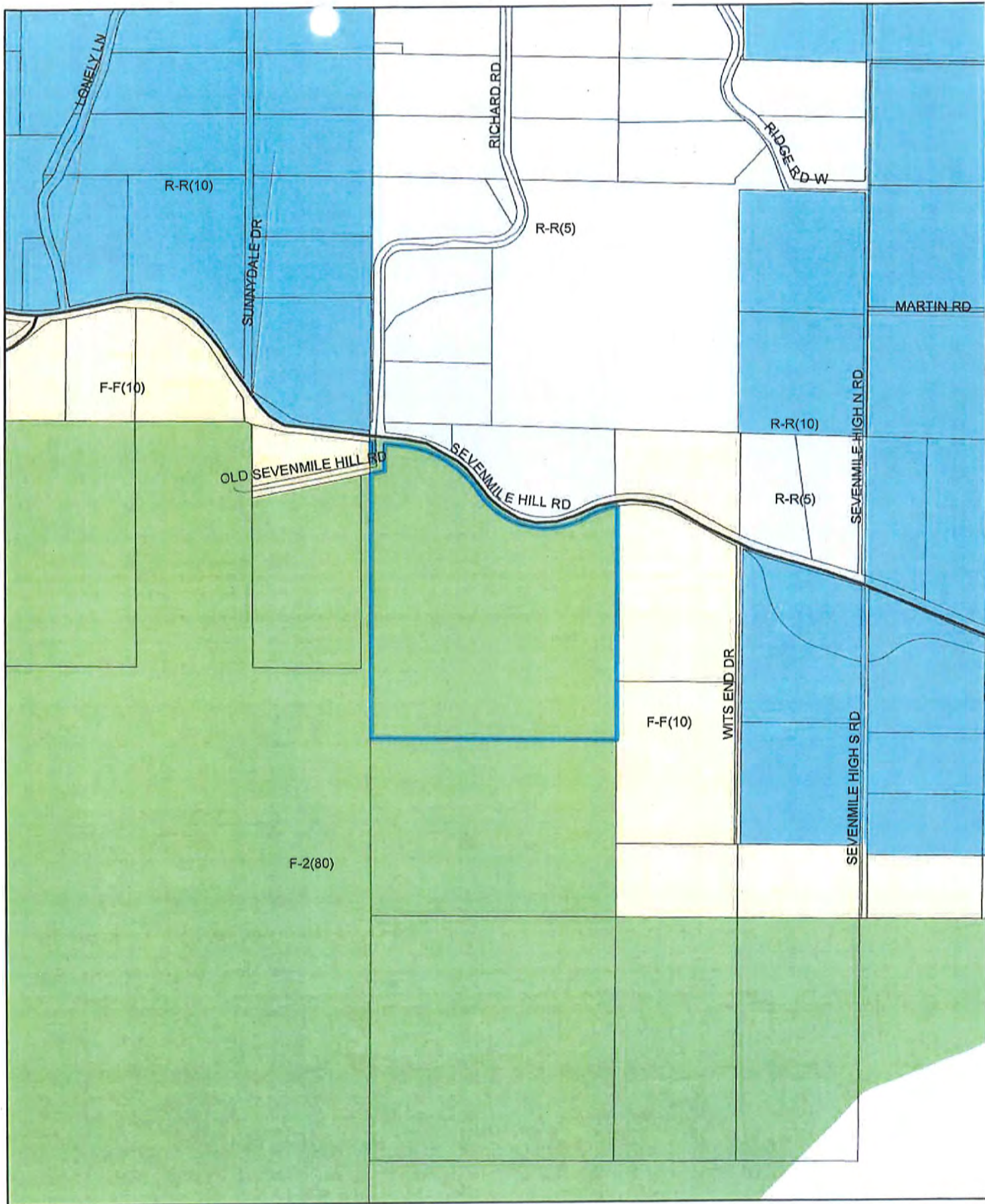



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.









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Board of County Commissioners  
March 16, 2022

COMPLETION RECORD #921018-000086-PLN

015

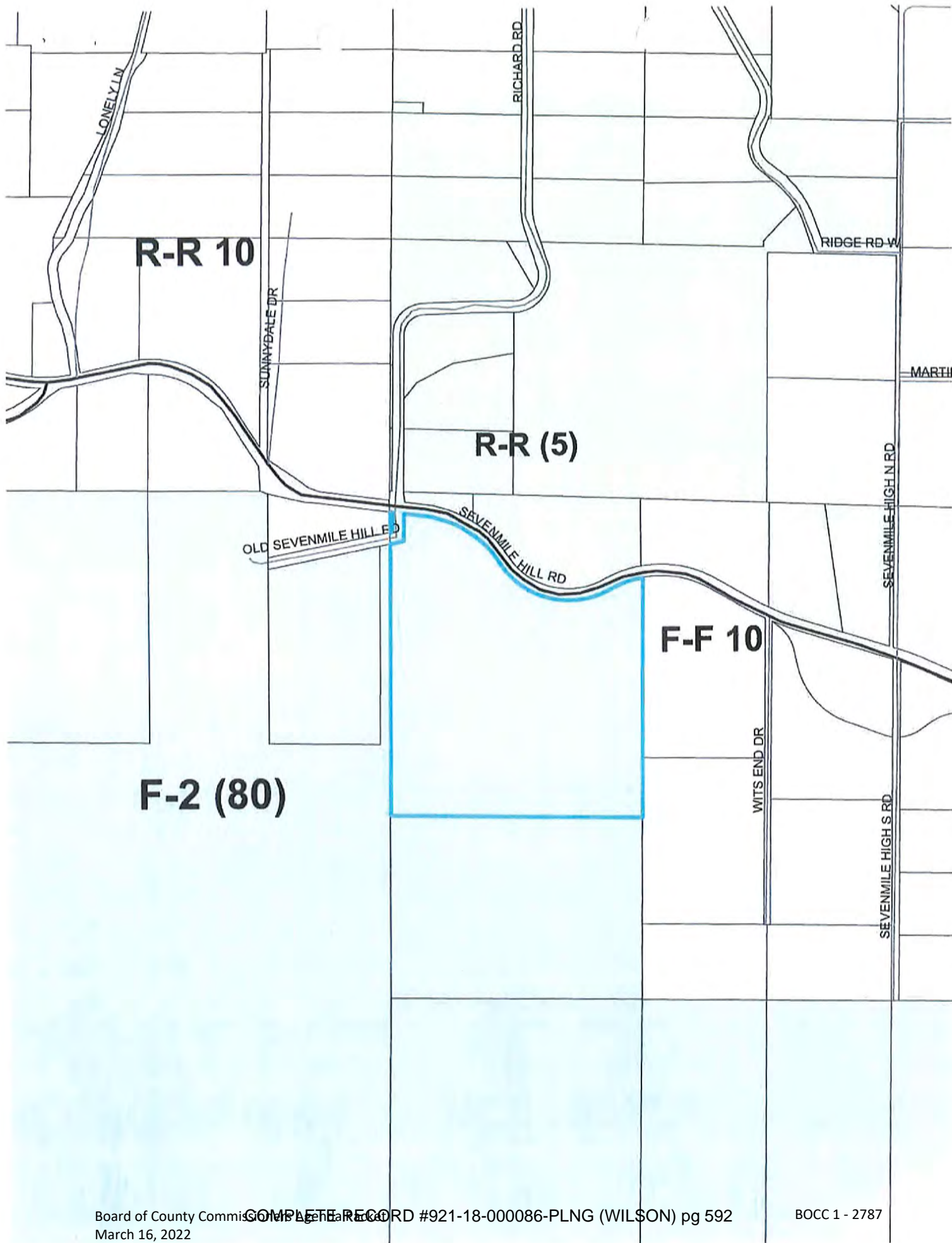
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BOCC 1 - 2786

0.3 Miles

(WILSON) pg 59













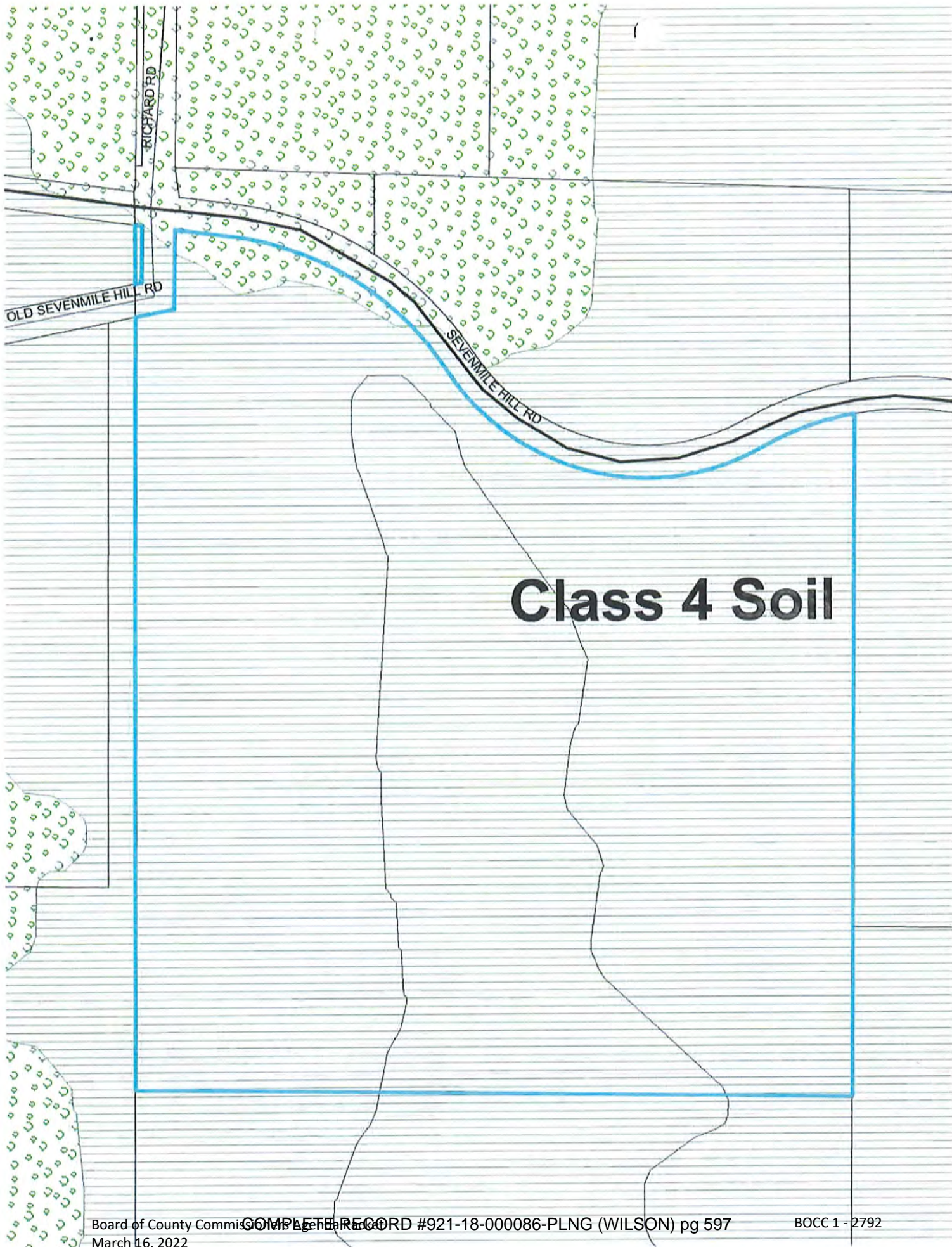




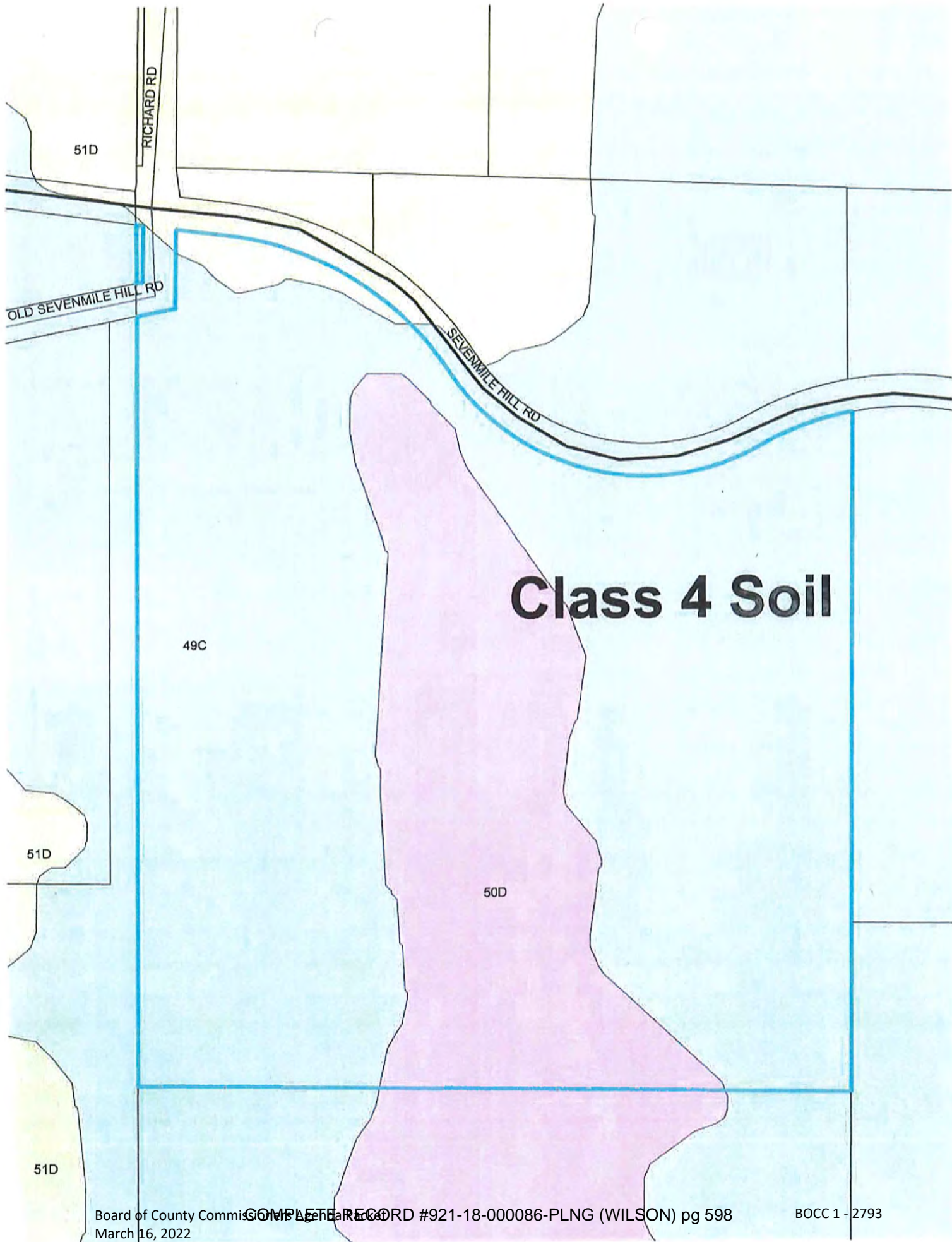




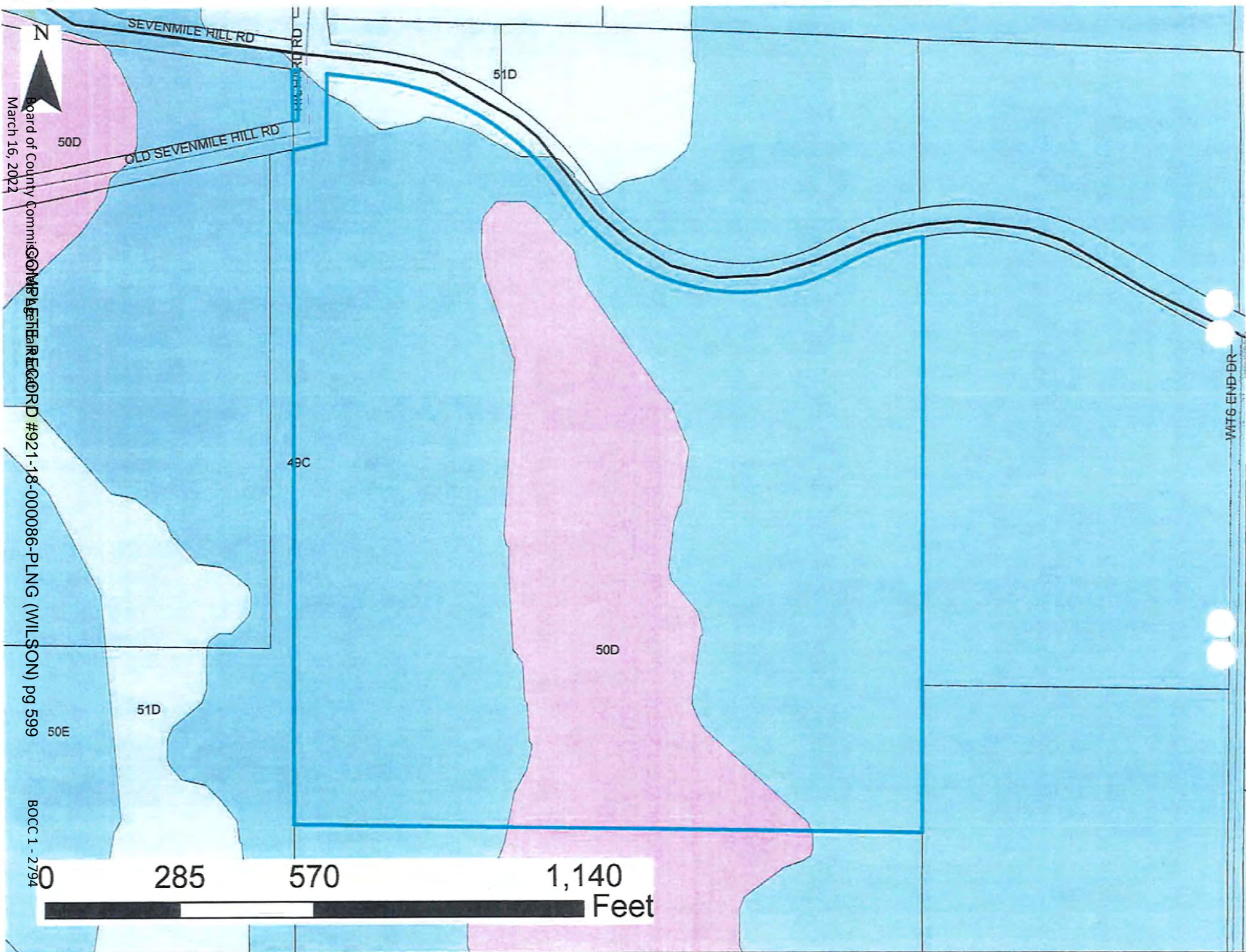












Board of County Commissioners  
March 16, 2022  
COMPLAINT RECORD #921-18-000086-PLNG (WILSON) pg 599

BOCC 1 - 2/794



*Pioneering pathways  
to prosperity.*

**WASCO COUNTY PLANNING COMMISSION HEARING**

**April 2, 2019**

**3:00 p.m.**

**The Columbia Gorge Discovery Center**

**5000 Discovery Drive**

**The Dalles, OR 97058**

**CALL TO ORDER**

**ROLL CALL:**

**Members Present:** Chair Mike Davis; Vice-Chair Chris Schanno (arrived at 3:13); Vicki Ashley; Lynne MacIntyre; Russell Hargrave; Kate Willis; Alternate LeRoy Booth

**Absent Members:** Brad DeHart

**Staff Present:** Planning Director Angie Brewer, Senior Planner Will Smith, Planning Coordinators Brenda Coleman and Jensi Smith

**Chair Davis** opened the hearing at 3:04 p.m.

**Chair Davis** asked for roll call.

**PUBLIC COMMENT:**

**Chair Davis** asked for comments on non-agenda items. There were none.

**APPROVAL OF PAST MINUTES:**

**Chair Davis** called for comments on the Minutes from March 5, 2019.

**Commissioner MacIntyre** motioned to approve the Minutes from March 5, 2019. **Commissioner Ashley** seconded. No other discussion.

**Chair Davis** called for the vote.

**The motion was unanimously approved 6 to 0, 2 absent (Commissioner DeHart; Commissioner Schanno)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis – yes

Alternate Booth – yes

**Chair Davis** asked for comment on the Minutes from March 12, 2019.

Commissioner Ashley moved to accept as submitted Minutes from March 12, 2019. Commissioner MacIntyre seconded. No other discussion.

Chair Davis called for the vote.

The motion was unanimously approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Schanno)

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**REVIEW OF FILE #921-18-000086-PLNG, A REQUEST BY DAVID WILSON FOR A COMPREHENSIVE PLAN AMENDMENT, ZONE CHANGE FROM FOREST, F-2 (80) TO FOREST-FARM F-F (10) AND EXCEPTION TO STATEWIDE PLANNING GOAL 4**

Chair Davis opened the Hearing in the following manner:

**Opening the Hearing**

We will now open the Planning Commission Quasi-Judicial Hearing on agenda item 921-18-000086-PLNG, a request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10).

The property involved is described as Tax Lot 2N 12E 22 4400; account number 884.

The criteria for approval of the land use decisions includes: Chapter 2 (Development Approval Procedures); Review Criteria: Oregon Administrative Rules (OAR) Division 4, Interpretation of Goal 2 Exception Process and Division 6, Goal 4 Forest Lands; Oregon Revised Statute (ORS) 197.732, Goal Exceptions; Wasco County Comprehensive Plan Chapter 11 – Revision Process, Sections A, B, C, E, H, I, and J; and Wasco County Land Use & Development Ordinance (LUDO) Chapter 9 – Ordinance Amendments, Sections 9.010, 9.020, 9.030, 9.0404, 9.050, 9.070, and 9.080.

The proposal must comply with applicable provisions contained in the Wasco County Comprehensive Plan, and State Law. Generally, unless otherwise noted, if a request is found to be consistent with the LUDO it is considered consistent with the Comprehensive Plan.

The procedure I would like to follow is:

- a. Disclosure of Interest, Ex Parte Contact or Potential Conflicts
- b. Reading of the Rules of Evidence
- c. Planning department will present their report
- d. Those who wish to speak in favor of the proposal
- e. Those who wish to speak in opposition of the proposal
- f. Rebuttal
- g. Questions by Planning Commission of staff, proponent, or opponent
- h. Close the hearing and record and begin deliberation (only Planning Commission can talk during this time)

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Planning Commission Hearing

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**Disclosure of Interest, Ex Parte Contact or Potential Conflicts:**

- a. Does any planning commissioner wish to disqualify themselves for any personal or financial interest in this matter? There were none. Does any Planning Commissioner wish to report any significant ex parte or pre-hearing contacts? (Staff contact is not ex parte and does not need to be disclosed.) There were none.
- b. Does any member of the audience wish to challenge the right of any planning commissioner to hear this matter? There were none.
- c. Is there any member of the audience who wishes to question the jurisdiction of this body to act on behalf of Wasco County in this matter? There were none.

**Planning Commissioner Disclosure of Site Visit**

For the record, have any Planning Commissioners conducted a site visit to the subject property? There were none.

**Party Recognition**

Anyone can speak for or against the proposal today. However, only those who have "party" status will be able to appeal a decision reached by this commission.

**A party is defined in Section 1.090 as:**

- a. The applicant and all owners or contract purchasers of record, as shown in the files of the Wasco County Assessor's Office, of the property which is the subject of the application.
- b. All property owners of record, as provided in (a) above, within the notification area, as described in section 2.080 A.2., of the property which is the subject of the application.
- c. A Citizen Advisory Group pursuant to the Citizen Involvement Program approved pursuant to O.R.S. 197.160.
- d. Any affected unit of local government or public district or state or federal agency.
- e. Any other person, or his representative, who is specifically, personally or adversely affected in the subject matter, as determined by the Approving Authority.

If you want party status, please say so at the beginning of your testimony. At the end of the public testimony, the planning commission will deliberate about granting party status to each person who requested it.

**The Rules of Evidence are as follows:**

- a. No person shall present irrelevant, immaterial, or unduly repetitious testimony or evidence.
- b. Evidence received shall be of a quality that reasonable persons rely upon in the conduct of their daily affairs.
- c. Testimony and evidence must be directed toward the criteria applicable to the subject hearing or to criteria that the party believes apply to the decision.
- d. Failure to raise an issue with sufficient specificity may preclude raising it before the Land Use Board of Appeals.
- e. Failure to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow Wasco County to respond to the issue precludes an action for damages in circuit court.

Any party of record may request that the record remain open for at least seven (7) days prior to the conclusion of the initial evidentiary hearing.

Failure of persons to participate in the public hearing, either orally or in writing precludes that person's right of appeal to the Board of Commissioners. Written testimony submitted prior to the hearing constitutes participation in the hearing.

Chair Davis stated Senior Planner Smith would present.

Senior Planner Smith shared his presentation (See Attachments A & B)

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Planning Commission Hearing  
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During his presentation, **Senior Planner Smith** shared a Findings Checklist and sections of the Staff Report to help Commissioners analyze each part of the proposal. (See Attachment C)

During the presentation, **Senior Planner Smith** noted an error on Wasco County LUDO section - 9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. Planning Commission should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed in above sections.

**Senior Planner Smith** summarized: (41:40)

- There is apprehension on one side but there are advantages on the other
- Conducting forestry operations are currently not impractical. Trees could be planted and harvested (Ponderosa Pine).
- More residences would result in the loss of wildlife habitat, but a small impact.
- With increase in residences, it increases the wildlife/urban interface.
- More residences could impact water supply.
- The advantage would be in increase dwellings, as adequate housing is an issue in the County.
- Not in the current recent history has the property been used to harvest forest products so it would not be taking away commercial forest use. It would take the potential away.
- There are economic impacts on housing.

**Senior Planner Smith** asked for questions.

It was asked if this was in the Big Game Overlay. It was established it is in EPD 8, Low Impact area, which is exempt from requirements.

It was noted during the discussion that this property had been involved in a previous request to change zoning, with a settlement of an appeal (in a Legislative action) to have the County look at rezoning in this area. That did not happen for a number of years, and then in 2012 there was a request for 29 new houses on 280 acres. The Staff Report during that time did not have a recommendation. The Planning Commission voted to approve the zone change, but the Board of County Commissioners voted to deny it. There have not been any comments on the current application but it was noted there had been comments on the previous request regarding concerns over fire and water. It was not appealed further and it was resolved with the County's good faith effort to look at it.

It was stated there is currently one residence on this property, but if request is granted, there could be up to four. It was also discussed that it is hard to quantify how much water is available in the area and noted the Water Master has said there was a general concern, with levels dropping every year. It was also discussed that Mosier or Mid-Columbia Fire District would be the ones to respond to a fire, with a substation close to the property.

**Chair Davis** asked for testimony from the applicant or their representative. (54:41)

**Bill Summerfield**, Attorney for the applicant spoke. He shared a visual aid to present and hard copy hand out. (See Attachments D & E) He spoke regarding the water issue. In the findings and conclusions, there is a statement showing there are two wells on the subject property. One produces 50 gallons per minute, one at 60 gallons per minute. The home where the applicant lives has its own well that produces 35 gallons per minute. He feels that the wells that are on the proposed rezoned property will be sufficient to support development, without any new ones added to the aquifers. He references four reports – noting one for when the well was drilled, one for when it was serviced and another is for a second well on the property. He stated that the 50 gallon per minute well is servicing the house located there and the other one is not doing much currently, but is available. He said they would probably do a shared well agreement or some other form of sharing water for the property at such time that development was implemented. A lot of that will be developmental criteria at the time the property would be subdivided.

**Mr. Summerfield** said they are trying to change that one green spot to a purple spot (referencing the map in Attachment B, slide 3). Everything along Sevenmile Hill Road is residential. There is no Resource land that touches Sevenmile Hill Road. He stated they are asking for common sense on this. This is the one parcel that is zoned differently. Having done some research, they haven't found a rhyme or reason to that. The Transitional Lands Study Area (TLSA) didn't touch that property, with no explanation as to why. **Mr. Summerfield** said it makes sense to rezone to keep it with the properties around it, in keeping with the neighborhood. There was a question about water in the TLSA. There is a map in the agenda packet, (PC-125) that show ground water levels in the area. The shared well reports are consistent with the TLSA map showing adequate ground water.

**Mr. Summerfield** said he isn't sure that the prior history of zoning has any relevance. This application stands on its own. The property stands on its own. The applicant was not part of the prior zoning request. They are not trying to implement anything that went on before or be part of any settlement. This is a new and unique application, pertaining to just this one 40 acre parcel.

**Mr. Summerfield** spoke regarding the Criterion. The physically developed and irrevocably committed seem to be very closely related to one another. Regarding the physically developed, he doesn't believe you just inventory what is on the property. You need to take a more holistic view of what is on the property. What does it look like, feel like, how is it being used. There is a log home, possibly a historic home from around the early 1900s. To build (this) home, the log home had to be de-commissioned. It is currently being used as an AG building. **Mr. Summerfield** stated **Mr. Wilson** hopes that someday the log home would be rehabilitated. The house in the meadow area seems to indicate that this area has never been used as forest land. **Mr. Summerfield** stated that **Mr. Wilson** has indicated he has been nurturing some trees for around 20 years and they have not grown very quickly. **Mr. Summerfield** indicated on the map a draw that runs through Ken Thomas's property. He showed a section of the map the **Mr. Wilson** has referenced as to where Eastern Oregon begins. **Mr. Summerfield** indicated on the map where a section is green and does well and another area that seems to be more scrubby. **Mr. Summerfield** showed south of that on the property where **Mr. Wilson** lives is scrubby as well. You don't see the canopy firs and others that you see on the other section.

**Mr. Summerfield** stated that when you look at the physically developed and irrevocably committed, there is the old pioneer house, barn, shed, and other structures. How would you develop that as a wood lot? What would it mean to the other people who live nearby? What would it mean for the other structures? You don't just measure the square footage of the structures; you look at the property as a whole. Doesn't look or feel like a commercial forest property.

**Mr. Summerfield** said he feels the same with the irrevocably committed. If you zoom out and look at the neighborhood. What would a commercial forest operation on Sevenmile look like, in the middle of this residential area? Each dot on the map is a home. It is pretty heavily developed. Those are factors in determining whether something is irrevocably committed. Is it compatible with its neighborhood? There is a sense when you drive down there that it is a rural residential neighborhood. It's not forest land. One of the questions is whether a mistake was made in the Comp Plan. **Mr. Summerfield** said it is hard to say that a mistake was made when you look at that map with one little green parcel that touches Sevenmile. You wonder what that's doing there. Without a stated reason for why it's there, it seems obvious it was either overlooked or ignored or a mistake was made there. **Mr. Summerfield** said that was 20 years ago and it's possible the surrounding neighborhood looked different than it does today. The subject property stands out as an anomaly.

**Mr. Summerfield** said there is a lot of talk in the Staff Report about the need to buffer resource zones from other uses around it. He said the buffer he sees is FF-10. That is what we are asking to do. This would help with the buffer and help resource zones themselves. He stated agreement with most of the green findings in the Staff Report (SR). He feels they are supported with the record in front of them.

**Mr. Summerfield** addressed the fire issue. He said the SR stated that most of the development has been north of Sevenmile, but if you look further out, there is residential development to the south, a lot of subdivisions. He



stated he doesn't feel that is a hugely valid concern. There is a natural fire break with the BPA powerline that runs through there. He doesn't see changing the zone on this property would be a public health, safety or welfare concern.

**Mr. Summerfield** also talked about big game. He feels that has been fixed. He said they looked at it and thought it was a non-issue. He would like to leave the record open to address, if it is an issue. He said other things like transportation, meeting or not meeting other goals are non-issues. If we are not addressing it, there is no conflict. We are hopeful to get a recommendation for a zone change.

**Chair Davis** called for questions. (1:11:00)

During questioning, it was established that **Mr. Wilson** lives on the property behind the subject property. Questions regarding the casing of the wells were brought up, noting if they are not cased they need to be. It was stated they go through multiple aquifers.

The applicant, **Mr. David Wilson** testified. (1:13:12) He stated he was not sure if the wells were cased, as it was before his time on the property. He stated he went to the well master and got copies of what was done there. He stated one is in the ravine by the old log home that provides water to log home and the historic house. **Mr. Wilson** stated the property used to look like a wrecking yard. He stated the motor had been knocked off the well head, the casing and everything went down into the well. This happened since he lived there. They had to pull the casing out, pull the pump out and did a bunch of casing work on the thing. On the well logs, the later dated one shows that they did improvements. He is not sure how far they are cased. **Mr. Wilson** was asked when the last time the wells were tested, where the head is. **Mr. Wilson** state he found out that if work is done on a well now, they have to put in separate PVC in so they can gage it. He said none of his wells have had that, they do not have separate PVC. He stated he is not in the survey. **Mr. Wilson** was asked if he has spoken to the Water Master to assure it is rated for domestic use. **Mr. Wilson** state two houses on one well are allowed. Otherwise a water district must be created. **Mr. Wilson** was asked if he irrigates pasture land. He replied no. He said the lower property well had a 300 horse pump on it at one time. Since then it has been switched out to a regular domestic pump. He found records that date back to the historic house, stating it is very old. He said he had worked to keep it (historic house) from falling in by jacking it up but found he couldn't do anything with it without getting it on its own parcel. He has to subdivide the property to do anything with the historic house.

There were no other questions for the applicant.

**Chair Davis** asked if anyone else wanted to speak in favor. There were none.

**Chair Davis** asked if anyone wished to speak in opposition. (1:17:42)

**Sheila Dooley** introduced herself and said she wanted to address the four concerns stated in the Staff Report. These included conducting forest operations are not currently impractical. She stated she had been involved in the TLSA study. This was not rezoned due to the value as forest land, the property is still capable to use for commercial use. This zoning is not a mistake. Across the road trees have been replanted and are growing. Just because this property has not been replanted for forest use does not make it less valuable as forest land. Looking at the map, there is forest land all around it. Conversion of this property will result in further encroachment of residential use onto Resource zones. Approving this is setting a precedent. The applicant owns an addition 69 acres of forest land. She feels the same arguments on this could be used to rezone that property. When Ken Thomas had applied for rezoning, the Land Conservation and Development Commission (LCDC) had objected because it is good forest land. In the application, the development pattern references the old farm house. The owner decided to build a second house instead of using the farm house. She stated an increase in residences will decrease the amount of wildlife habitat and would increase the wildland/urban interface fire risk. If a fire starts here, it will spread to the adjoining forest lands. She noted it takes 60-80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Department of Forestry. Response time is low due to the terrain and



distance. Fire risk and intensity have increased over the years. The residences increase the fire risk which is related to public safety and welfare in this area. Sevenmile hill was intended as a buffer, with development on one side and forestry on the other. Three new Single Family Dwellings (SFD) would impact available water supply. Water issues are increasing. Ms. Dooley stated a residence just up the road had their well go dry. She referenced information in the SR that the Water Master said the water table has been dropping two feet a year. If it only takes one criteria not being met to deny, she feels the request should be denied. These could be second homes that do nothing for housing shortage. She feels the housing issue should be addressed in incorporated areas with higher density. The fact that it is not currently used for forest land is not relevant.

The Commission did not have any questions for Ms. Dooley.

Jill Barker spoke in opposition to the request. She stated she had many of the same concerns as Ms. Dooley. She stated the property just down the street from the subject property had their well drop 50 feet during the winter. There is a lower water supply in this area. She was involved with the Ken Thomas proposal and there was overwhelming opposition to that from the Forestry Department, Fish & Wildlife, and LCDC. It is common knowledge that area has a dwindling water supply. North of Sevenmile is all small parcels and that is a huge demand on the aquifer. She understood that the subject parcel was part of the earlier Ken Thomas proposal which was denied, with good reason. Big game winter range is included there. The site is not suitable for the proposed reason. Ms. Barker said she believes if there is a fire, the power line isn't going to do anything to be a fire break.

Ms. Barker said it has been noted the soils (4s and 5s) are adequate for commercial forest use. In regards to the old historic farm house, it was being lived in in the 1970s. It wasn't that long ago that was a home. She feels the fire danger isn't if, it is when. She feels there is too much development and too much demand on the water. It is very dry and we are getting less water each year. There is already one house on that property already where it is 80 acre minimum, this one is on 40 acres. Ms. Barker stated that one of the reasons there is development south of Sevenmile is that many of those lots were pre-existing, during the TLSA study. Just left of this property, got a special conditional use to develop it and there was controversy for years. The other properties by Dry Creek Road have been there for years. She stated she was not sure about new development, not sure when they were approved. She feels it is a bad idea, a dangerous idea. The one home is adequate for that property.

There were no questions from the Commission for Ms. Barker.

There were no others to speak in opposition.

Chair Davis asked if the Applicant wish to refute any of the testimony.

Mr. Summerfield spoke regarding the comments related to the Ken Thomas proposal. We haven't had that with this. He feels you could draw inference from that. As to the fire danger, that would be addressed with buffers and such at the Building Permit stage, and adequately addressed elsewhere. The driveway is Dave's and any new development would be served by that driveway. It is very wide, any development would be served off that.

Chair Davis called for questions.

During the question and answer segment it was established the drainage from the homestead goes north. It was stated there may be a spring. It was also established that grass is grown there, with it being baled sometimes. There is no tax exemption; it is believed it is residential.

There was a question regarding the comment that the zoning was not a mistake. Ms. Dooley was asked if she had evidence of that. Ms. Dooley responded that the TLSA study was based on the soil types, the slopes. It looked at a lot of different factors. For clarification, Ms. Dooley was asked if the subject property was unique. Ms. Dooley responded no, it was not rezoned, they could have chosen to rezone it but they didn't.

**Chair Davis** called for further questions. There were none.

**Chair Davis** closed the Hearing at 4:41 pm. (1:37:12)

Deliberation:

**Chair Davis** noted the handouts that staff had given. He stated he would like to use that during the conversation, starting with a straw poll, focusing on critical area. He noted that if one thing is denied, the whole thing must be denied.

Straw poll:

- Commissioner Ashley – opposition to 1, 2 and 17
- Commissioner Willis – Concern with 17
- Alternate Booth – No issues
- Commissioner MacIntyre – No issues
- Commissioner Schanno – No issues
- Chair Davis – No issues
- Commissioner Hargrave had left the meeting

Discussion:

It was noted that for F2 the zoning is one home for 240 acres. This parcel is already smaller than that. There are residential areas with relatively small lots all around when heading up the hill towards this property. If you look around, how does this sit relative to the neighborhood? There are a lot of residences.

It was noted that the error that **Senior Planner Smith** indicated on Wasco County LUDO section - 9.020.A would be resolved during the discussion, deciding if there had been a mistake or not and findings written as such in the recommendation.

The soils classification was discussed with note there had not been any evidence presented that timber could not been grown on this property. It was also stated that just because it could support commercial forestry, does that mean that it should, considering the location and development pattern. The discussion also mentioned that forest practices would have timber harvest equipment and travel on a residential road. Commercial timber harvesting would also increase the fire risk, with the high wind zone. Even with a large fire break but in a high wind area, the fire will jump, crowning from tree to tree. It was noted there would be serious concern if it were a timbered area. There would also be the potential to have noise complaints from residents in the area. In the conversation, it was noted that if the request were granted to FF, trees could still be harvested.

It was stated that if it is approved, the issue of the water would need to be addressed and the wells should be cased. The water table and reduced water availability were noted as concerns.

The aquafer for the area was discussed. **Senior Planner Smith** stated he did not have an Aquafer map so he did not know if the residents there were all on the same aquafer. It was noted that the TLSA map had indicated there were two aquafer, of different types, in the area. The Water Master is quoted in the Staff Report. The amount of water per minute is not something the Planning Department regulates typically. The capacity is not just for household use, but also for irrigation and fire suppression. **Director Brewer** stated the Fire Safety Standards Ordinance does have standards for residential fire suppression and that would be applied at the time of future development. It was also stated that the wells would have to be tested to utilize the water and cased appropriately. It was questioned if the Water Master had expressed concern, is that enough to deny the request. It was stated the Water Master would be the one to determine if another well would be allowed there or if existing wells could be shared. The properties would need to pass a perk test, and if not, it would not be approved for development.

There was discussion about the TLSA report and if it missed or didn't miss this property. The comment was made that all along that line is FF and some of these issues would be addressed when the request is taken to the next level. **Director Brewer** stated the Oregon State Land Use protects Resource Lands over residential uses, so if the

outcome is there would be a negative impact to the residential area, you are actually saying in that context is this area is irrevocably committed to a rural residential use. Therefore it is more appropriate for this part of the county to have more residential use and not commercial. She stated that if that was the consensus, it would help with concerns noted about items #1 & #2.

**Chair Davis** called for a motion.

**Commissioner Schanno** moved to recommend approving the change in zone. **Alternate Booth** seconded.

**Chair Davis** opened for further discussion. (2:01:10)

The discussion included what the criterion is for this property to be irrevocably committed and if it is considered physically developed. This included looking at the use of the parcels by the subject property and what was physically located on the subject property, including the house, structures, and roads to determine if it is physically developed. Soil types were also discussed. **Senior Planner Smith** informed the Commission if there was consensus to affirm these, they could choose physically developed, irrevocably committed or both. It was stated that language could be added to clarify the findings.

There was discussion on what could happen by taking Resource land out and it was noted we are trying to protect Resource land in Wasco County. Once you lose it, it's gone. It was stated the land had been left in that zone for that purpose. It was also noted that the subject property is not isolated.

**Director Brewer** noted that the language for the findings has to stand on its own for this property. The same criteria would have to be used for other future proposals on other property.

**Chair Davis** called for a break. (2:26:44)

**\*\*Break\*\***

**Chair Davis** resumed the Hearing at 5:42pm.

**Chair Davis** stated there is still a motion on the table.

**Commissioner Willis** moved to approve and amend the motion on the table. She moved to change the motion on the table and amend it, on page 13, PC 18 for the commission, in relation to OAR 660 004-0028(2) b and c to clarify the uniqueness of this property because it is surrounded on three sides by residential or potential residential development and its uniqueness in relationship to the surrounding area by being the only F-2 zoning on the Sevenmile Road. A change to the proposed F-F would complete the residential buffer to the resource area.

**Alternate Booth** seconded.

**Chair Davis** noted the motion on the table was to approve the whole thing and there has been an amendment to that motion to make that property very unique.

There was more discussion regarding the language of the amendment noting it was added to make a very tight buffer with this property to prevent creeping of the buffer. The language would just help identify this property as unique. It was also noted that anyone could come in and request a zone change, but they would have to go through the same process. It was stated that this language is to illustrate intent, to show confinement.

**Chair Davis** called for a vote on the amendment to the original motion, noting the language had been written and projected on the screen for everyone to read. **Commissioner Schanno** asked for clarification. **Senior Planner Smith** read out loud to explain the sections. It was stated the language is adding to the findings for B & C.



**The motion was approved 5 to 0; 1 abstention; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

Commissioner DeHart – absent

Commissioner Ashley – abstained

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**Commissioner MacIntyre** stated she thought we were changing the findings. **Commissioner Ashley** stated that she believed that also. **Commissioner Schanno** stated we are adding to the findings.

**Chair Davis** stated the modification to the original motion had been approved. He called for discussion of the motion with the modifications.

**Commissioner Willis** stated the modification was to provide rationale for the findings. It was clarified that it was not taking out the finding that it was developed, but added to it. **Director Brewer** stated there was general consensus.

There was a discussion about what had been identified in the findings regarding 'development'. **Commissioner Ashley** stated she feels it is physically developed more than was indicated, demonstrated by things like the wells, outbuildings, etc.

**Commissioner Ashley** moved that we add additional findings to the approval finding to indicate the further development of the parcel, which includes wells and additional buildings for the physically developed exception finding [OAR 660 004 0025 (2)]. **Commissioner Willis** seconded.

**Commissioner Schanno** noted that most of this is in the Staff Report. **Director Brewer** stated the highlighted areas are conclusions of the larger findings above them. **Senior Planner Smith** stated he did not reference the wells in his findings. **Director Brewer** said the Staff Report consists of the rules that apply, information from the application, staff's findings of facts, and conclusions of law. She stated the requested changes can be made if that is part of the amended motion.

**Commissioner Willis** stated she feels the conclusion should include more of the laundry list of stuff. **Senior Planner Smith** said that could be added.

**Chair Davis** asked for any further discussion on this amendment to the motions. There was none.

**Chair Davis** called for a vote on the amendment to the motion.

**The motion was approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

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Planning Commission Hearing

Minutes

04/02/19

Page 10



Commissioner DeHart – absent  
Commissioner Ashley – yes  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated there has been a motion to approve with two amendments. He called for discussion on the last amendment.

There was a question on where in the process a discussion on item #17 would take place. **Chair Davis** stated this is the time to discuss it and can make a further amendment to the original motion, if desired.

**Commissioner Ashley** stated she wasn't sure that the public safety issues have been addressed. By changing the zoning, have we opened a can a worm for people living in or near forest zones? The number of structures and people involved with that were discussed. The transportation issues, the number of vehicles and response time for emergency services were part of the discussion. It was stated there isn't anything the Commission can do if people go beyond the design parameters. It was also stated there is another process to deal with any proposed dwellings, where there are safeguards in place.

**Chair Davis** called for further discussion. There were none.

**Chair Davis** stated there is a motion with two amendments and called for the vote.

**Chair Davis** called for the vote.

**The motion was approved 5 to 1; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes  
Vice Chair Schanno – yes  
Commissioner Hargrave – absent  
Commissioner DeHart – absent  
Commissioner Ashley – no  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated the vote is to recommend approval with the amended language.

**Chair Davis** adjourned hearing at 6:06 p.m.

  
Mike Davis, Chair  
Wasco County Planning Commission

  
Angie Brewer, Director  
Wasco County Planning & Development

Wilson notes

Criteria and Summary

Public Facilities and Services: General overview

Land Use History: TLSA, Ken Thomas Settlement

STATE LAW

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.732: Exceptions allowed IF Physically Developed, or Irrevocably Committed. Describes process, what to look for. Actual factors addressed in OAR section

\*(1.) OAR 660-004-0025: Exception Requirements for Land Physically Developed to Other Uses: requires describing extent of development on a map, is it "Physically developed to the extent that it is no longer available for uses allowed by the applicable goal"?

- Describe management of small woodlands, soils (49C and 50D), slope, southern parcel of tract assessor information (is successfully managing to meet annual income requirements)

\*(2.) OAR 660-004-0028 (1)-(2): Irrevocably Committed: is it committed? Are existing adjacent uses making uses allowed by the applicable goal impracticable? Discuss FF and RR zones all around, use of land (development %), and relationship to southern parcel.

\*(3.) OAR 660-004-0028(3): Uses allowed by applicable goal are impracticable, specifically Goal 4 uses like forest operations, harvesting of forest products, etc. Describe how adjacent lands in residential use make it unlikely, but adjacent forest lands make it potentially possible. "just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use." Not necessary, but how would it be affected?

\*(4.) OAR 660-004-0028(4): Does the conclusion address all factors of section 6 and sufficiently explain why the facts support the impracticability?

\*(5.) OAR 660-004-0028(5): Do findings and facts discuss irrevocably committed throughout the report?

\*(6.) OAR 660-004-0028(6): Addressing the following factors: existing adjacent uses, existing public facilities and services, parcel size and ownership patterns of the area and adjacent lands, neighborhood

and regional characteristics, natural/man made features, physical development (this one has approval/denial findings)

OAR 660-004-0028(7): Does the submittal include required info? Yes

OAR 660-004-0040: Not applicable, not related to Goal 14 urbanization, not looking to allow parcels smaller than allowed by proposed new zone, any future proposals will have to comply with F-F requirements

OAR 660-004-0118: Planning and Zoning for Exception Areas, Describing area, are uses compatible with nearby resource areas, (NOTE: one semi-denial finding here – may decide to leave this in if relevant), how it relates to nearby urban areas (none) or industrial uses (none)

#### COMPREHENSIVE PLAN

Findings describe who may apply (QJR = landowner),

(factors for consideration, not specific criteria. Denials here are generally related to denials elsewhere. Are they generally satisfied? If not, could be a denial)

H 1,2: Review Goals, does this comply, and does it demonstrate substantial proof that such a change “shall not be detrimental to the spirit and intent of such goals”. \*(8.)

1. Citizen Involvement
2. Land Use Planning
3. Agricultural Lands
4. \*(9.)Forest Lands
5. Open Spaces, Scenic and Historic Areas, and Natural Resources
6. Air, Water, and Land Resources Quality
7. Areas subject to Natural Disasters and Hazards
8. Recreational Needs
9. \*(10.)Economic Development
10. Housing
11. Public Facilities and Services
12. Transportation
13. Energy Conservation
14. Urbanization

\*(11.) H 3: Mistake in original Comp plan can be demonstrated. Did TLSA resolve the mistake, or did it miss this property?

\*(12.) H 4: Factors relating to need for healthy, safe, aesthetic surrounding and conditions. Fire risk increase? Is it significant enough to matter? Does the proposal match the aesthetic of the area?

\*(13.) H 5: Proof of change in the inventories originally developed. Original inventory included this as forest, has since changed (TLSA), but not here. Stop encroachment?

\*(14.) H 6: Revisions based on special studies or other info. Has enough info been provided to justify the stated need for low density housing, for which F-F could be used?

I. Transportation Compliance. Not significant enough to trigger a Traffic Impact Analysis. 29 new ADT would not change functional class of road.

J. Procedures

Application, notification, hearings. Complied.

WC LUDO

9.010 Application presented on forms used as issued by the office.

9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. PC should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed above in sections XYZ?

\*(15.) 9.020.B.1. the rezoning will comply with Comp Plan (related to earlier discussion – it will or it won't depending on what has been decided above)

\*(16.) B.2. site is suitable to proposed zone. LUDO states purpose of F-F: "The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses." But Comp Plan says: "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." These are Class 4. Does it make sense as a residential area considering residential uses nearby?

\*(17.)B.3 consideration of public health, safety, welfare. Fire risk? Water impacts?

9.030 Transportation Planning Rule Compliance: insignificant impact

Rest of Chapter 9 = any additional conditions, recommendations, notice requirements, actions



PLANNING DEPARTMENT



Planning Commission  
Public Hearing  
April 2, 2019

Applicant/Owner: David Wilson  
(921-18-000086-PLNG)

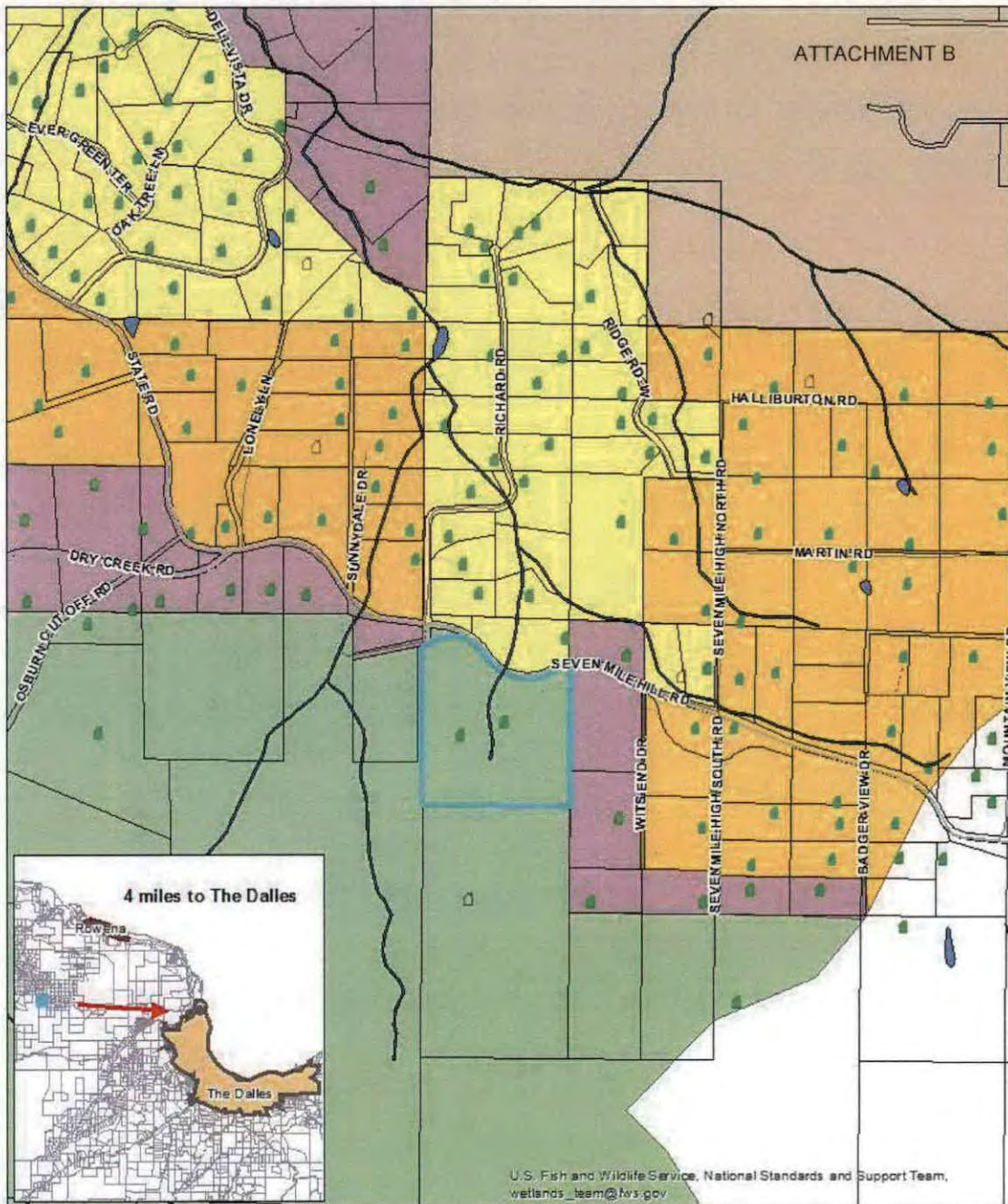


# Request

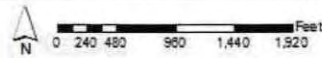
- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm
  - Applicant/Owner: David Wilson
  - Location: 7100 Seven Mile Hill Road
  - Size: @40 acres



# Vicinity Map



- |  |   |   |  |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>A-1(160)</li> <li>F-2(80)</li> <li>F-F(10)</li> </ul> | <ul style="list-style-type: none"> <li>R-R(10)</li> <li>R-R(5)</li> </ul> | <ul style="list-style-type: none"> <li>Riverine</li> <li>Freshwater Pond</li> <li>Unknown Addresses</li> <li>Addresses</li> </ul> | <ul style="list-style-type: none"> <li>Wilson Property</li> <li>Taxlots</li> </ul> |
|--|---|---|--|



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# Staff Recommendation

- Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible.
- Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.



# Format

- Draft Findings in Green (Approval) and Yellow (Denial)
- It only takes one Criterion not being met (Yellow) to recommend denial of the request
  - (Except in the Comp Plan section)
- Today's hearing format recommendation
  - Straw Poll, discussion, identify and focus on differences



# Site Visit Photos






Total Acreage = 40 Acres  
Undeveloped Property = 35 Acres  
Developed property = 5 Acres

Total percentage undeveloped = 87.5%  
Total developed = 12.5%

## Wilson Property



0 40 80 160 240 320 Feet

-  Developed Property
-  Wilson Property
-  Taxlots



ATTACHMENT B

2018/ 6/21



ATTACHMENT B

2018/ 6/21



ATTACHMENT B





ATTACHMENT B



2018/6/21



ATTACHMENT B

2018/ 6/21



ATTACHMENT B

2018/ 6/21





# State Standards Addressed

## Oregon Administrative Rules (OAR)

- OAR 660
  - Division 4 – Interpretation of Goal 2 Exception Process
  - Division 6 – Goal 4 Forest Lands

## Oregon Revised Statute (ORS)

- 197.732 – Goal Exceptions

# County Standards Addressed

ATTACHMENT B

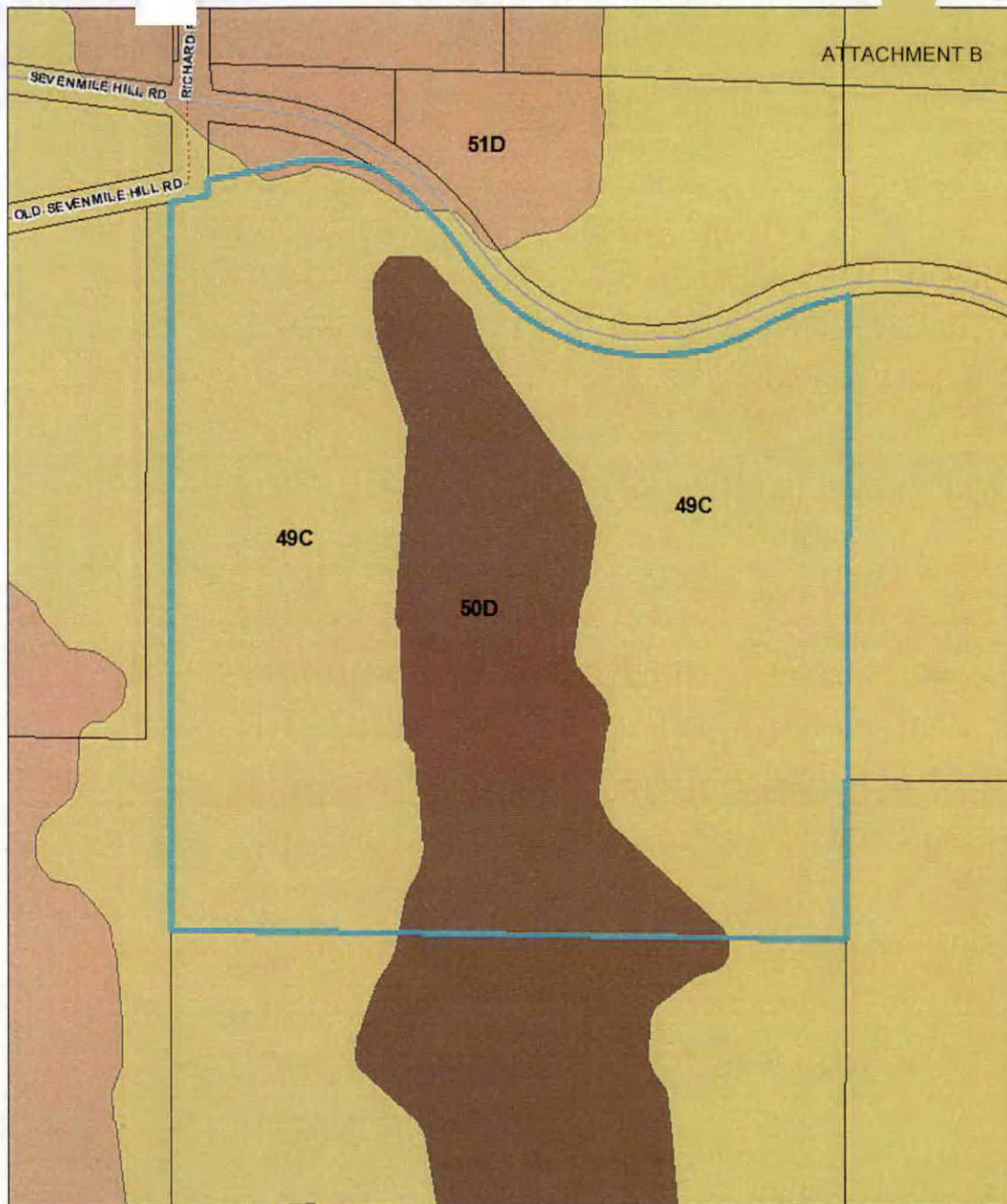
- Comprehensive Plan
  - Chapter 11 - Revisions Process
    - Section A. Intent and Purpose
    - Section B. Form of Comp Plan Amendment
    - Section C. Who May Apply for a Plan Revision
    - Section E. Quasi-Judicial Revisions
    - Section H. General Criteria
    - Section I. Transportation Planning Rule Compliance
    - Section J. Procedure for the Amendment process



# County Standards Addressed (cont.)

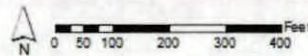
- Wasco County Land Use & Development Ordinance
  - Chapter 9 – Ordinance Amendments
    - Section 9.010 - Application for Zone Change
    - Section 9.020 - Criteria for Decision
    - Section 9.030 - Transportation Planning Rule Compliance
    - Section 9.040 - Conditions Relative to the Approval of a Zone Change
    - Section 9.050 - Amendments to the Zoning Ordinance
    - Section 9.070 - Notice of Planning Commission Recommendation
    - Section 9.080 - Action by County Governing Body

# Soil Map



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property**
- Taxlots**

## Soil Map



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# Staff Comments

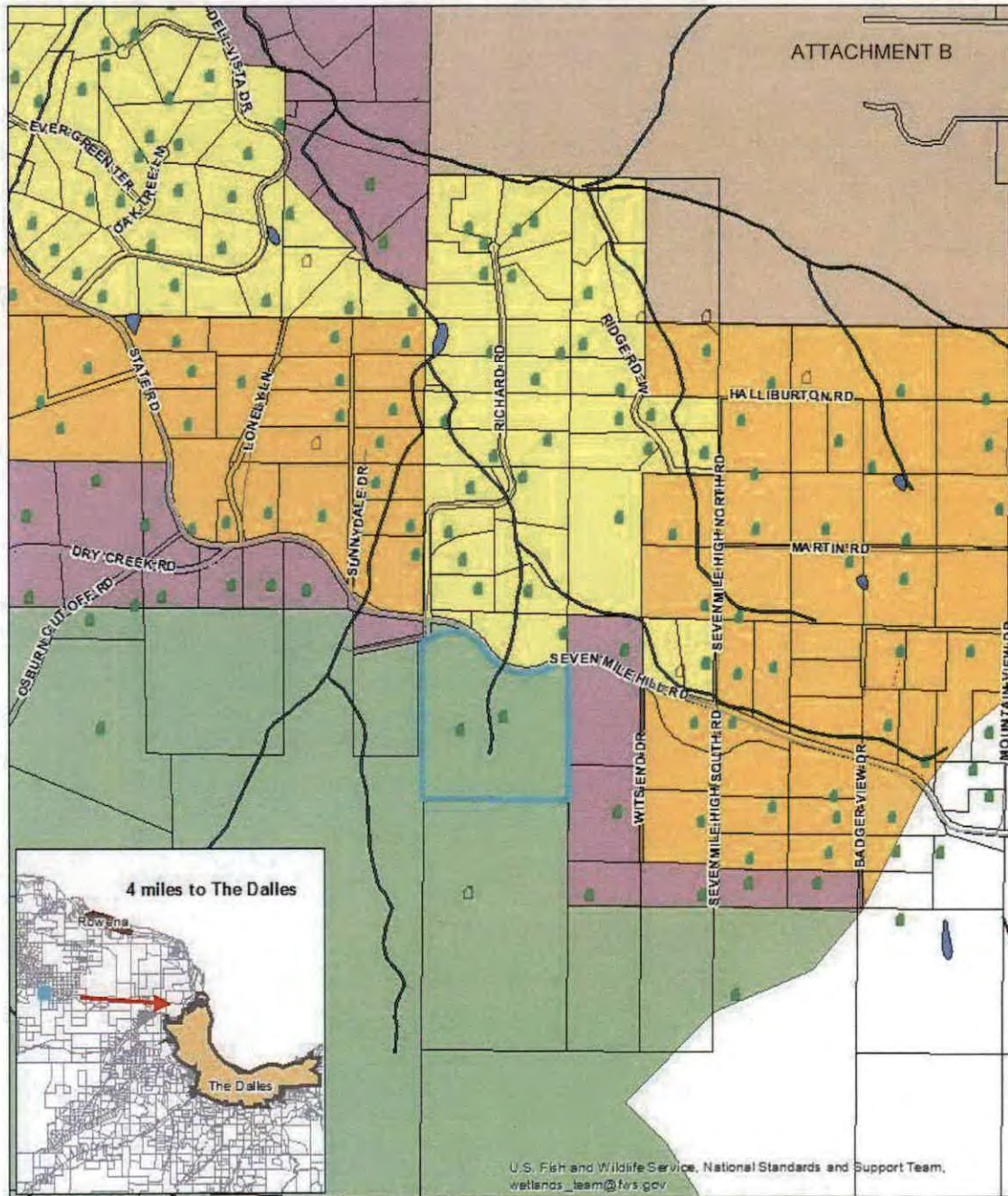
- Apprehensions
  - Conducting forestry operations are not currently impracticable (Goal 4).
  - More residences would result in the loss of more wildlife habitat (Goal 5).
  - The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
  - The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).
- Advantages
  - Three new dwellings will increase rural residential housing supply (Goal 10).
  - On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

# Questions?

- Format?
- Procedure?
- Substance?



# Vicinity Map



- |            |           |                     |                   |
|------------|-----------|---------------------|-------------------|
| ● A-1(160) | ● R-R(10) | ■ Riverine          | ○ Wilson Property |
| ● F-2(80)  | ● R-R(5)  | ■ Freshwater Pond   | ○ Taxlots         |
| ● F-F(10)  |           | □ Unknown Addresses |                   |
|            |           | ● Addresses         |                   |



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**Approval/Denial Findings Checklist**

Packet Page Number	Agree with _____ Interpretation	Notes
1. PC 13 – PC 17	Approval Denial	
2. PC 17 – PC 18	Approval Denial	
3. PC 22 – PC 25	Approval Denial	
4. PC 25	Approval Denial	
5. PC 25	Approval Denial	
6. PC 28	Approval Denial	
7. PC 35	Approval Denial	
8. PC 38*	Approval Denial	
9. PC 38*	Approval Denial	
10. PC 39*	Approval Denial	
11. PC 41 – PC 42	Approval Denial	
12. PC 42	Approval Denial	
13. PC 42	Approval Denial	
14. PC 43	Approval Denial	
15. PC 46	Approval Denial	
16. PC 46 – PC 47	Approval Denial	
17. PC 47 – PC 48	Approval Denial	

\*Comprehensive Plan findings: Factors for consideration, not standards that must be strictly met. They must still show that they can be generally satisfied!



(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

(a) *The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

(b) *The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation—the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

**2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

(1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*

- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of

woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

#### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.



A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

**APPROVAL FINDING:** The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**DENIAL FINDING:** The clustering of the existing house on the western edge, with the 1000' driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640' driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would



be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which, as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a "committed" exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A 'committed exception' is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an 'exception area' is that area for which a 'committed exception' is taken;*

*(c) An 'applicable goal,' as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a 'committed exception' for this property, which is the 'exception area'. The proposed goal exception applies to land in the Forest zone (F-2) and the 'applicable goal' that currently applies to these lands is Goal 4: Forest Lands.

**APPROVAL FINDING:** An exception to remove this parcel from the forest zone and transfer it to a non-resource "Farm-Forest" (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**DENIAL FINDING:** The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal



#4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.

- b. OAR 660-004-0028(2): "Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

(a) *The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

(b) *The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnyside Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and west are resource zones while those to the north and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along its western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(o)."

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including; but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in OAR 660-004-0028(6)(c)(B). The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine "the relationship between the exception area and the lands adjacent to it" when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- "(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.



(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions"

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice," according to Webster's New World Dictionary (2nd College Ed., 1980). "Capable" means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (Unabridged Ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

#### **APPROVAL FINDING**

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. This is caused by the proximity of residential neighbors on three sides, require additional protection to the protection, funding and general control of the area, and prevent the use of site specific resource uses and vegetation that competes with commercial tree species. Further conflict with residential use because of the noise associated with commercial operations and the safety risks of logging near residential property.

The exception area is located in the Forest Zone, and the current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. This is caused by the proximity of residential neighbors on three sides, require additional protection to the protection, funding and general control of the area, and prevent the use of site specific resource uses and vegetation that competes with commercial tree species. Further conflict with residential use because of the noise associated with commercial operations and the safety risks of logging near residential property.

**DENIAL FINDING:** One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation (see discussion earlier).

Based on the current composition of the subject parcel as being predominantly open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber, as discussed in findings above for OAR 660-004-0025. The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres. On the contrary, the state of Oregon, and Wasco County, recognize the ability to have as little as 2 acres of woodlands to qualify to receive tax reductions for forestry uses. The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this parcel could practicably be used for forest uses per OAR 660-004-0028(3).

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."

**FINDING:** All applicable factors of section (6) are addressed below.

**APPROVAL FINDING:** The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

**DENIAL FINDING:** The applicant submitted extensive statements and exhibits explaining their position on why they feel that the facts support the conclusion that uses allowed by Goal 4 are impracticable. However, staff has found these statements and exhibits to be inconclusive in that attempt, with reasons given throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be to not be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:



engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

(f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

(1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*

(2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

**APPROVAL FINDING:** The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

**DENIAL FINDING:** The current home and driveway are clustered against the eastern property line. There are abandoned (potentially historical) structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.

(g) *Other relevant factors;*



The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses, but expanding would conflict with potential resource uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group



**FINDING:** The following findings demonstrate how compliance **is not** achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

**Goal 1 – Citizen Involvement.** The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

**Goal 2 – Land Use Planning.** The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

**Goal 3 – Agricultural Lands.** Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

**Goal 4 – Forest Lands.** Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4.

**APPROVAL FINDING:** The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

**DENIAL FINDING:** Part 2 below outlines how this application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for “built” and/or “committed” exceptions. The proposal does not comply with Goal 4.

**Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources.** The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development



within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation.

**APPROVAL FINDING:** The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

**DENIAL FINDING:** The proposal promotes Goal 9 by allowing residential uses. However Goal 9 would also be promoted by encouraging forestry practices on this parcel, which the County considers to be the appropriate use of the subject property in view of its established zoning and the economic potential of timber and logging that exists, as outlined above in OAR 660 Division 4. The proposal is not consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: “Plans

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

FINDING: Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

~~REDACTED SECTION~~



changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

**DENIAL FINDING:** The TLSA study was extensive in its evaluation of the Sevenmile Hill area, and ultimately concluded not to rezone the subject property, while rezoning others. The soils data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time. The conversion of some properties south of the road to residential uses does not dismiss the need to hold the line somewhere between commercial forestry and single family dwellings. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

**APPROVAL FINDING:** This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

**DENIAL FINDING:** An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.

5. *Proof of change in the inventories originally developed.*

**APPROVAL FINDING:** The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

**DENIAL FINDING:** This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established.



6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

**APPROVAL FINDING:** As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**DENIAL FINDING:** This application attempts to demonstrate that there is a public need for low-density rural residential uses, and for small scale farm and forest uses, in the County generally and in the Sevenmile Hill area specifically. The justification for the particular change is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. However, as discussed throughout the report, staff has determined that not enough information has been provided to support this change. That forestry/residential buffer is important to maintain and to establish this area as residential would erode it further in this area, which has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire. The Commercial Forestry uses established by Goal 4 on this property under its current zoning are also an established public need in this County. Due to the existing potential for this property to still be used in that fashion, it has not been demonstrated or fully justified by this application and its exhibits that there is a public need for the requested change from a resource to a non-resource zone.

#### I. Transportation Planning Rule Compliance

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*



**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. The original zoning was the product of a mistake; or*
- B. It is established that*
  - 1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found **to be to not be** in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be "Forest-Farm." The zone designation, "Forest-Farm," with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

- 2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*"The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses."*



**APPROVAL FINDING:** The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion B.2.

**DENIAL FINDING:** The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used as part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses. The Green Sheets have a category for "Woodland suitability" where it addresses growth. For the two soil types on the subject property, both are listed at "4A", where 4 is the number of cubic meters/hectare/year, and A is "slight or no limitation". Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per acre per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for



development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. **The exhibits and record of this proceeding support a finding of compliance with this requirement.**

However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area is to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:*

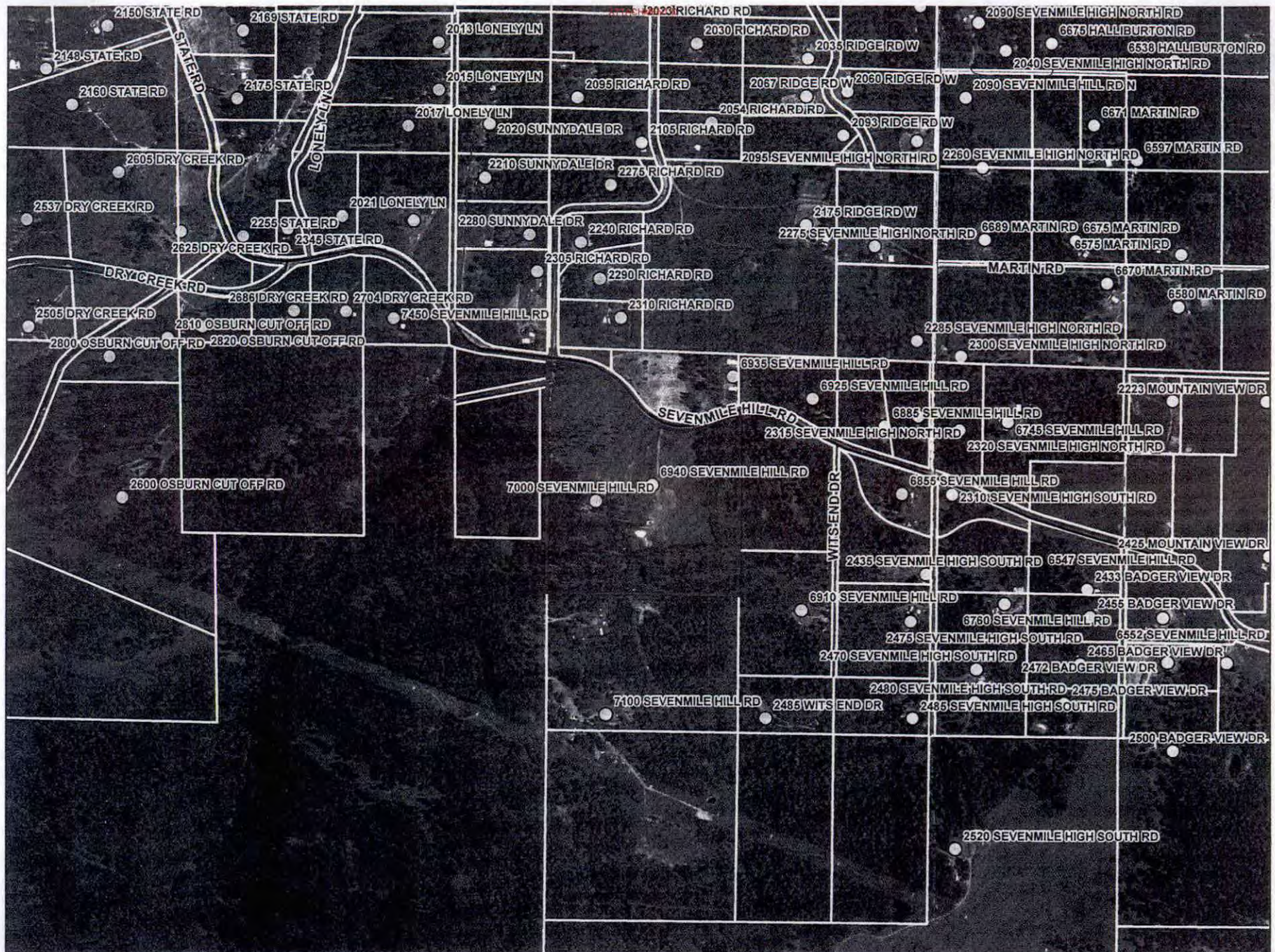
- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):









pg. 35  
4/2/19



rec. 4/2/19  
JS

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLSA study.



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

7000 / H / RECEIVED  
WASCO WATER WELL REPORT  
STATE OF OREGON MAY 28 1974  
003131 (Please type or print) STATE ENGINEER  
SALEM, OREGON

State Well No. 2N/12E-22  
State Permit No.

(1) OWNER:

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒  
6" Diam. from 0 ft. to 41 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

d: gal./min. with ft. drawdown after hrs.

Air  
Ball test 50 gal./min. with 100 ft. drawdown after 9 hrs.

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite - cement  
Well sealed from land surface to 40 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite Yellowstone  
Number of pounds of bentonite per 100 gallons  
of water 65 lbs./100 gals.  
Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.  
Did any strata contain unusable water? ☐ Yes ☒ No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed? ☐ Yes ☒ No Size of gravel:  
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Wasco Driller's well number  
NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.  
Static level 33 ft. below land surface. Date 5-14-74  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt. 1, Box 61-A, The Dalles, Oregon

[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

(USE ADDITIONAL SHEETS IF NECESSARY)

SP\*4566-119



STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Please type or print)

(Do not write above this line)

State Well No. 2N-12E-22

State/Permit No. \_\_\_\_\_

003111

Contractor's License No. 569 Date Oct. 30 1975

SP\*45658-110



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

RECEIVED

APR 20 1987

WVASC  
003105

24/E-22cb

(1) OWNER: Richard J. Murray  
Name: Richard J. Murray  
Address: 2175 Ridge Rd  
City: The Dalles, State Oregon Zip 97058  
Well Number: WATER RESOURCES DEPT.  
SALEM, OREGON

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

BORE HOLE CONSTRUCTION:

Special Construction approval Yes No ☐ Depth of Completed Well 3/20 ft.  
Explosives used ☐ Type Amount

HOLE		SEAL		Amount	
meter	From To	Material	From To	sacks or pounds	
12	0 24	Bentonite	0 24	700#	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other Rodded

Backfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

m	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom No

Did any strata contain water not suitable for intended use? ☒ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Seven Mile Rd

(10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 240		Estimated Flow Rate	SWL
From	To		
230	270	5	
334	350	25 50	150

(12) WELL LOG: Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number 606  
Signed Date 4/17/87

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 4/17/87

WHITE COPIES - WATER RESOURCES DEPARTMENT

YELLOW COPY - CONSTRUCTOR

PINK COPY - CUSTOMER

9809C 10/86



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

ATTACHMENT E

(START CARD) # 21248

(1) OWNER:

Name James Hubbard  
Address 7100 Seven Mile Rd  
City The Dalles State Ore Zip 97058

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 308 ft.

Explosives used ☐ Yes ☒ No Type Amount

HOLE		SEAL		Amount	
Diameter	From To	Material	From To	sacks or pounds	
10	0	Bentonite	0	19	7
6	19			308	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☐ Other Rodded

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
35	100%	308	1 hr.

Temperature of water 58 Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N N or S, Range 12E E or W, WM.  
Section 22 SW 1/4 SW 1/4  
Tax Lot 901 Lot Block Subdivision  
Street Address of Well (or nearest address)  
7100 Seven Mile Rd

(10) STATIC WATER LEVEL:

187 ft. below land surface. Date 29 April  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 274

From	To	Estimated Flow Rate	SWL
274	295	35	187

(12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Soil	0	3	
Sandstone & boulders	3	10	
Basalt gray	10	188	
Rock brown	188	202	
Basalt gray	202	274	
Rock brown visicular WB	274	295	18
Basalt gray	295	308	

RECEIVED

MAY 28 1991

WATER RESOURCES DEPT.  
SALEM, OREGON

Date started 27 April Completed 29 April 1991

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number  
Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 27 May 1991

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT

SECOND COPY - CONSTRUCTOR

THIRD COPY - CUSTOMER

9809C 3/88



# **WASCO COUNTY PLANNING** **COMMISSION AGENDA PACKET**

## **FOR**

Hearing Date: April 2, 2019  
Hearing Time: 3:00 pm  
Hearing Location: The Gorge Discovery Center  
Lower Level Classroom  
5000 Discovery Drive  
The Dalles, Oregon 97058

File #921-18-000086-PLNG - Application for a Comprehensive Plan  
Amendment







**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

*Pioneering pathways to prosperity.*

**MEMORANDUM TABLE OF CONTENTS**

Date: March 26, 2019  
To: Wasco County Planning Commission  
From: Wasco County Planning Office  
Subject: Submittal for Meeting dated April 2, 2019  
Re: #921-18-000086-PLNG – Application for a Comprehensive Plan Amendment

<b><u>Item</u></b>	<b><u>Page</u></b>
Summary of Information	PC - 1
Staff Recommendation and Planning Commission Options (Attachment A)	PC - 2
Maps (Attachment B)	PC - 4
Staff Report	PC - 6
Exhibit 1 – Transition Lands Study Area	PC - 52
Exhibit 2 – Transition Lands Study Area (Memo)	PC - 96
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Exhibit 4 – Transition Lands Study Area Groundwater Study	PC - 110
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Exhibit 6 – Guide for Using Soil Surveys	PC – 160
Exhibit 7 – Soil Map	PC – 188
Exhibit 8 – Submitted Maps	PC – 190





**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

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**SUMMARY OF INFORMATION**  
**Prepared for Planning Commission Hearing**

FILE # 921-18-000086-PLNG

**HEARING DATE:** April 2, 2019

**NEWSPAPER PUBLISH DATE:** March 13, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm";
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**STAFF RECOMMENDATION:**

1. The Planning Commission should accept and weigh public testimony;
2. The Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial.

**APPLICANT/OWNER:** David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY LOCATION:** The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:** F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:** EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Staff Recommendation and Planning Commission Options
- B. Maps
- C. Staff Report
- D. Exhibits



## ATTACHMENT A

### STAFF RECOMMENDATION AND PLANNING COMMISSION OPTIONS

The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the April 2, 2019, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **STAFF RECOMMENDATION**

As noted on the cover page of this document, Staff's recommendation is for the Planning Commission to accept and weigh public testimony, and that the Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial. The reasoning for this broad recommendation is that this is a complex proposal that could have both positive and negative impacts on the land base of Wasco County. In some cases the proposal potentially advances statewide planning goals and policies, and in others it may detract from them. The Planning Commission has a more broad level of discretionary authority to hear the proposal and weigh the positive and negative impacts for a final recommendation to the Board of County Commissioners. The following list briefly outlines staff's apprehensions, and areas of support.

Overall, staff has the following apprehensions regarding the proposal:

- Conducting forestry operations are not currently impracticable (Goal 4).
- More residences would result in the loss of more wildlife habitat (Goal 5).
- The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
- The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).

Additionally staff sees the following advantages:

- Three new dwellings will increase rural residential housing supply (Goal 10).
- On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible. Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.

#### **FORMAT**

This summary and staff report feature several locations where items are highlighted in **GREEN** or **YELLOW**. The green options represent potential Approval Findings, and the yellow options represent potential Denial Findings. The Planning Commission must select one or the other in each instance, or rewrite them to their preference. **It only takes one Criterion not being met to recommend denial of the request.** With the exception of the Comprehensive Plan, Section H. Findings which are factors for consideration, and not criteria which must be met, if the PC upholds the interpretation of ANY yellow Denial finding over a green Approval finding, the recommendation to the Board of Commissioners will be for denial.

## ATTACHMENT A

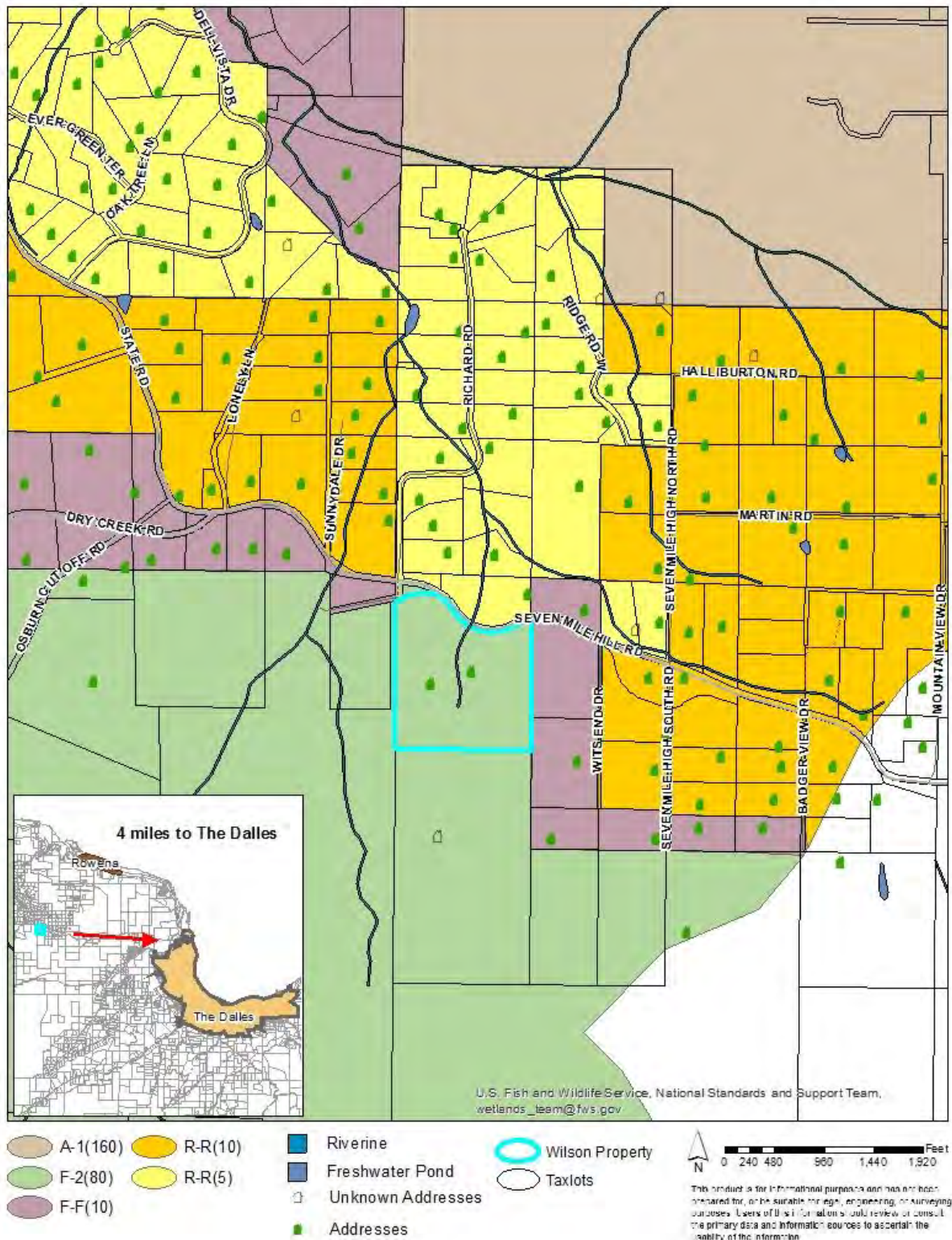
### STAFF RECOMMENDATION AND PLANNING COMMISSION OPTIONS

#### PLANNING COMMISSION OPTIONS

- A. Continuation: Based on testimony and evidence presented at the hearing, continue the hearing for more time to deliberate and/or consider the information provided. Additional testimony may provide specific reasons to support a recommendation of approval or denial.
- B. Continuation: Based on testimony and evidence presented at the hearing, request additional information of staff or the applicant, and keep the record open for additional information to be provided until the next hearing at a date and time certain.
- C. Recommend Approval: Based upon all of the findings of fact and conclusions of law set forth above, the Planning Commission can recommend approval of the exception and zone change with Approval Findings as laid out in the Staff Report with “Approval Finding” language, and recommend that the proposed exception area be rezoned to F-F(10) and that the corresponding plan, map and ordinance changes be made.
- D. Recommend Approval With Modification(s): Approve the request with amended findings of fact and/or new conclusions of law.
- E. Close the Public Hearing, and Continue Deliberation to Work Session: Acknowledge that all required evidence has been presented and heard. Continue deliberations with a scheduled work session to review and edit individual findings before making a final decision.
- F. Recommend Denial: Based upon all of the findings of fact and conclusions of law set forth above, the Planning Commission can recommend denial of the exception and zone change with Denial Findings as laid out in the Staff Report with “Denial Finding” language, and recommend that the Commission deny the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- G. Recommend Denial With Modification(s): Deny the request with amended findings of fact and/or new conclusions of law.

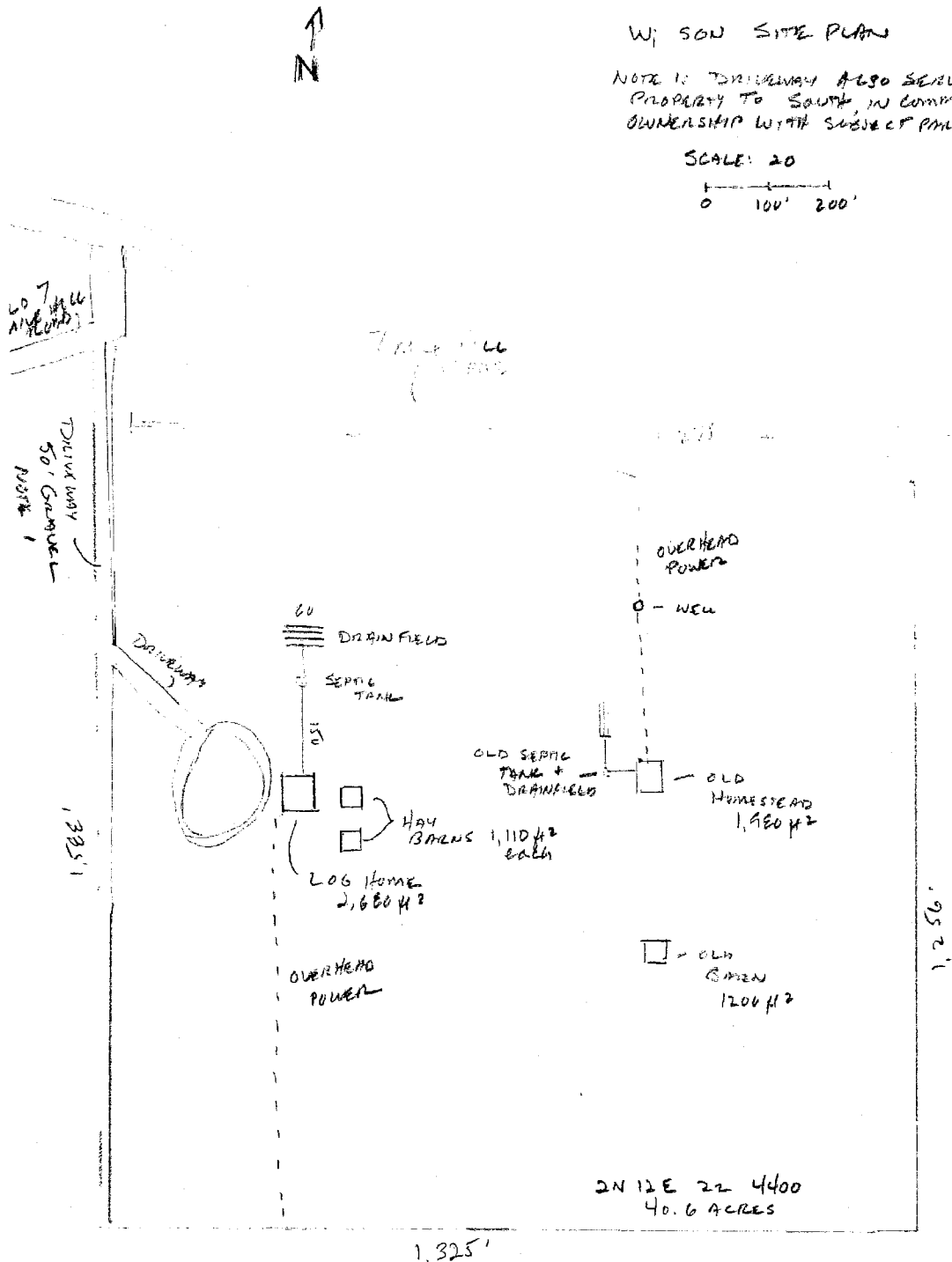
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan





## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Planning Commission

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Staff Recommendation:**

1. The Planning Commission should accept and weigh public Testimony; and
2. The Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial.

**Planning Commission Hearing Date:** April 2, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

PLALEG-13-08-0002 (Rezone)  
PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)  
CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)  
PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)  
PLAPAR-17-05-0002 (Partition and Agricultural Structure)  
PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)

**Property Owners:** The following property is referred to in this submittal as the “subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile

Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).



The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to

low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*\* \* \**

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*\* \* \**

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

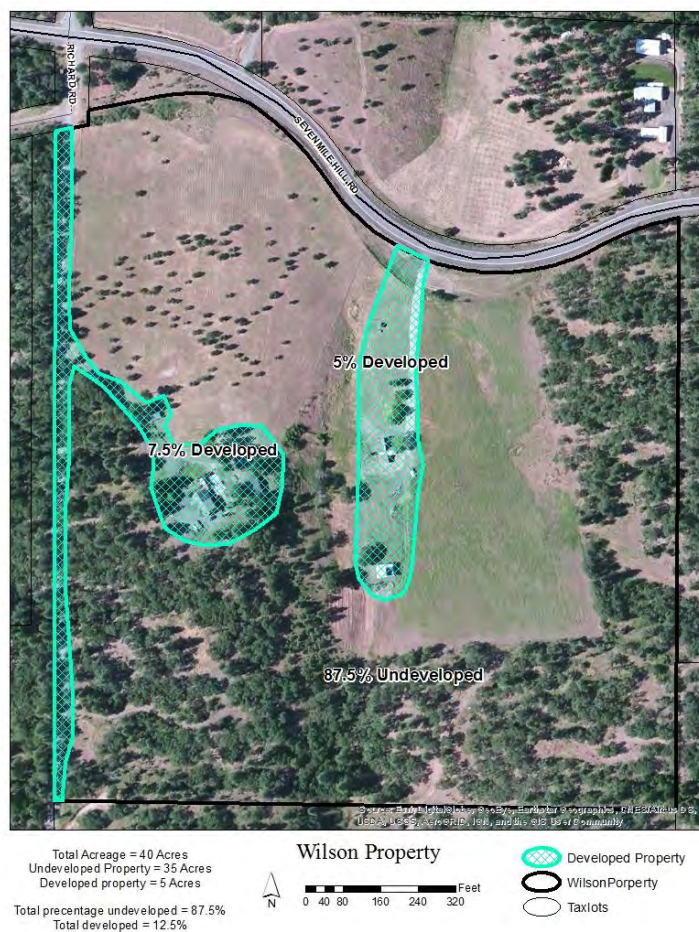
*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*



(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



**Figure 1: Development**

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of

woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

**APPROVAL FINDING:** The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**DENIAL FINDING:** The clustering of the existing house on the western edge, with the 1000' driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640' driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would

be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which, as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

**APPROVAL FINDING:** An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**DENIAL FINDING:** The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal



#4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.

- b. OAR 660-004-0028(2): “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

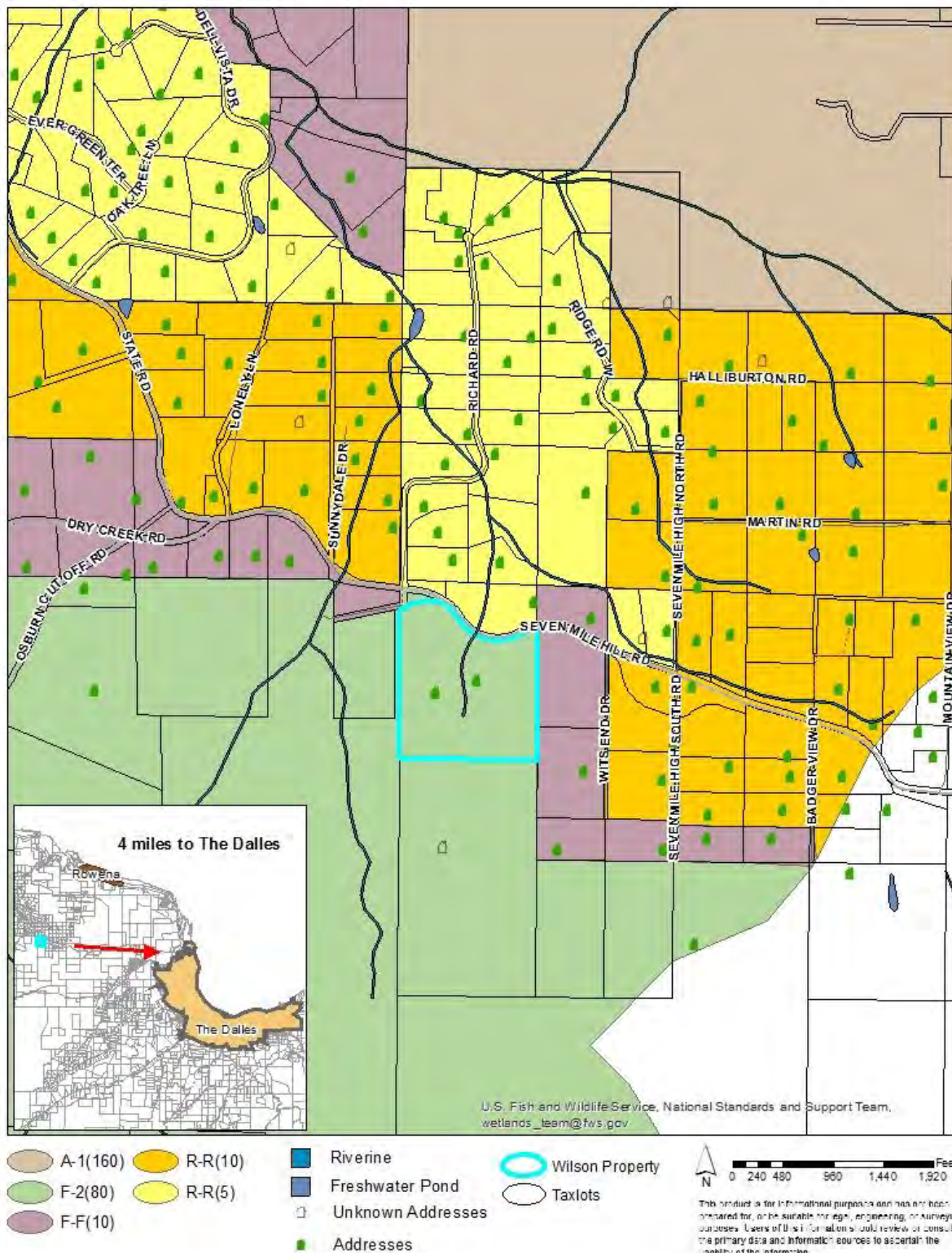


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.



*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and west are resource zones while those to the north and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The “forest products” definition can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.” An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine “*the relationship between the exception area and the lands adjacent to it*” when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those “Uses Authorized in Forest Zones”. An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- “(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

#### APPROVAL FINDING

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

DENIAL FINDING: One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation (see discussion earlier).

Based on the current composition of the subject parcel as being predominantly open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber, as discussed in findings above for OAR 660-004-0025. The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres. On the contrary, the state of Oregon, and Wasco County, recognize the ability to have as little as 2 acres of woodlands to qualify to receive tax reductions for forestry uses. The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this parcel could practicably be used for forest uses per OAR 660-004-0028(3).

- d. *OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below.

APPROVAL FINDING: The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

DENIAL FINDING: The applicant submitted extensive statements and exhibits explaining their position on why they feel that the facts support the conclusion that uses allowed by Goal 4 are impracticable. However, staff has found these statements and exhibits to be inconclusive in that attempt, with reasons given throughout this report.

- e. *OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found **to be to not be** irrevocably committed are discussed throughout this report.

- f. *OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*



*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate*

*ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land's actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property's existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who

engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

(f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

**APPROVAL FINDING:** The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

**DENIAL FINDING:** The current home and driveway are clustered against the eastern property line. There are abandoned (potentially historical) structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.

(g) *Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g. OAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h. OAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

*OAR 660-004-0040 (5) and (6):*

- (5) The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a*



*local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

*(7) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

*(8)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

*(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

*(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

*(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

*(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

*(A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

*(B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

*(C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

*(D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

*(E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco Count LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners' Association formed to maintain common open space and other common improvements." Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

*(f) Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

- (A) The parcel to be divided has two or more permanent habitable dwellings on it;*
- (B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*
- (C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*
- (D) The partition would not create any vacant parcels on which a new dwelling could be established.*
- (E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

- (i) For rural residential areas designated after the effective date of this rule, the affected county shall either:*

- (A) Require that any new lot or parcel have an area of at least ten acres, or*
- (B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"*

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the



event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

OAR 660-004-0118 Planning and Zoning for Exception Areas

*(2) For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

*(a) That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

*(b) That meet the following requirements:*

*(A) The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

*(B) The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses, but expanding would conflict with potential resource uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

“I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done.”

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group

domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### **A. Intent and Purpose**

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

#### **B. A Comprehensive Plan Amendment May Take the Following Forms:**

*(\*\*\*)*

##### **5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)**

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The

existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:  
Comprehensive Plan Revision may be initiated by:*

*(\*\*\*)*

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

*(\*\*\*)*

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

*(\*\*\*)*

*H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*



**FINDING:** The following findings demonstrate how compliance **is is not** achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4.

**APPROVAL FINDING:** The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

**DENIAL FINDING:** Part 2 below outlines how this application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for “built” and/or “committed” exceptions. The proposal does not comply with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development

within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is *“To maintain and improve the quality of the air, water and land resources of the state.”* The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is *“To protect people and property from natural hazards.”* Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is *“To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.”* Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is *“To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.”* The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation.

**APPROVAL FINDING:** The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

**DENIAL FINDING:** The proposal promotes Goal 9 by allowing residential uses. However Goal 9 would also be promoted by encouraging forestry practices on this parcel, which the County considers to be the appropriate use of the subject property in view of its established zoning and the economic potential of timber and logging that exists, as outlined above in OAR 660 Division 4. The proposal is not consistent with Goal 9.

Goal 10 – Housing. Goal 10 is *“To provide for the housing needs of citizens of the state.”* The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans*

*providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TSLA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**APPROVAL FINDING:** To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also recognizes that the character of the neighborhood south of Sevenmile Hill Road has



changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

DENIAL FINDING: The TLSA study was extensive in its evaluation of the Sevenmile Hill area, and ultimately concluded not to rezone the subject property, while rezoning others. The soils data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time. The conversion of some properties south of the road to residential uses does not dismiss the need to hold the line somewhere between commercial forestry and single family dwellings. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

APPROVAL FINDING: This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

DENIAL FINDING: An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.

5. *Proof of change in the inventories originally developed.*

APPROVAL FINDING: The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

DENIAL FINDING: This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established.

6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

**APPROVAL FINDING:** As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**DENIAL FINDING:** This application attempts to demonstrate that there is a public need for low-density rural residential uses, and for small scale farm and forest uses, in the County generally and in the Sevenmile Hill area specifically. The justification for the particular change is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. However, as discussed throughout the report, staff has determined that not enough information has been provided to support this change. That forestry/residential buffer is important to maintain and to establish this area as residential would erode it further in this area, which has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire. The Commercial Forestry uses established by Goal 4 on this property under its current zoning are also an established public need in this County. Due to the existing potential for this property to still be used in that fashion, it has not been demonstrated or fully justified by this application and its exhibits that there is a public need for the requested change from a resource to a non-resource zone.

## **I. Transportation Planning Rule Compliance**

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*

- c. *As measured at the end of the planning period identified in the adopted transportation system plan:*
  - (1) *Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - (2) *Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - (3) *Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
2. *Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
  - a. *Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. *Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. *Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. *Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
3. *Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance."*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

#### **J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

(\*\*\*)

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with these requirements. They were submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing. Criteria 3-5 and all other applicable statutory and local procedures will be followed in consideration of the proposal.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

**Section 9.010 – Application for Zone Change**

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*



**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

*A. The original zoning was the product of a mistake; or*

*B. It is established that*

*1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found **to be to not be** in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

**APPROVAL FINDING:** The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

**DENIAL FINDING:** The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used as part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses. The Green Sheets have a category for "Woodland suitability" where it addresses growth. For the two soil types on the subject property, both are listed at "4A", where 4 is the number of cubic meters/hectare/year, and A is "slight or no limitation". Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per acre per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for

development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area is to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

- A. Special yards and spaces;*
- B. Fences and walls;*
- C. Special parking and/or loading provisions;*
- D. Street dedication and improvements or bonds in lieu of improvements;*
- E. Control of points of vehicular ingress and egress;*



*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

**FINDING:** Staff is aware of this Criterion and intends to comply.

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**FINDING:** Staff is aware of this Criterion and intends to comply.

*Section 9.080 - Action by County Governing Body*

*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** This Criterion will be met.

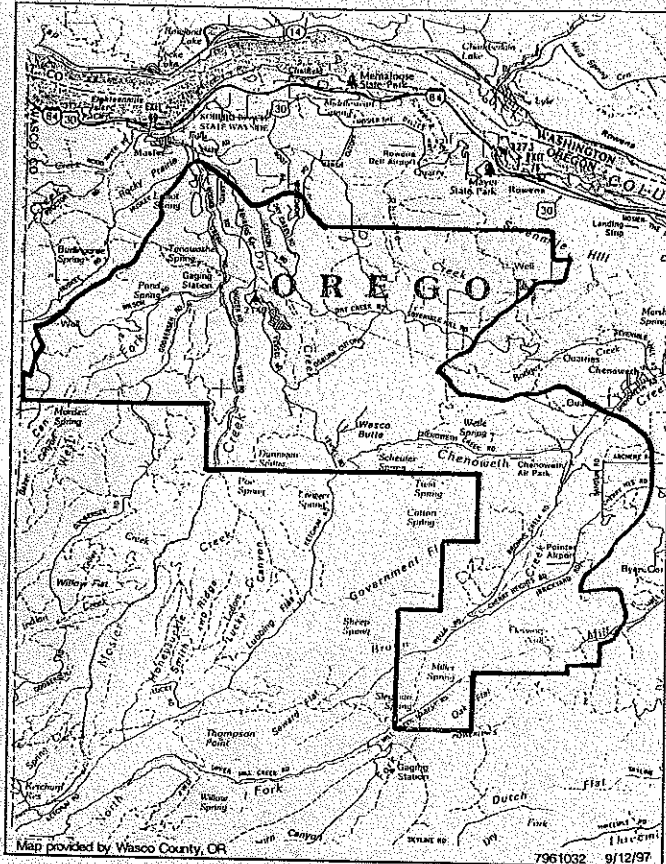
**EXHIBIT 1**

**Transition Lands Study Area**

**(Full Report)**

2044

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**



# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
2705 East 2<sup>nd</sup> Street  
The Dalles, Oregon 97058

**Prepared by**

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**In cooperation with**

Suzanne Rock  
**Northwest Economic Associates**

**September 12, 1997**

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- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
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## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.

## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

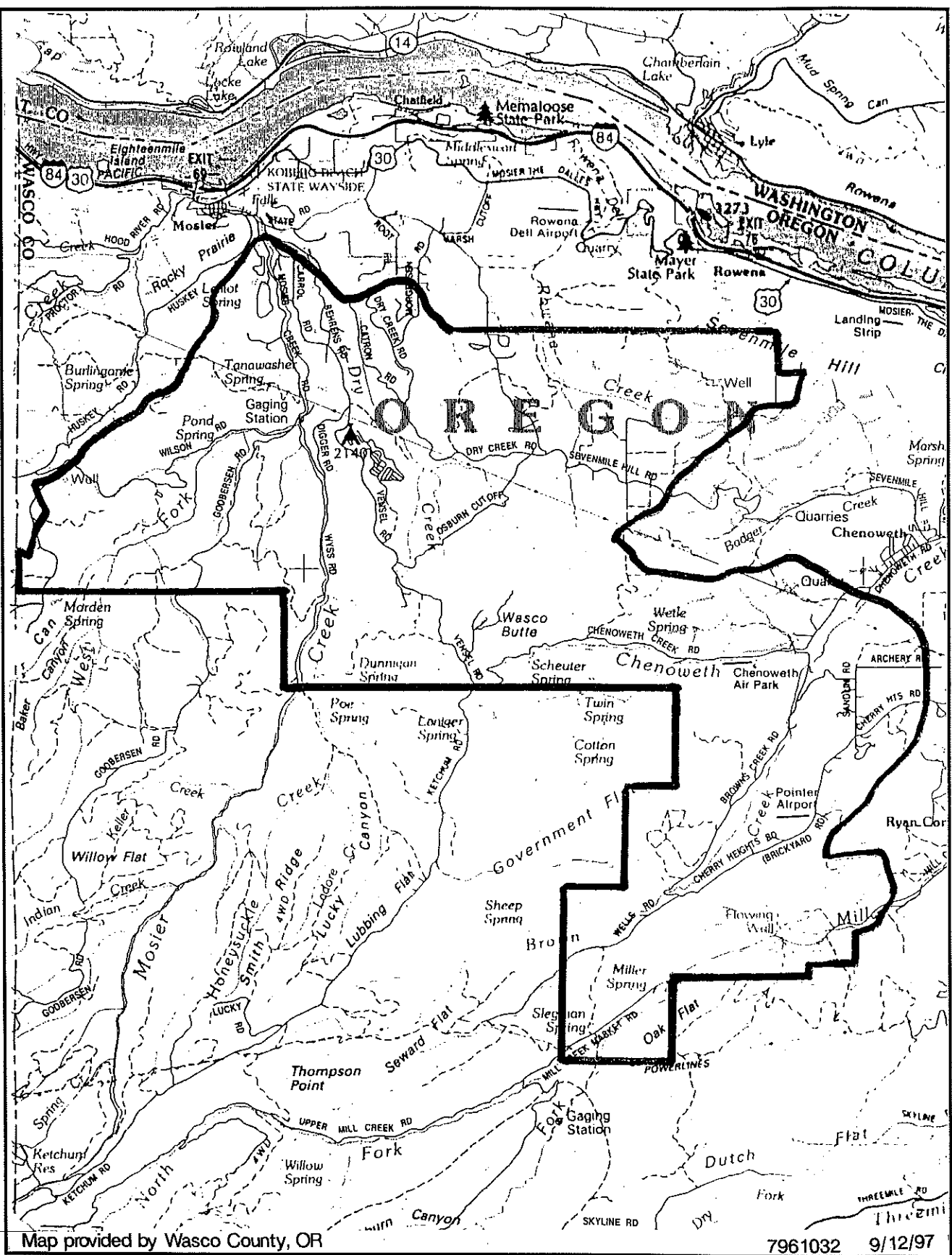
### **1.2 Purpose**

#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



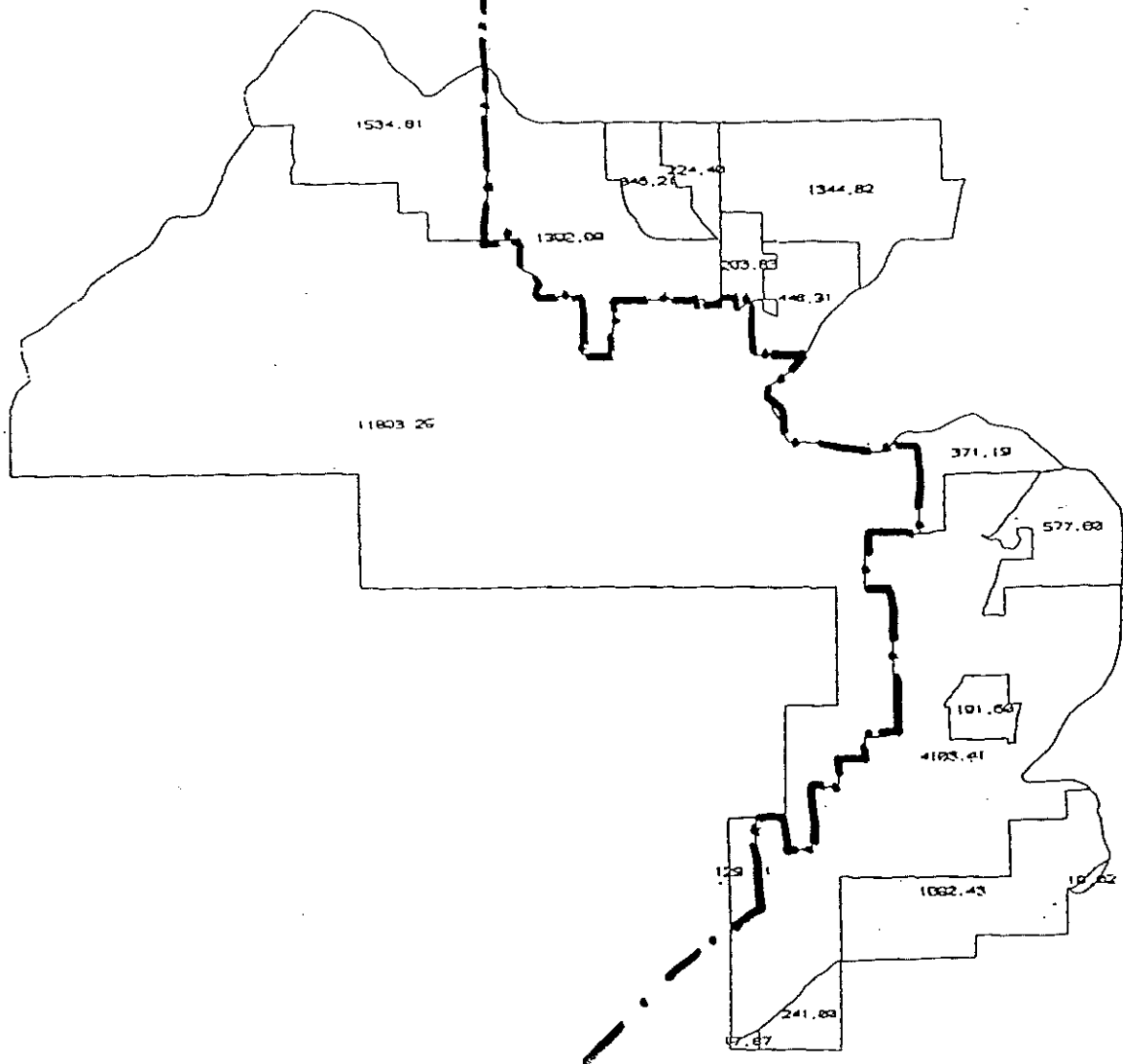
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.2 : ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. : RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

7961032 9/12/97

Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?  
What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.

9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,



evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

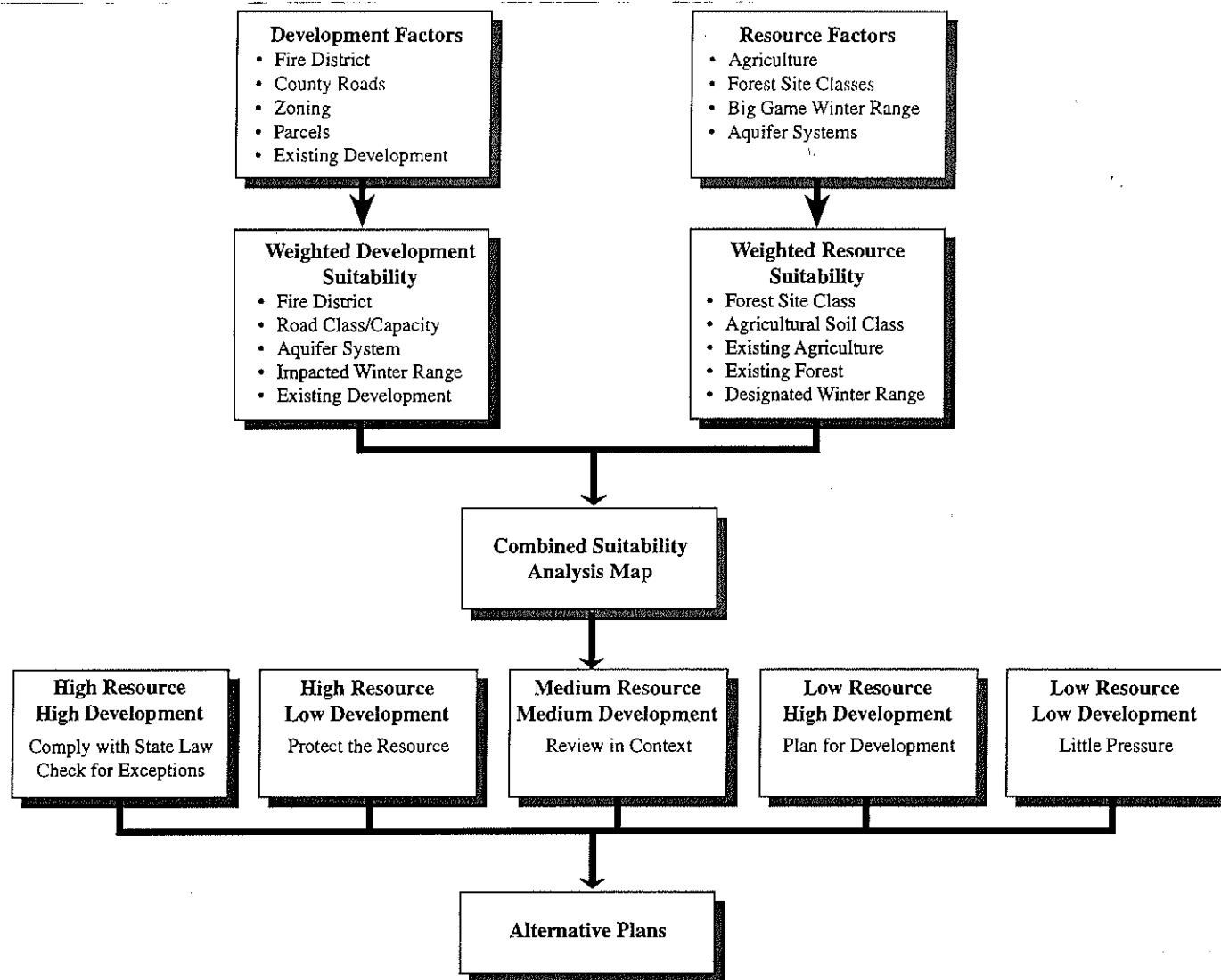
The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems



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Wasco County Transition Lands Study Area  
 Simplified Flow Diagram

FIGURE  
 4

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning	Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))
Existing Ag (Field&Perennial)	Existing registered field and perennial crops
Ag Soil Classes	High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)
Parcels	Parcel boundaries/ownership

Zoning	Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))
Forest Site Classes	Forest Site Classes 4, 5, 6, and 7
Soils	Soil classes
Parcels	Parcel boundaries/Ownership/Centerpoints

ANALYSIS MAPS

Agricultural Suitability Weighted Values	Soil Class: High Value (Class 1-2) = 2 pt. Class 3 - 6 = 2 pt. Existing Agriculture = 1 pt.
--	--

Forest Suitability Weighted Values	Forest Site Class (Predominantly): Class 6 = 1 pt. Class 5 = 2 pt. Class 4 = 3 pt. Existing Forest Use ≥ 80 ac. in F-2 (80) zone = 1 pt.
------------------------------------	---

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 3: Big Game Winter Range Availability

## 4: Fire Districts/Response Time

SOURCE MAPS

Big Game Winter Range	Big Game Winter Range boundary from Comprehensive Plan
Impacted Winter Range	Impacted winter range inventory from ODFW
Low Elevation Winter Range	Low elevation winter range inventory from ODFW
Rivers and Streams	Surface water features coverage

Fire Hazard	Extreme and High fire hazard
Fire Districts	Wasco County Rural Fire District (RFD) boundaries Mosier RFD Oregon Department of Forestry
Response Time	Fire response time (in minutes) by section and Wasco Co. RFD

ANALYSIS MAPS

Big Game Winter Range	1 pt.
-----------------------	-------

Fire District Coverage	1 pt.
------------------------	-------

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
--

Development Values Weighted Compositions
--

Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)
--

CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
 Revised "Recipe" Diagram

FIGURE  
5b



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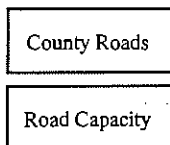


# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

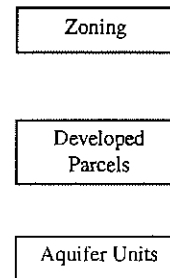


Roads in TLSA

Remaining Capacity on County Roads Using Wasco

County Road Classifications:

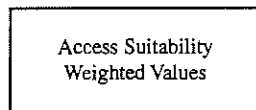
- Class I < 25 Average Daily Traffic (ADT) - 18' Gravel
- Class II ADT (25 - 250) - 22' Paved, 26' Roadway
- Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway



Zoning

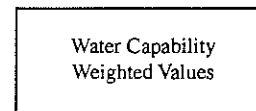
Existing Developed (house)

ANALYSIS  
MAPS



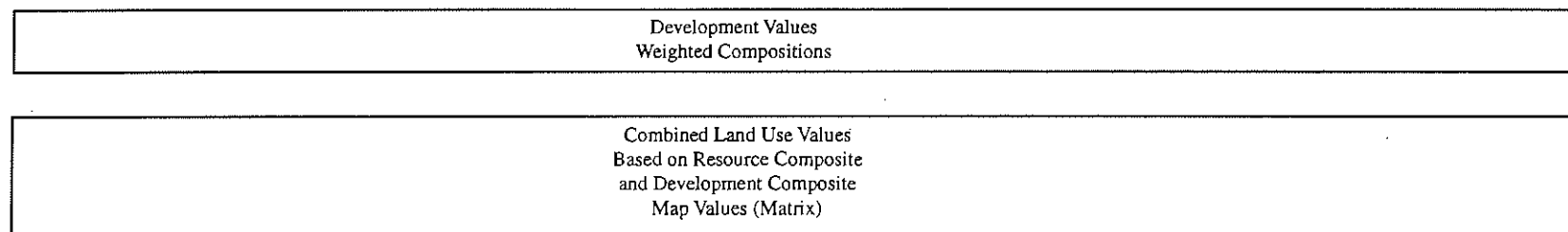
Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.

Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.



"Green" Aquifer<sup>†</sup> = 2 pt.  
"Yellow" Aquifer<sup>\*\*</sup> = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2



<sup>†</sup> Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level.  
<sup>\*\*</sup> Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

CONTINUED ON FIGURE 5d

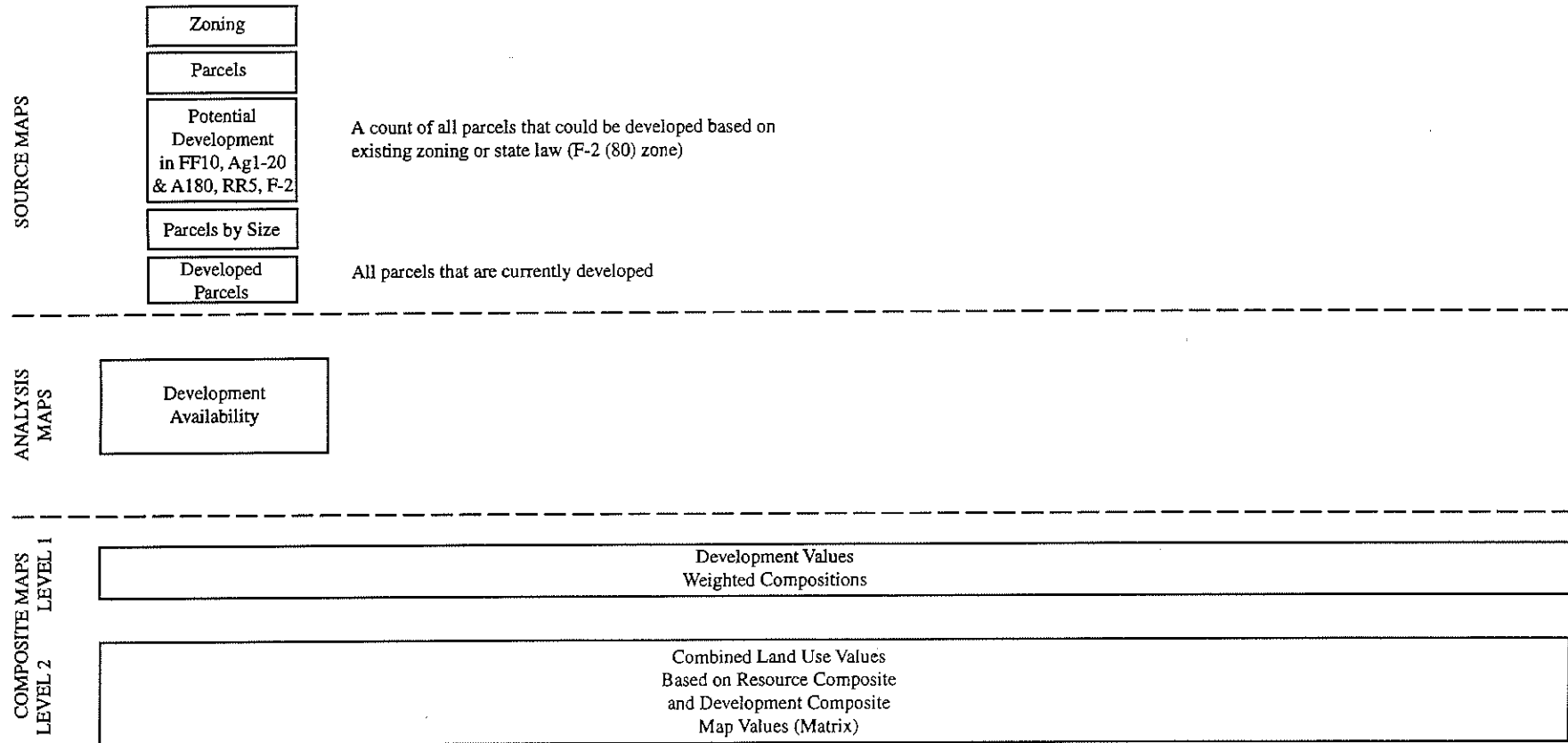
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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

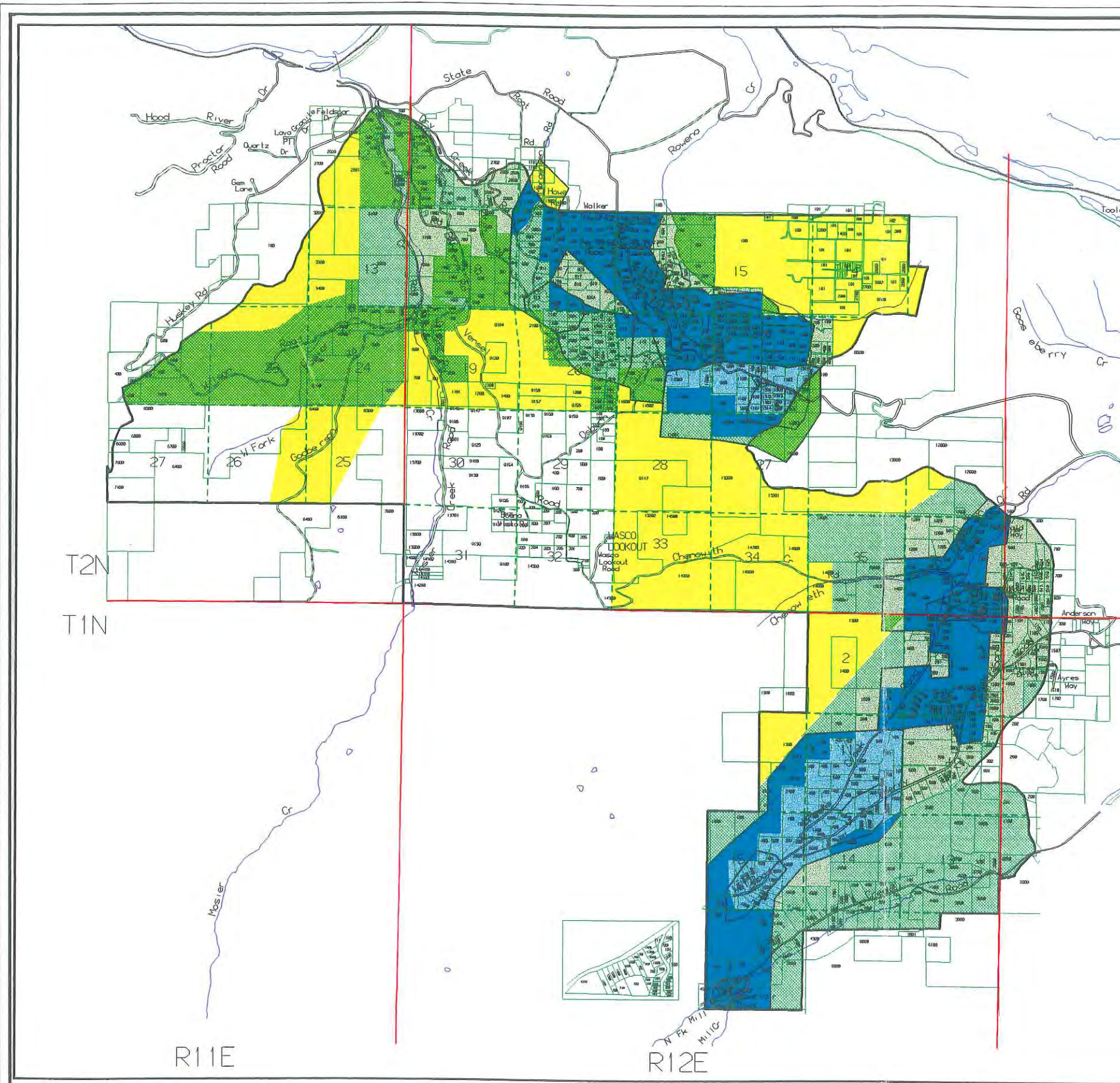
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

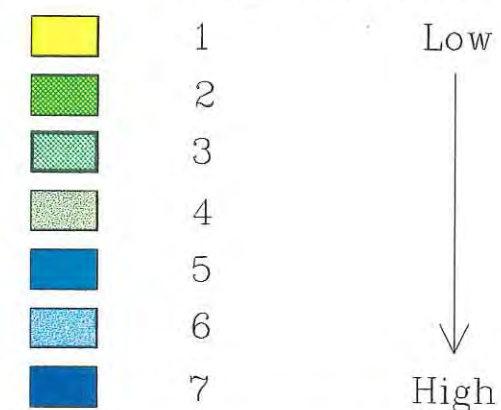




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining = 2 points

Class I With 75% Capacity Remaining = 1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



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WASCO COUNTY  
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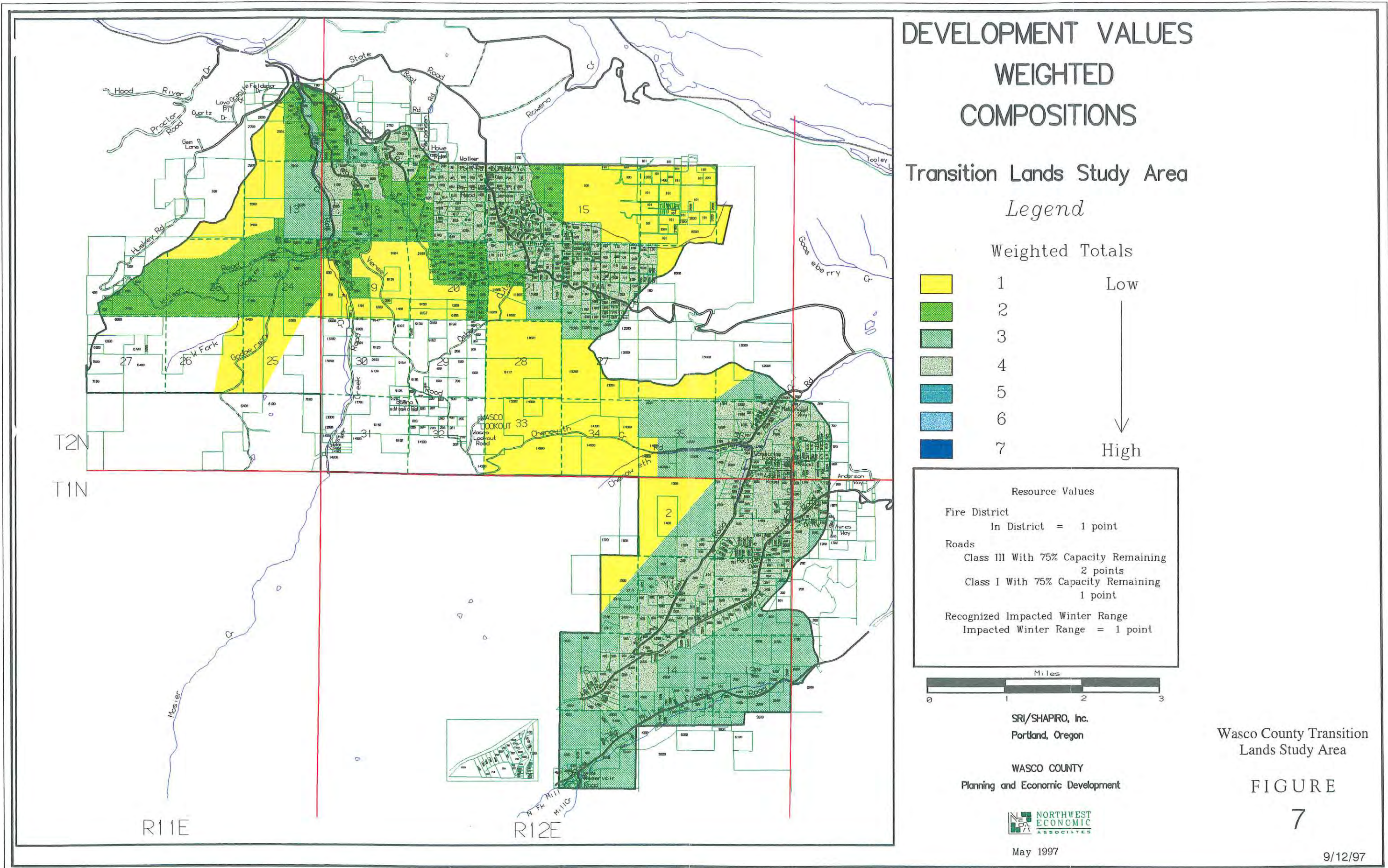
May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
6

9/12/97



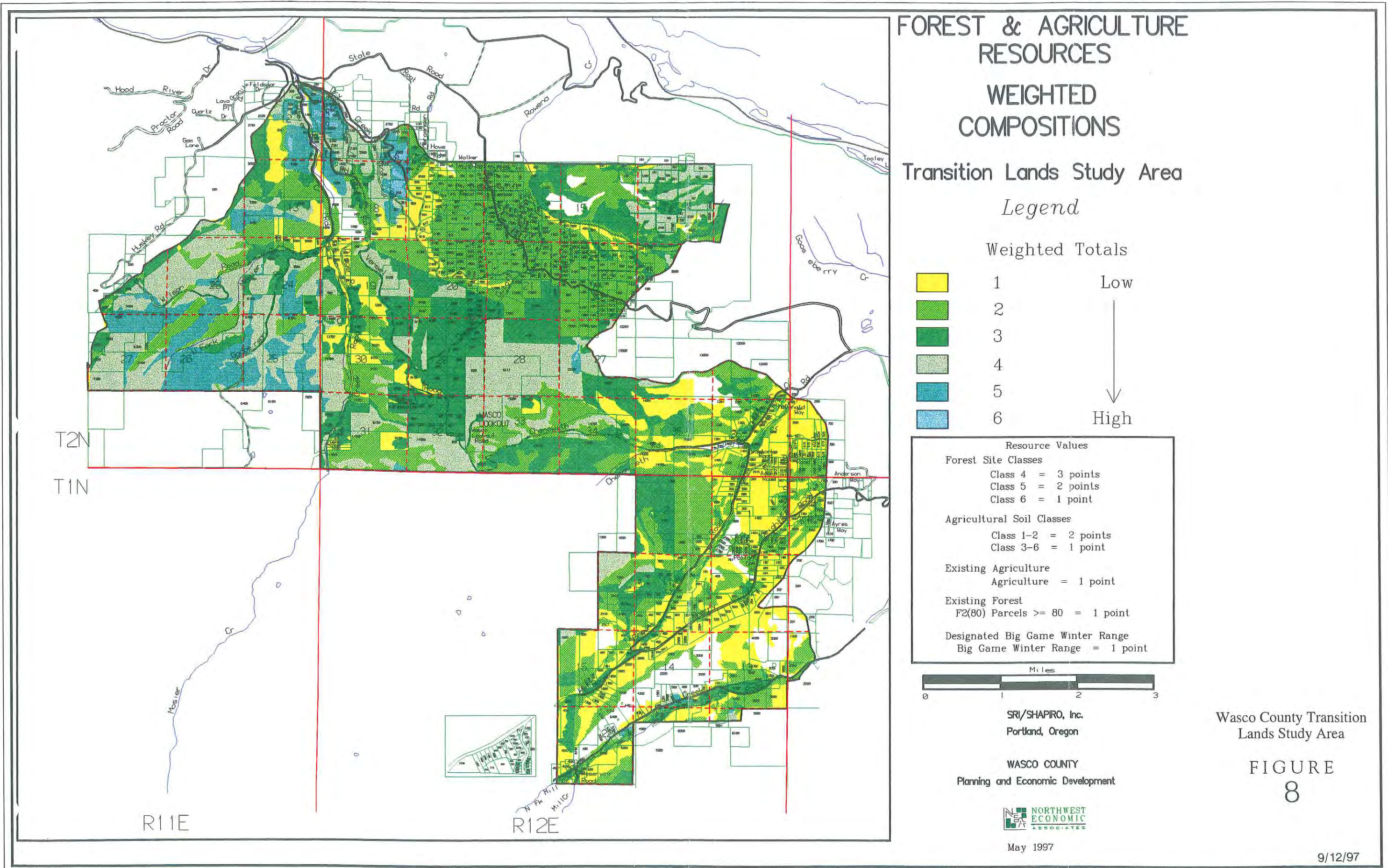


Wasco County Transition  
Lands Study Area

FIGURE  
7

9/12/97







# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill		Mill Creek-Cherry Heights	
FF-10	= 125	FF-10	= 256
RR-5	= 52	RR-5	= 50
Ag	= 8	Ag	= 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

Tables from Wasco County, OR, 1997

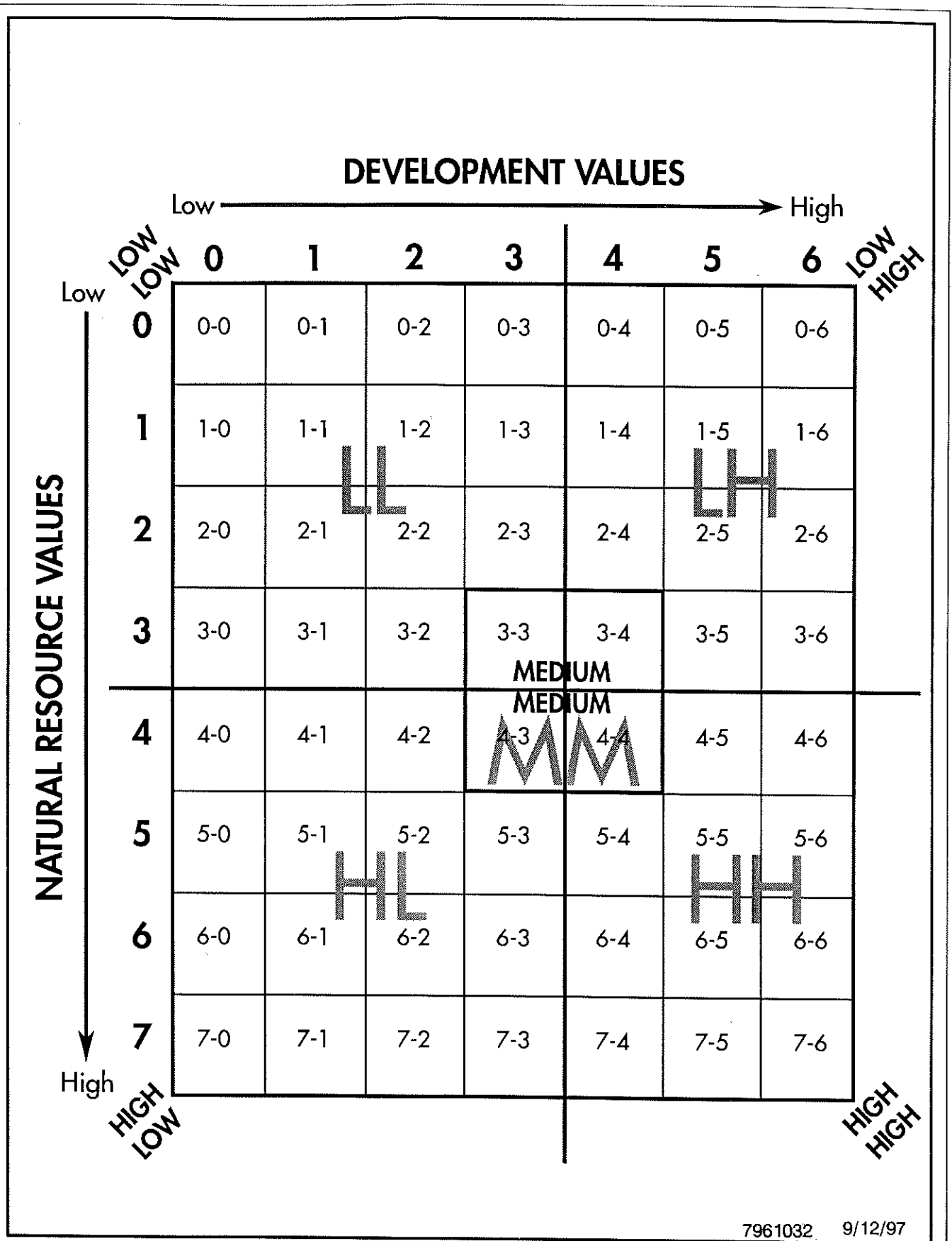
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Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

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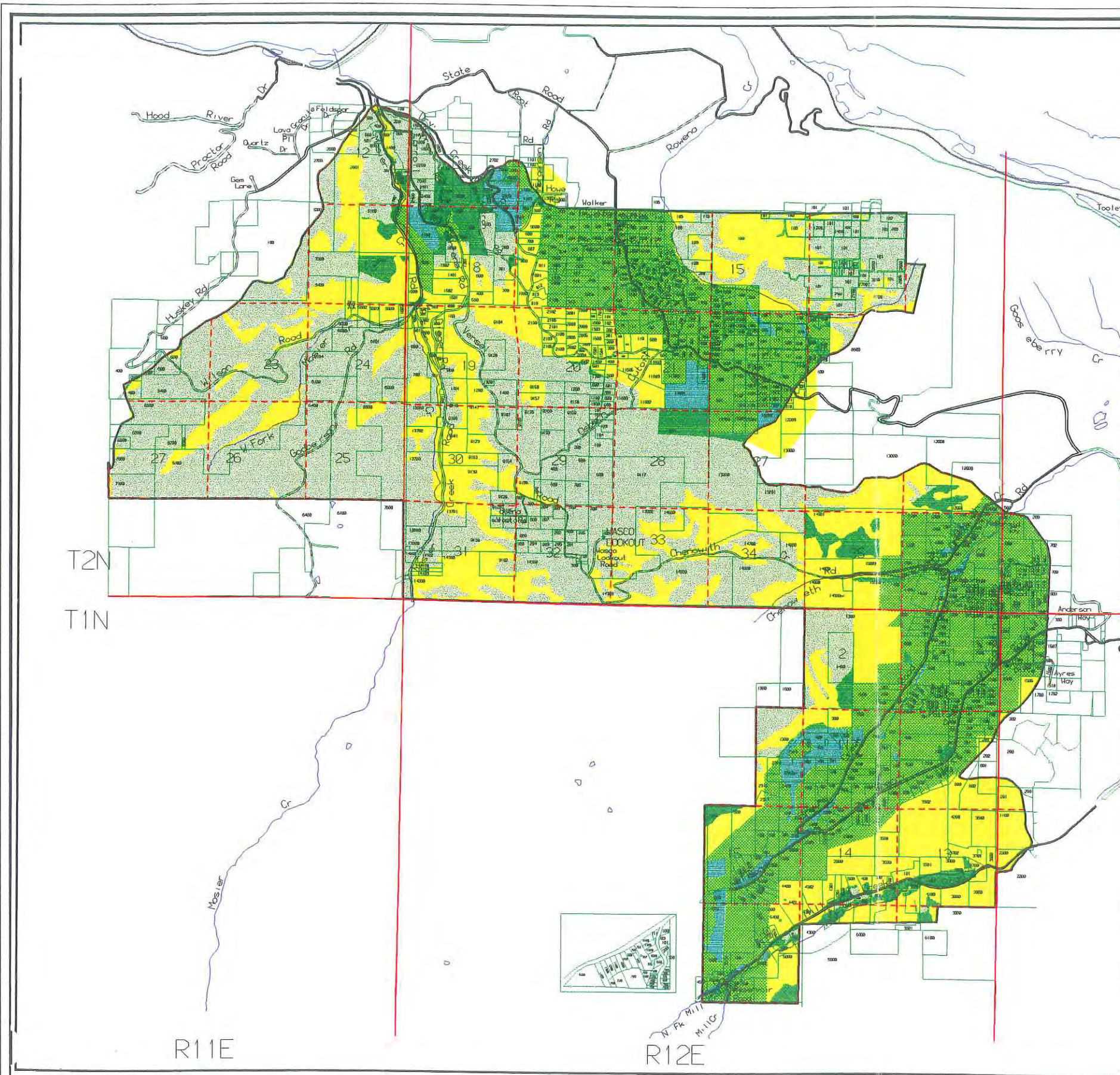
Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

**FIGURE  
10**



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INCORPORATED**





# COMBINED LAND USE VALUES (based on resource composite & development composite map values)

## Transition Lands Study Area

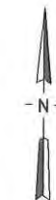
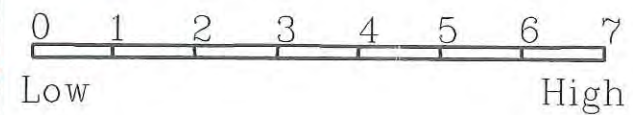
### Value Comparison

Forest & Agriculture Values      Development Values

L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7

F&A-Dev Medium Ranges

M/M	3-3, 3-4, 4-3, 4-4
-----	--------------------



Wasco County Transition  
Lands Study Area

FIGURE  
11

WASCO COUNTY  
Planning and Economic Development



June 1997

9/12/97



- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

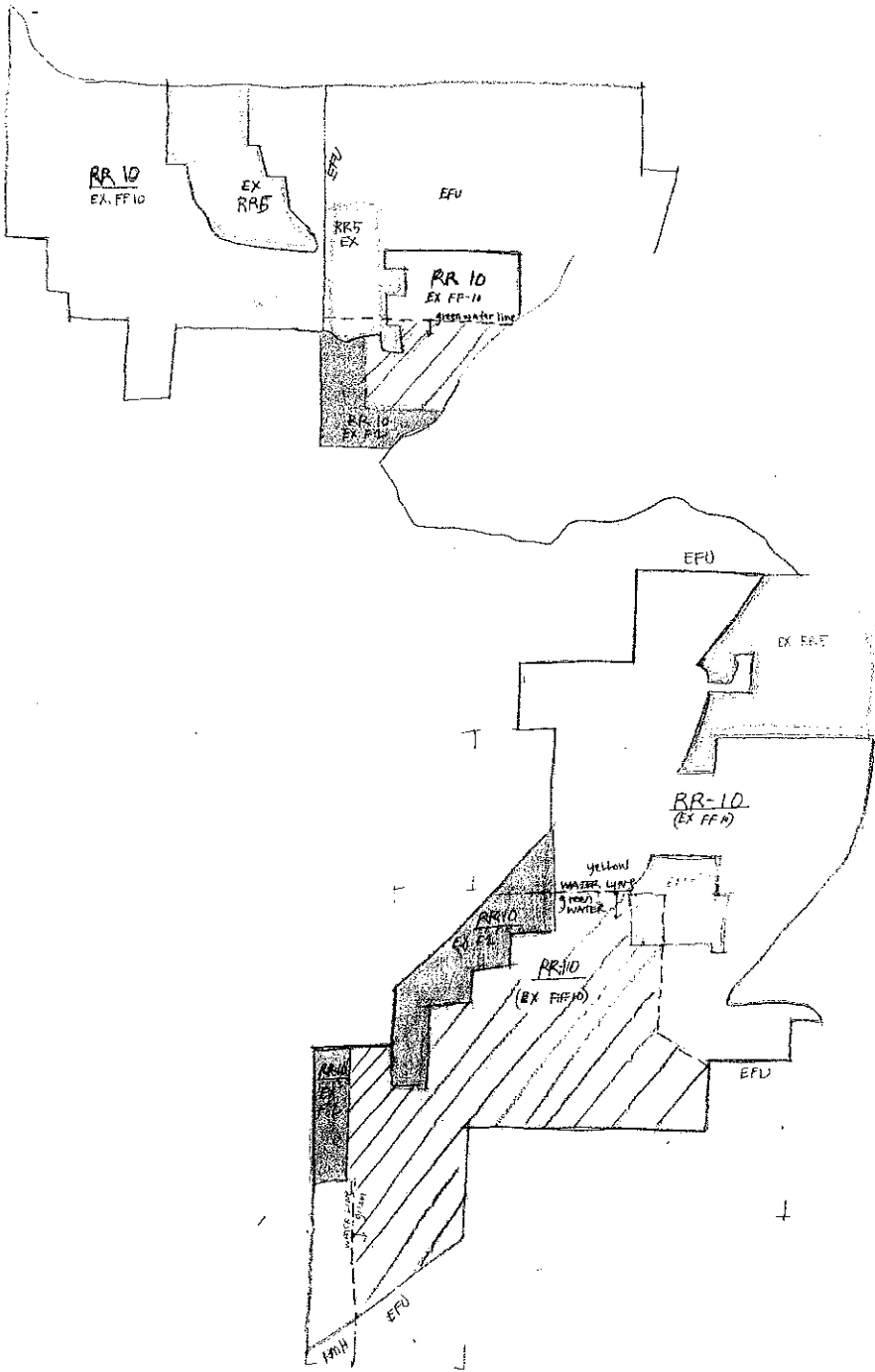
#### 5.1.1 Seven Mile Hill Area




In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

# ALTERNATIVE FOR MINIMUM DEVELOPMENT

(Same zoning w/ minor changes)



-  ALL EXISTING FF10 TO RR-10
-  WATER MONITORING AREAS FOR POTENTIAL INCREASE IN DENSITY (areas where current density spacing is working, other areas will be monitored, but not being counted for density increases)
-  PROPOSED MINOR INCLUSIONS OF RESOURCE LAND TO RR-10 (RES)

## MINIMUM DEVELOPMENT

### PROS:

- Rezone only very limited resource zoned lands with low resource values, retaining areas of higher resource value.
- Retain existing ten acre minimum.
- No increase in potential impacts on BGWR.
- Allows further testing and monitoring of aquifer systems prior to any increase in density - "we'll never be able to promise water but may understand the odds better."
- Doesn't increase potential service needs (roads and fire protection).
- Retains familiar 10 acre land use pattern.

### CONS:

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Alternative 1 - Minimum Development

FIGURE  
12



# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend

 IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

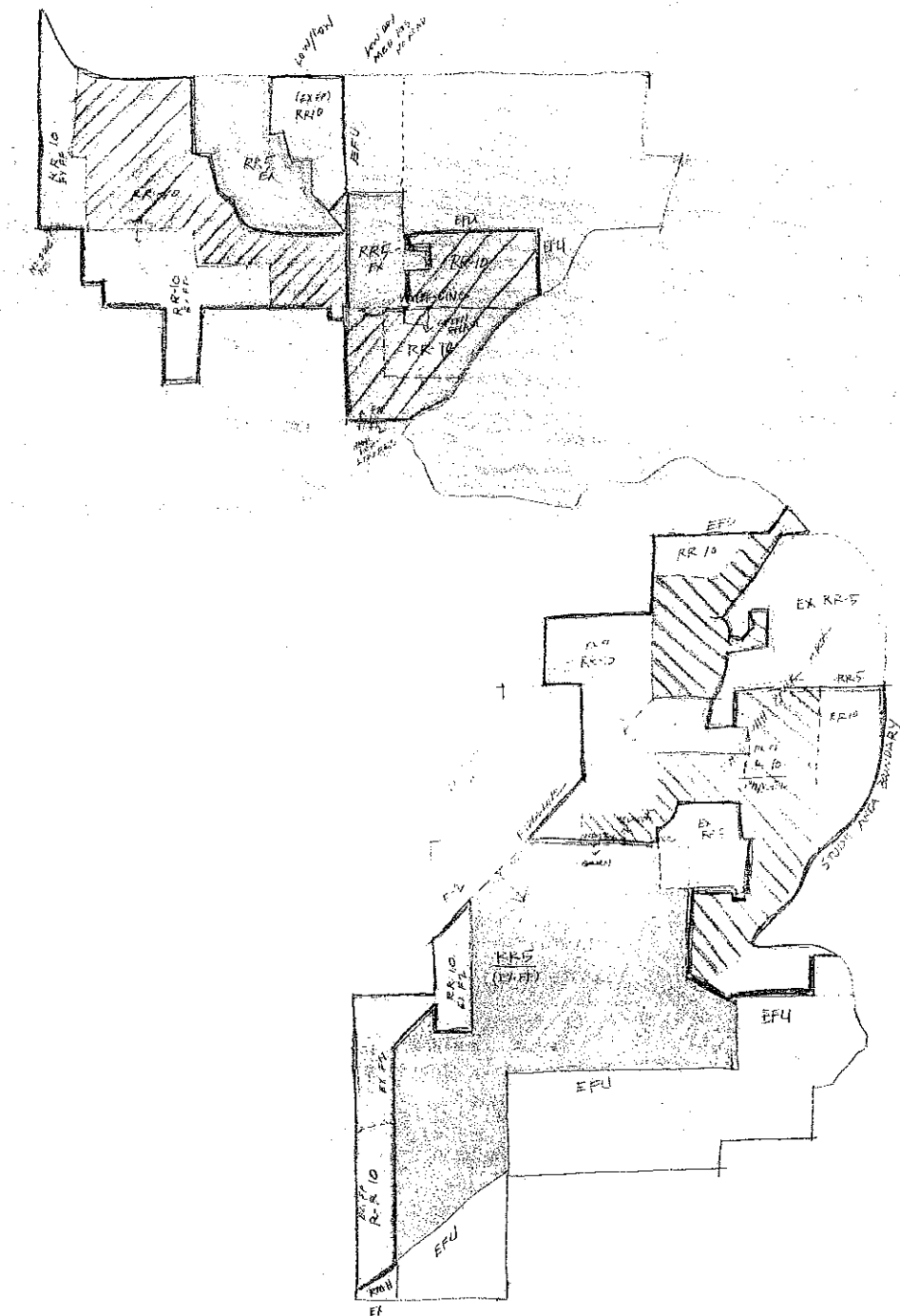
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



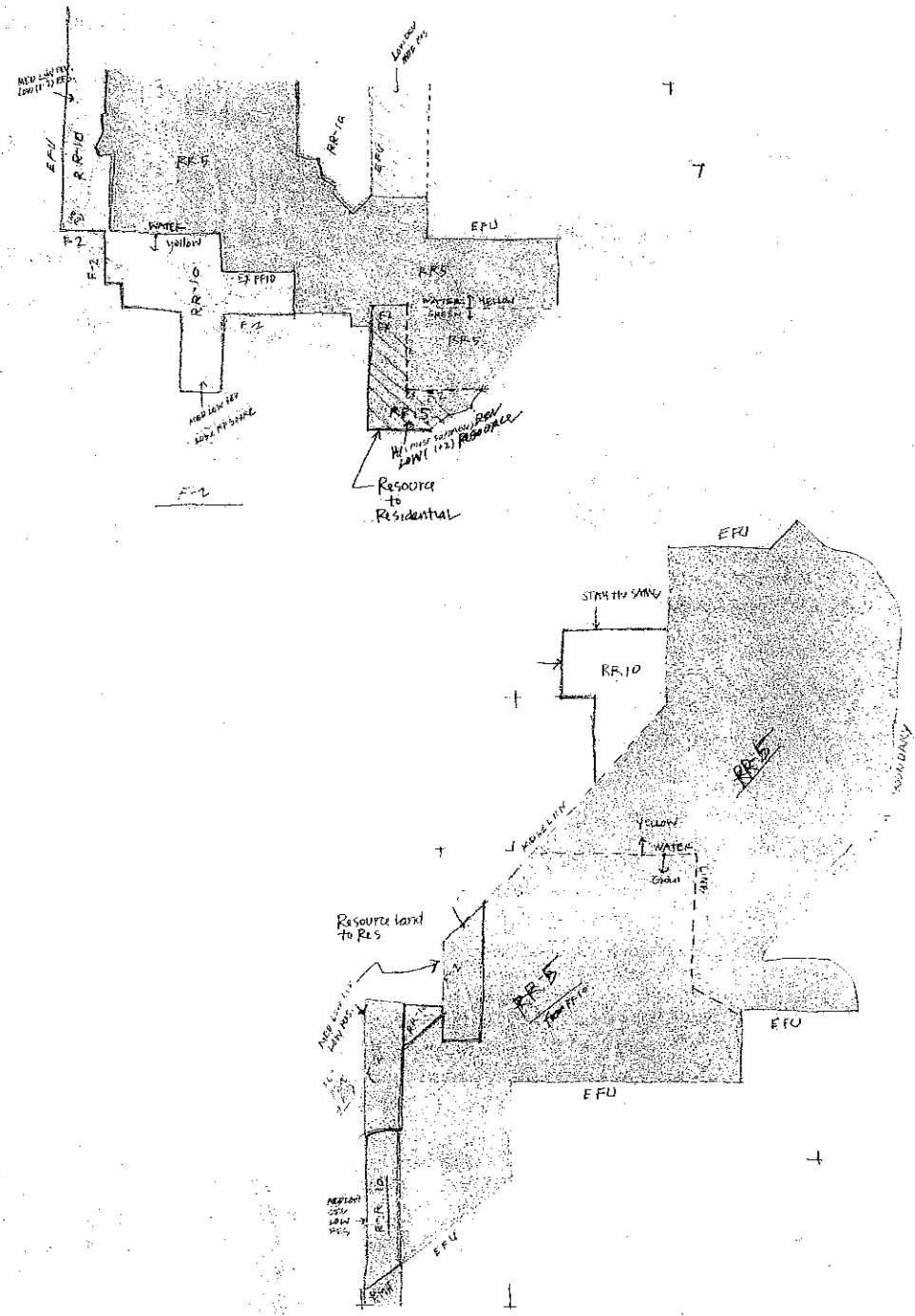
Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

FIGURE  
13

# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
  - Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat- quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

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FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).



- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).

### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

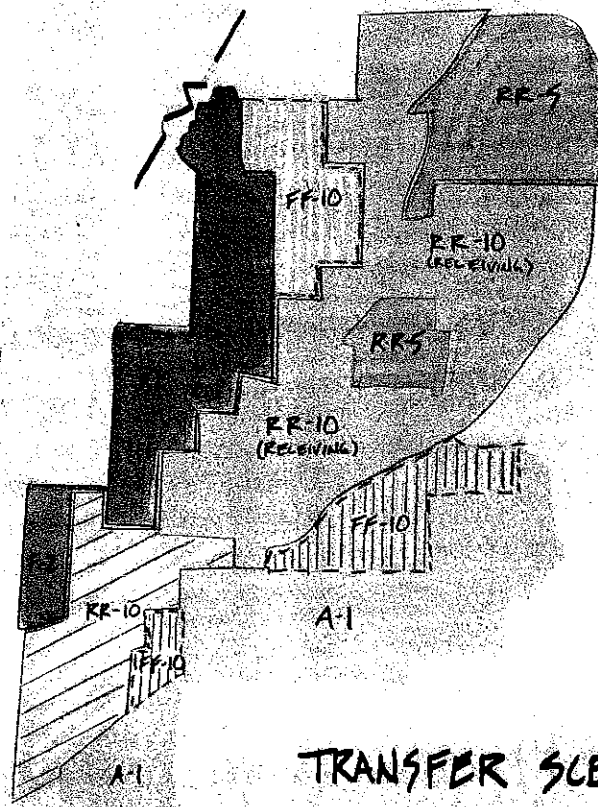
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



TRANSFER SCENARIO

Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

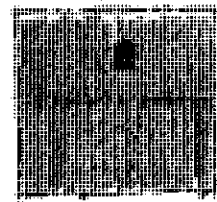
FIGURE  
15



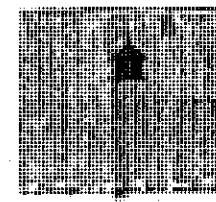
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VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



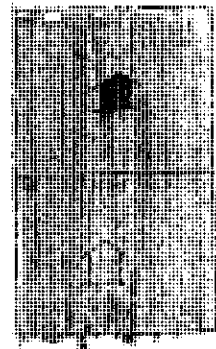
5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

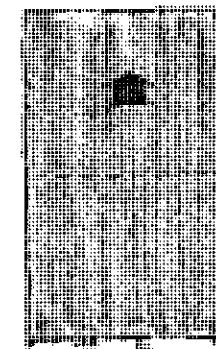
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 20 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

BROWN'S CREEK  
CHERRY HT'S

20AL WITH HOUSE (160,000<sup>00</sup>)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)

MOSEY  
7 MILE  
HILL

(170,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> (BROWN'S CREEK  
CHERRY HT'S)

\$ 60,000<sup>00</sup> (MOSEY  
7 MILE HILL)

Figure from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

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FIGURE  
16

### 6.1.2 Mill Creek/Cherry Heights Area

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### 6.1.3 Intent and Impacts of the TDR Alternative

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

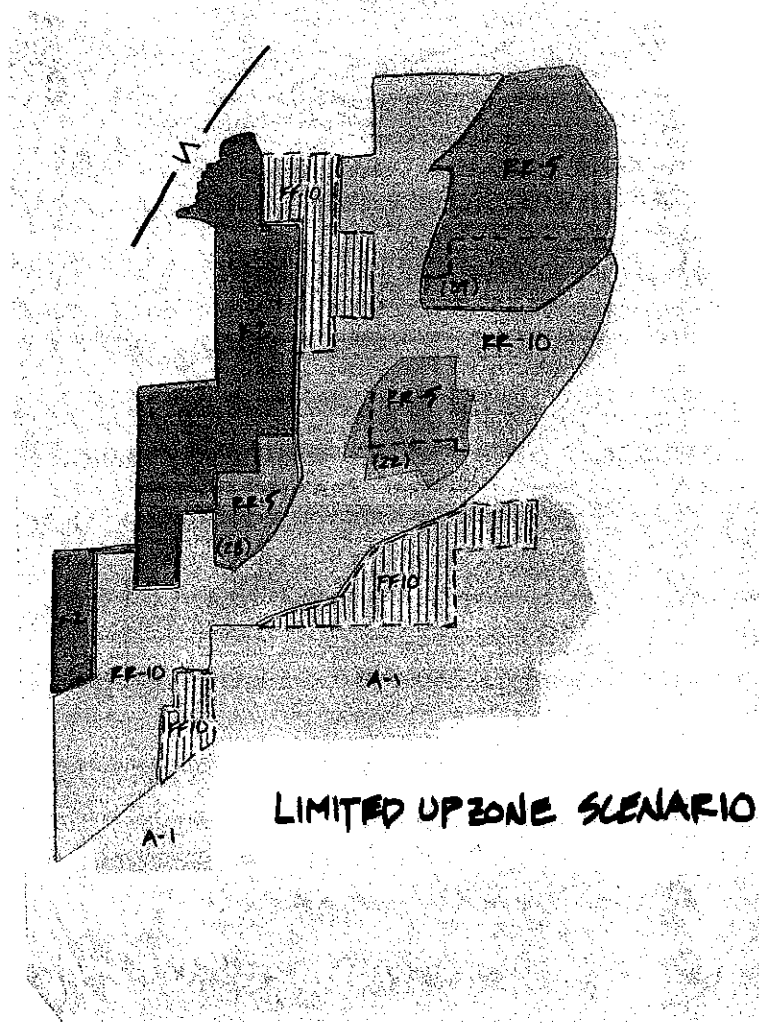
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### 6.2 Limited Upzone Alternative

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### 6.2.1 Seven Mile Hill Area

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



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## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

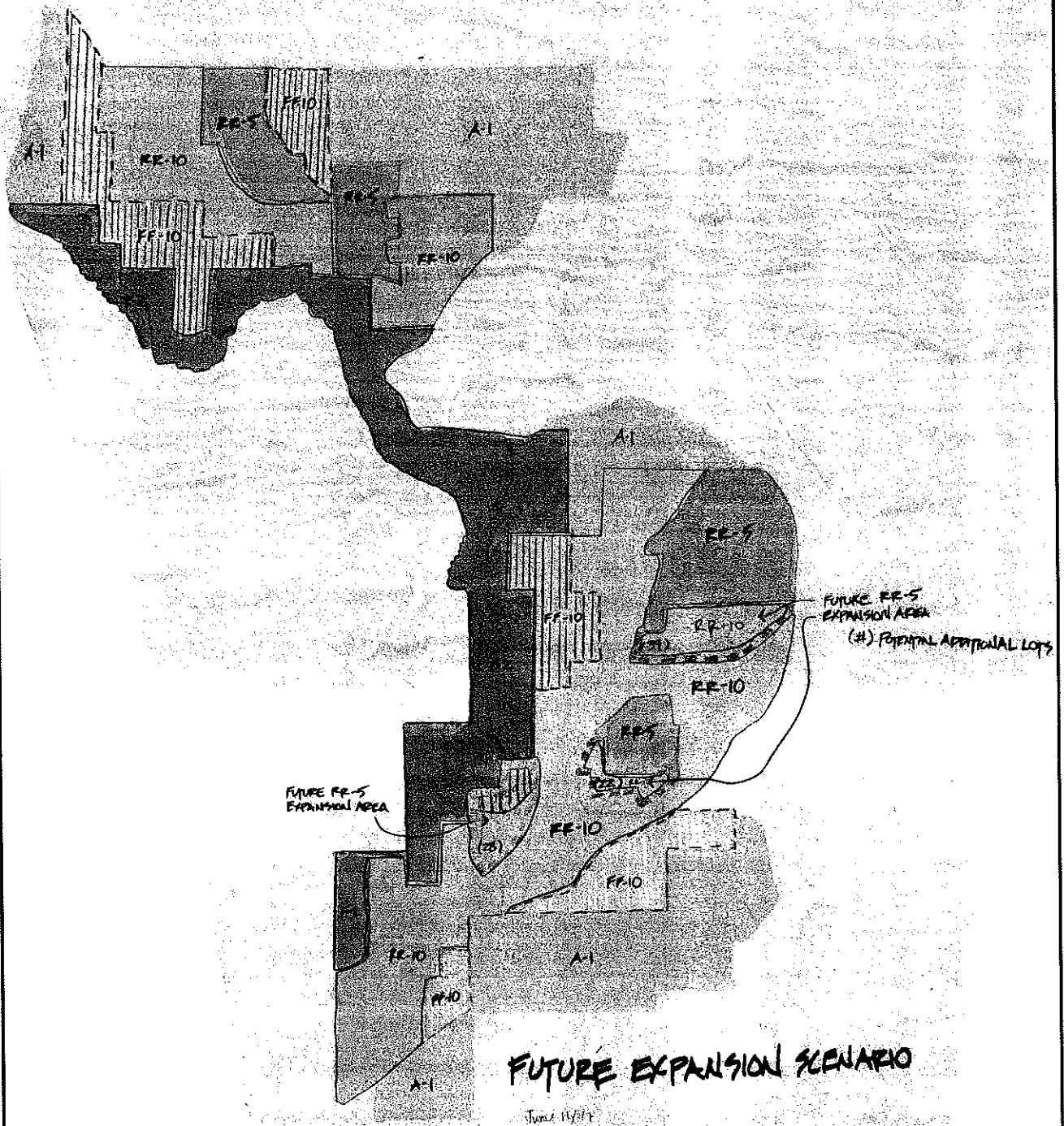
### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.





Map from Wasco County, OR, 1997

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# Wasco County Transition Lands Study Area Future Expansion Alternative

FIGURE  
18



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## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.

**EXHIBIT 2**

**Transition Lands Study Area**

**(Memo)**

## MEMORANDUM

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### Background

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### Purpose of the TLSA Study

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### Summary of TLSA Steering Committee Recommendations:

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

## EXHIBIT 2



**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR)  
Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

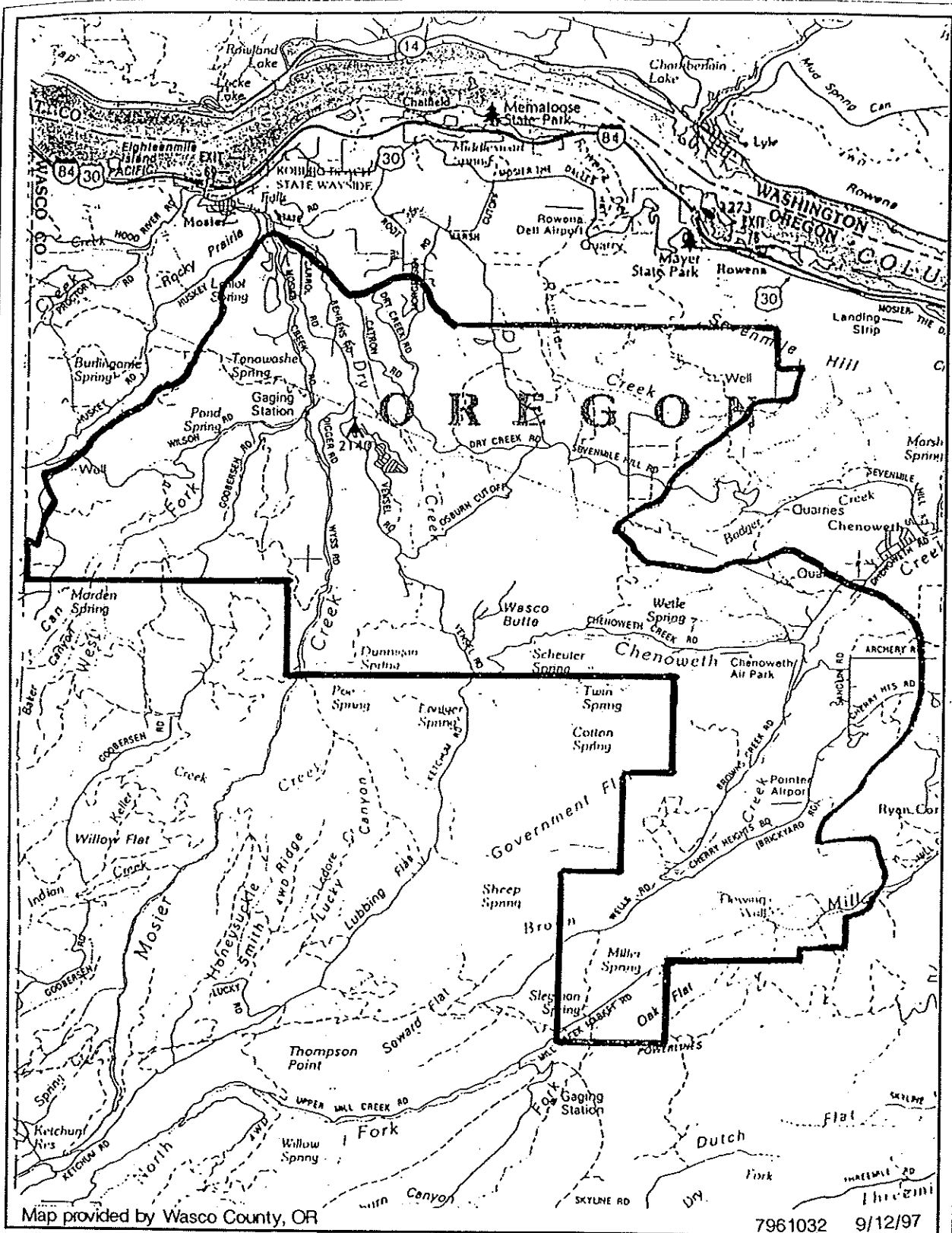
Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other

issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

#### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**



Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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page 1

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLSA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLSA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLSA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLSA with at least 25% capacity remaining are shown below.

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page 2

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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page 3

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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**EXHIBIT 3**

**2000 Settlement Agreement**



## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not

approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.

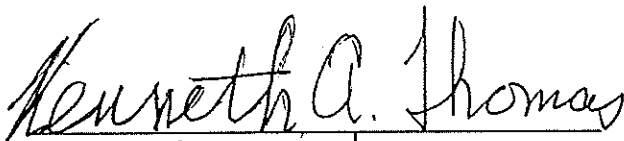
15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

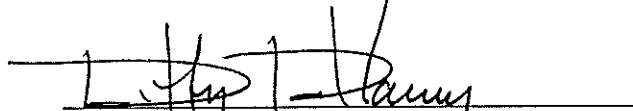
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

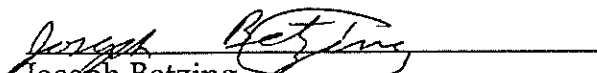
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing





**EXHIBIT 4**

**Transition Lands Study Area**

**Groundwater Study**



**JERVEY** Geological  
Consulting

810 FELDSPAR DR. / P.O. BOX 328  
MOSIER, OREGON 97040

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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervey

**EXHIBIT 4**



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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervy

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

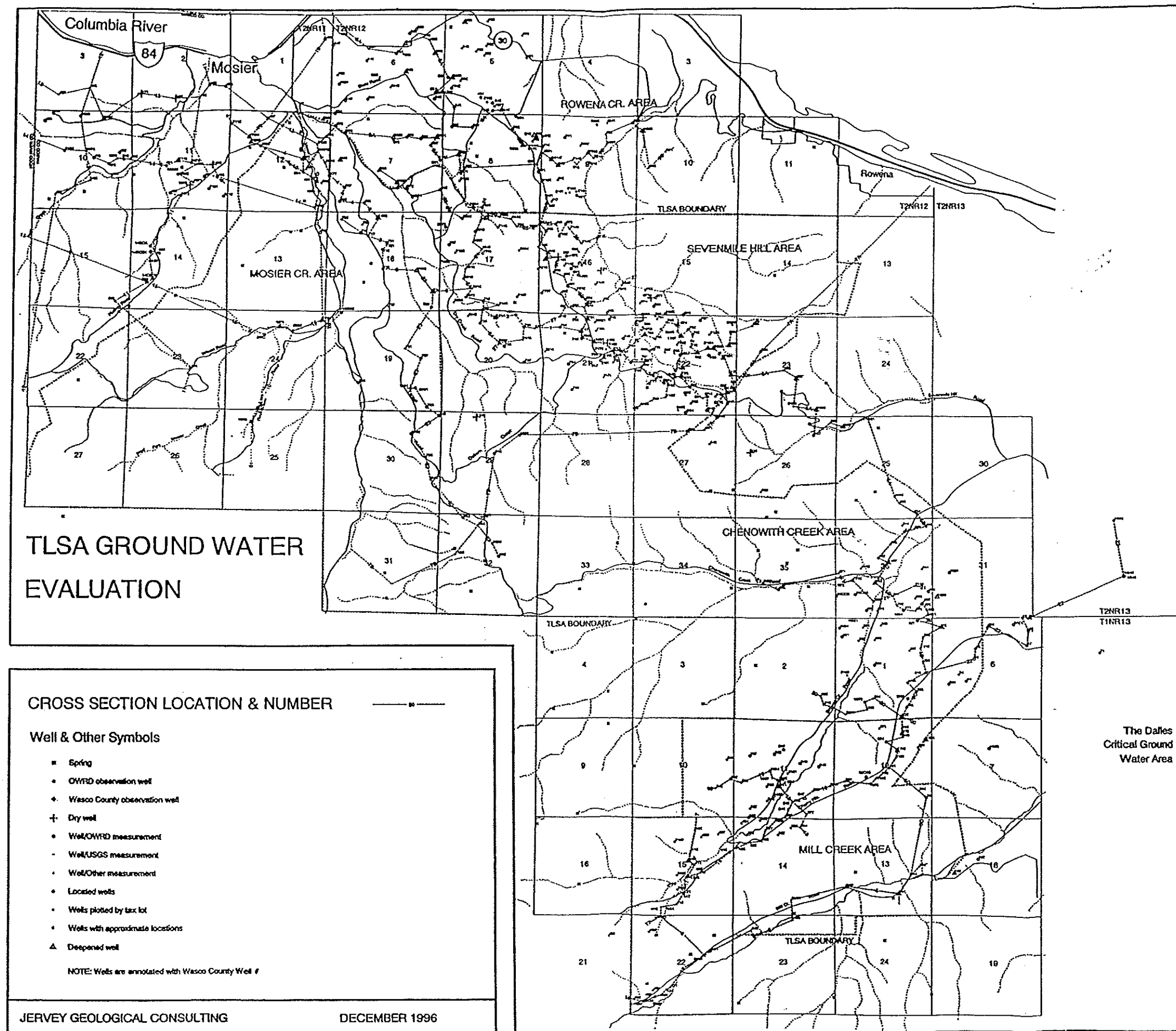
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward





locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year

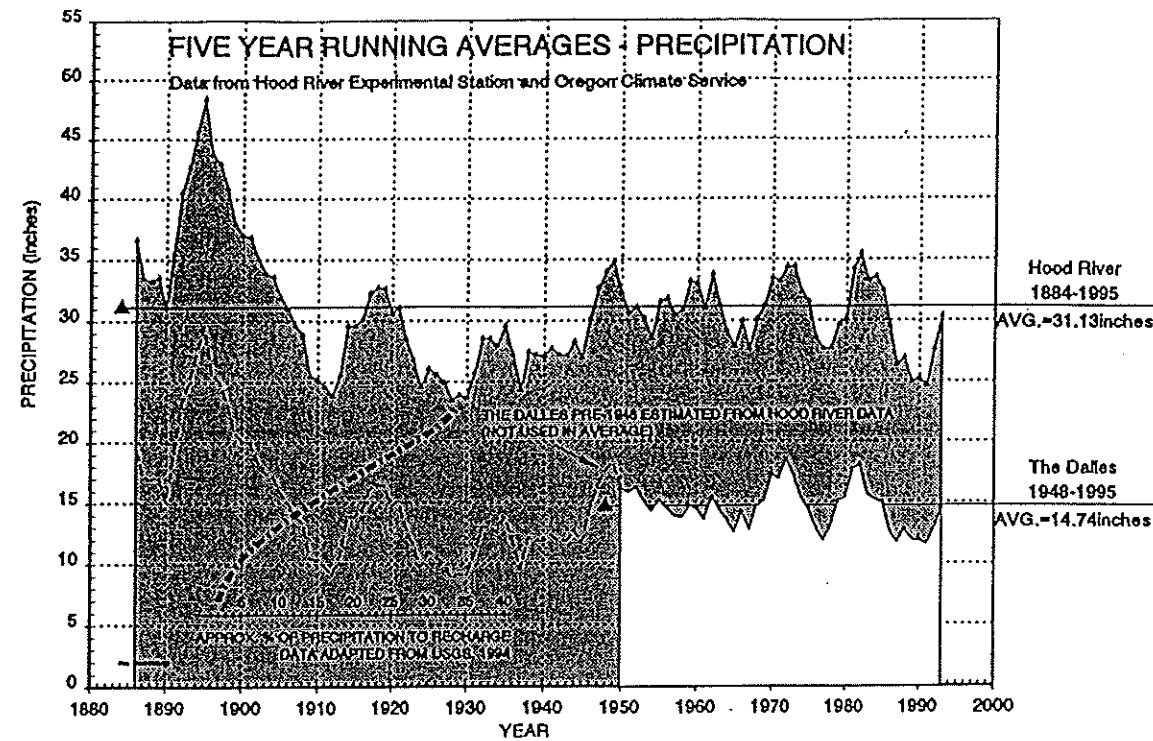


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

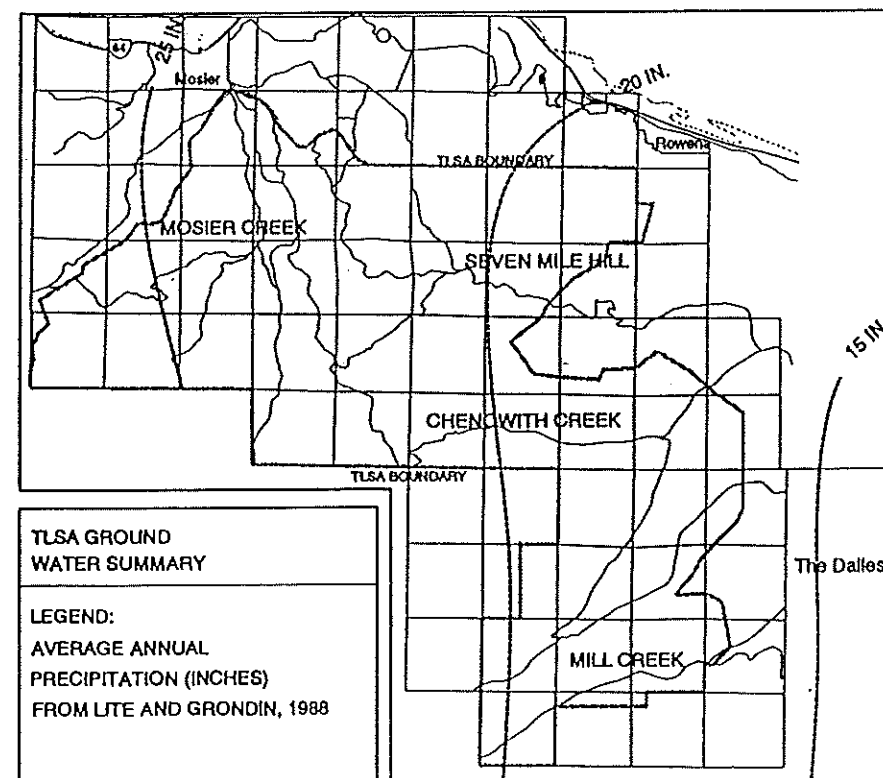


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				99,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepening observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

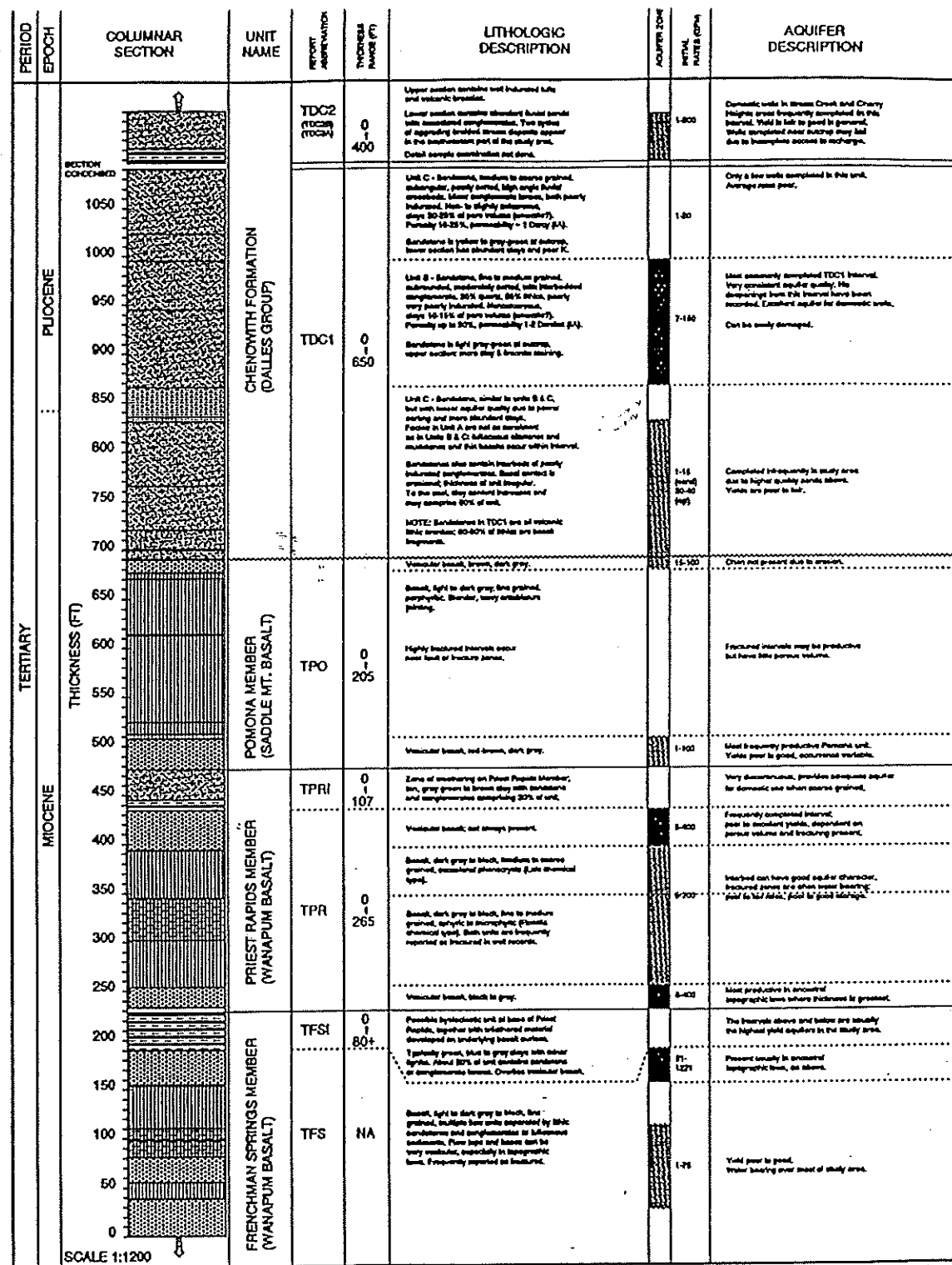
## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In





GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

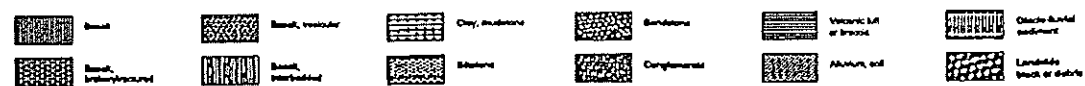


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keimle, 1995, and Lite and Grondin, 1988).

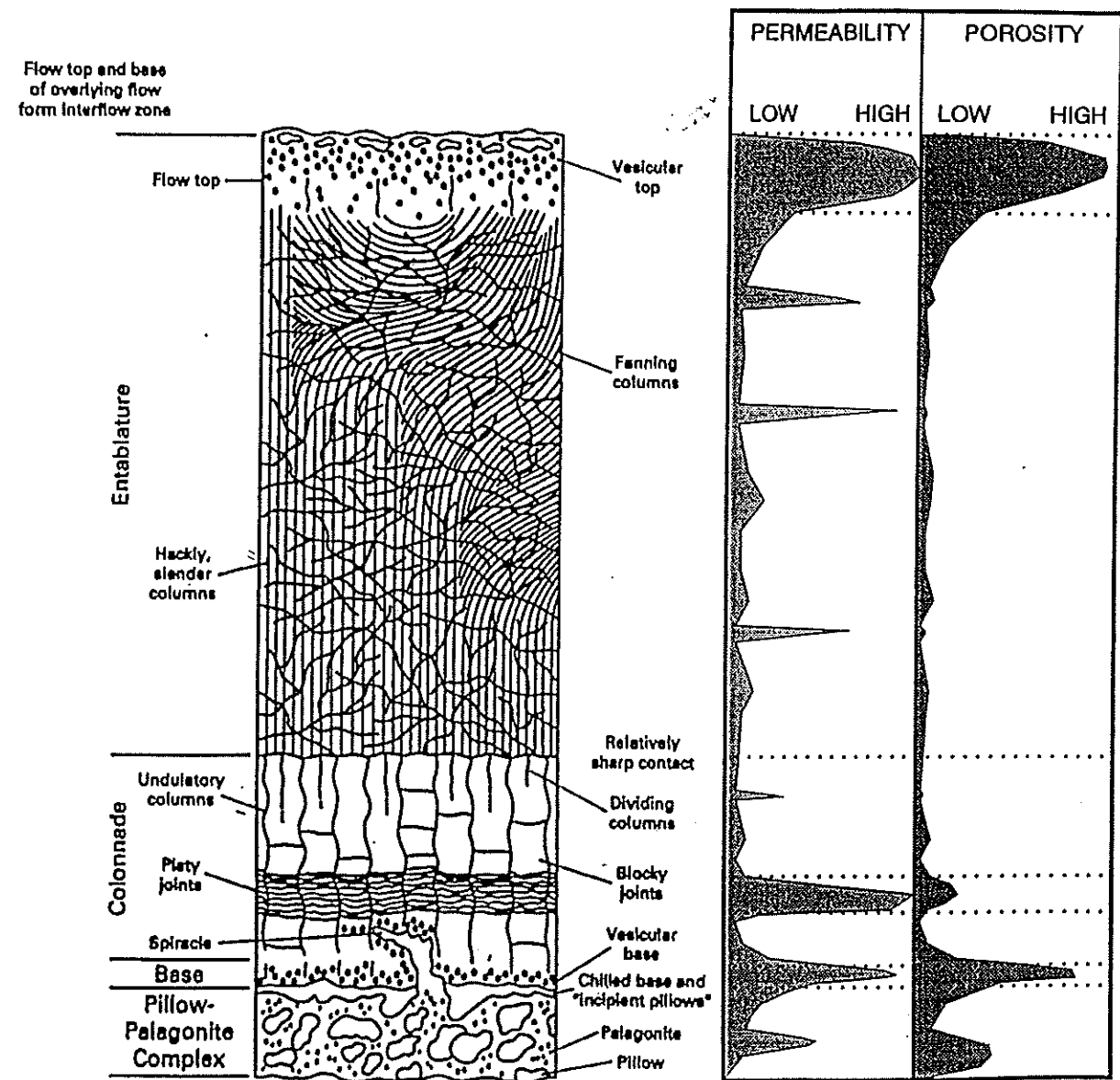


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).

general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

#### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

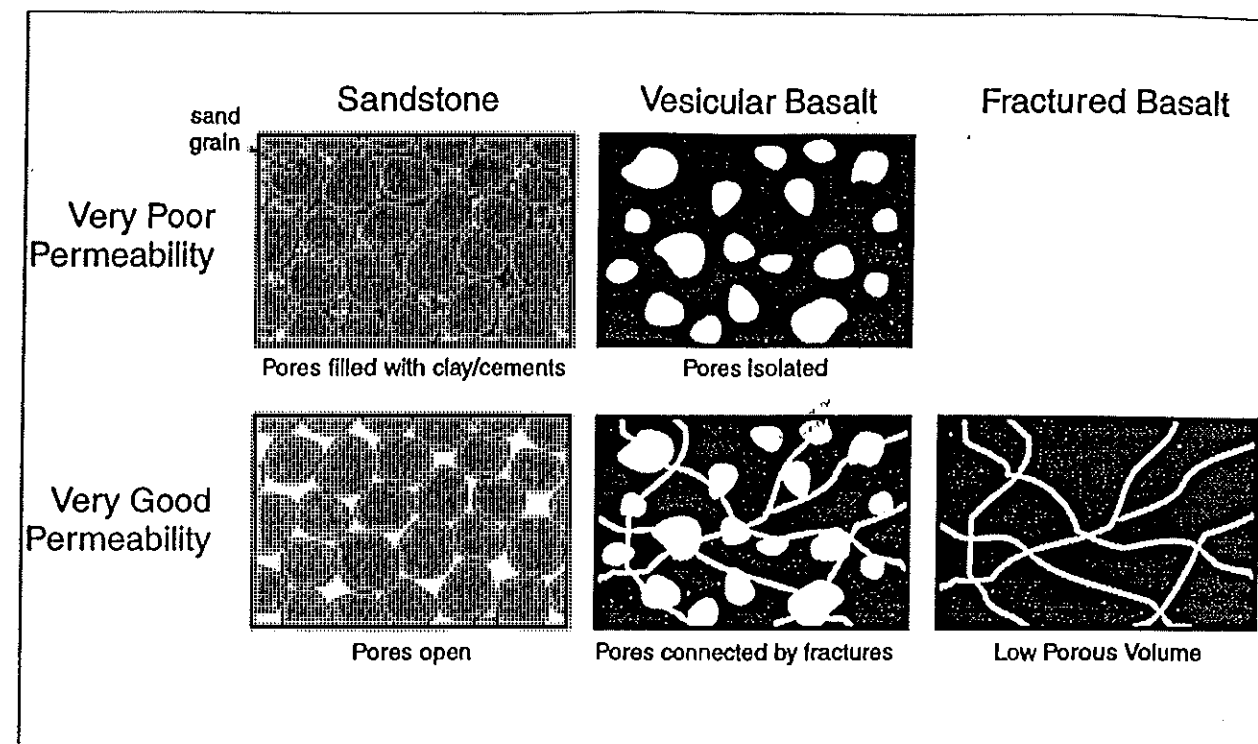


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

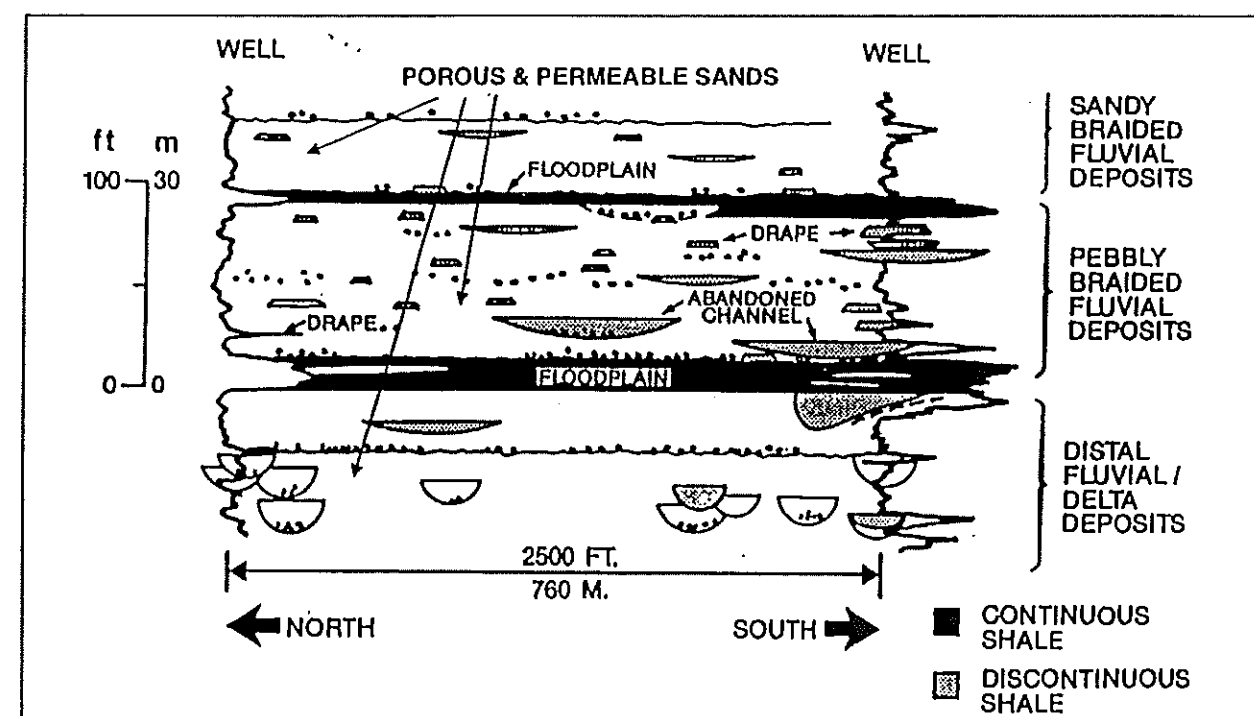


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).



quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

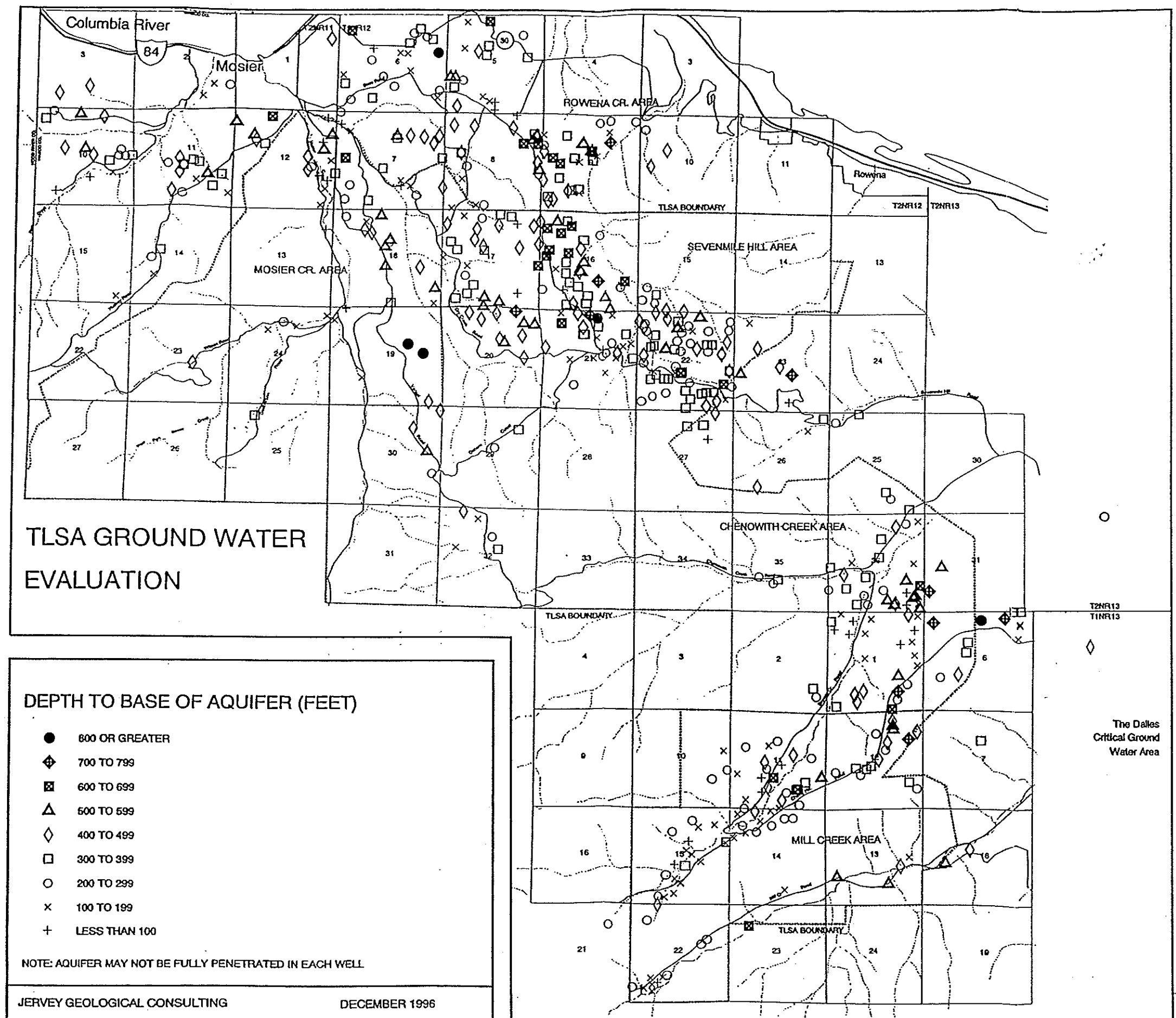
- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

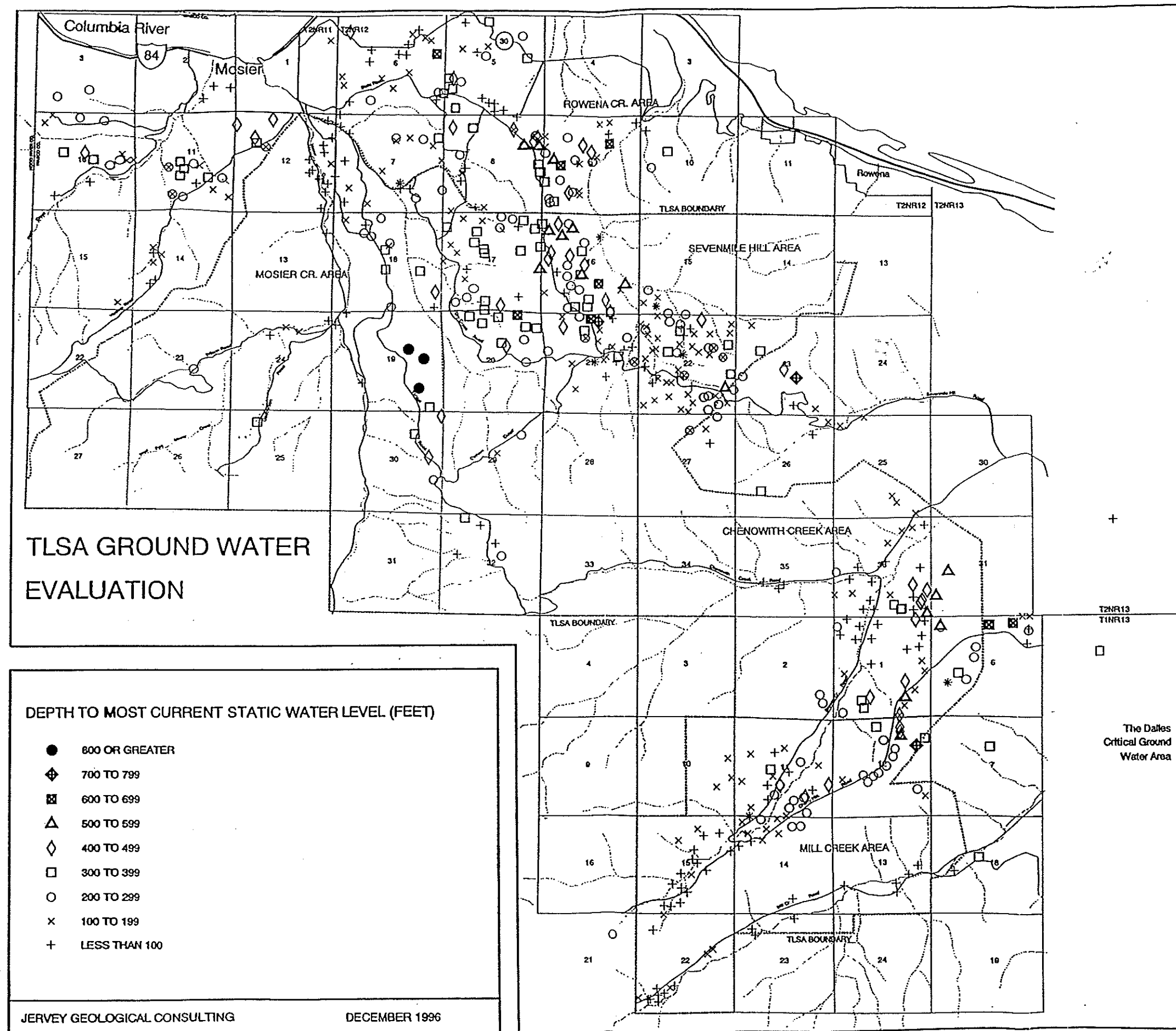
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

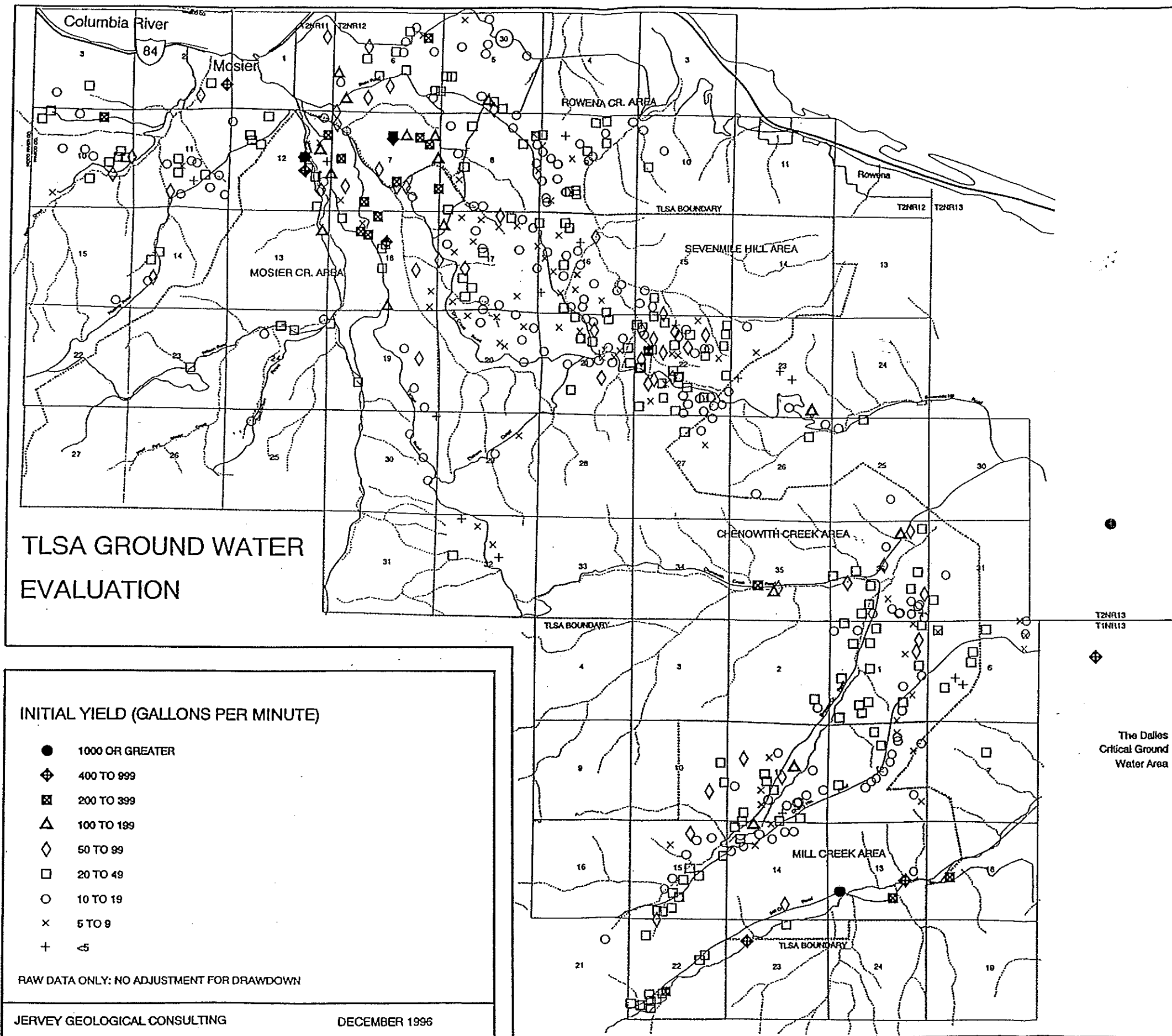
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

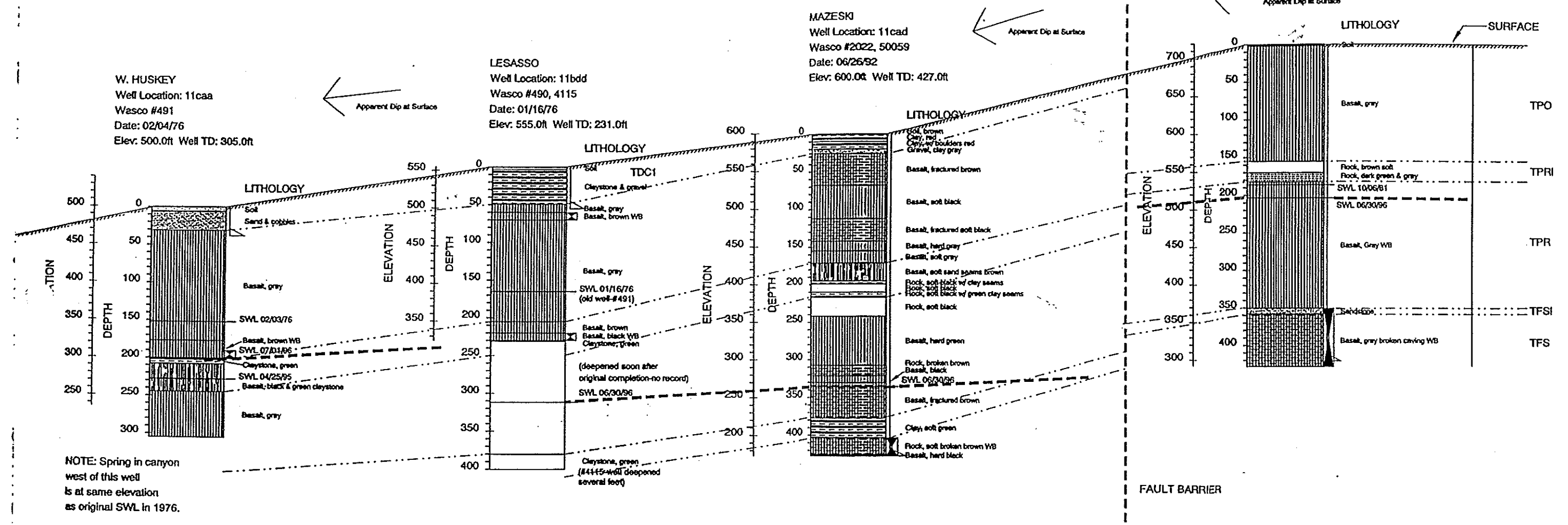
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Dalles Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt

as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepenings (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

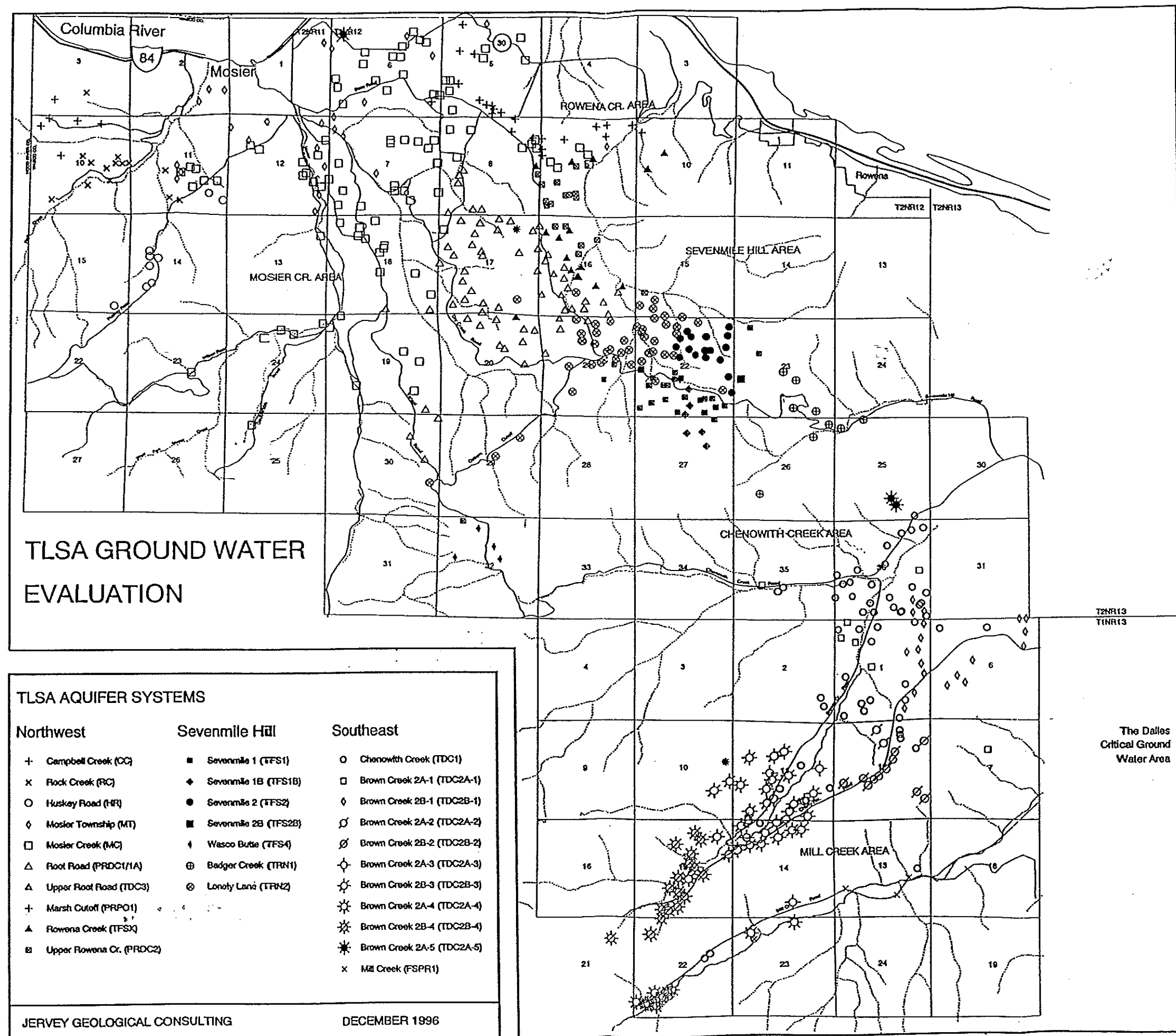
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DEPTH	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH H2O	# OF DEEPEENINGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	P	COMMENT	
NORTHWEST TLSA															
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61	1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TPR	14	719	286	30	545	174	113	0	1	0	4	-26	56	
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58	
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0		* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58	HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61	HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60	2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60	SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53	
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56	SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61	
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59	
SEVENMILE HILL															
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57	HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55	
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53	
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60	
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53	ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52	SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*		* SIMILAR TO TRN2?
SOUTHEAST TLSA															
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58	
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50	
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56	1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77	

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.





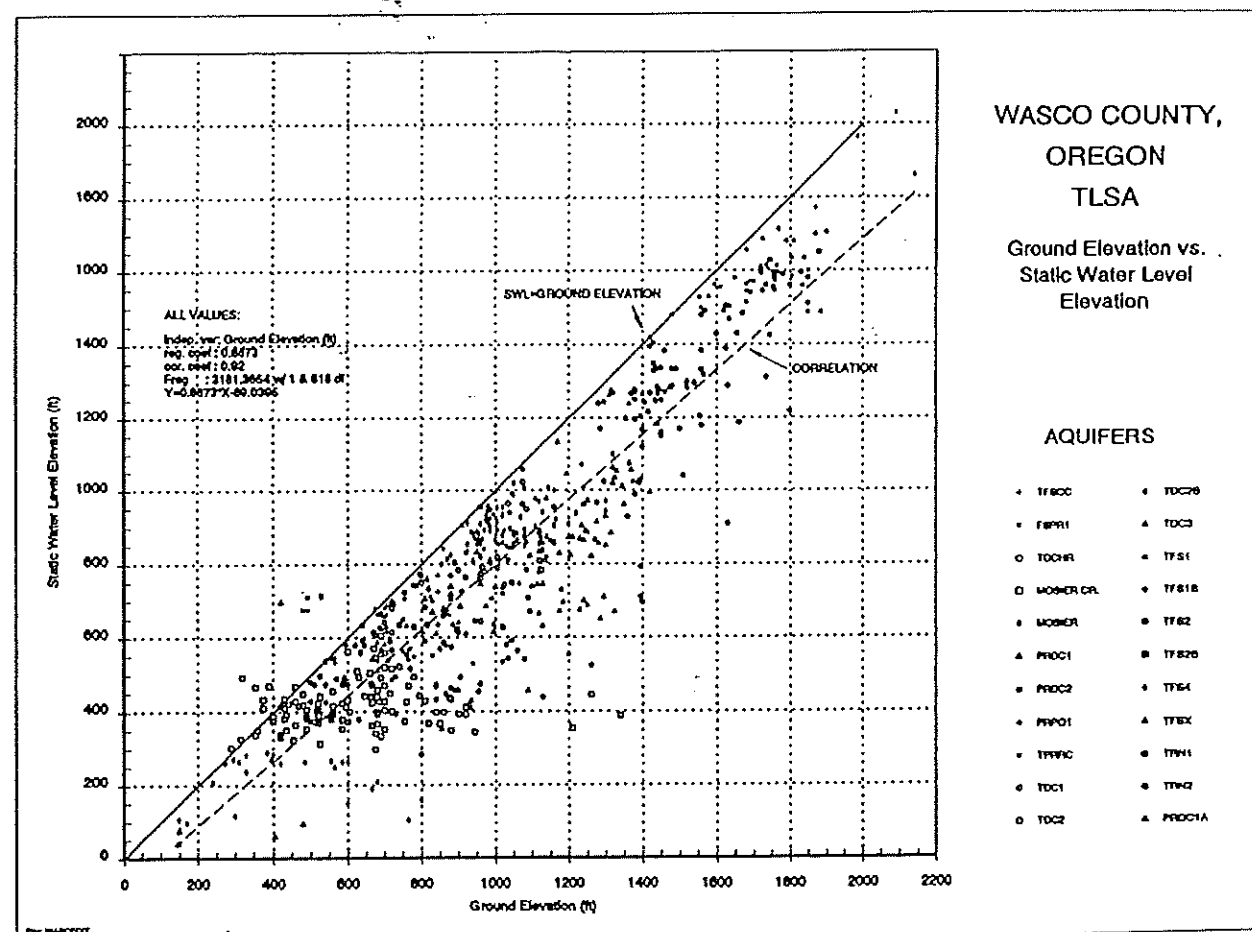


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.

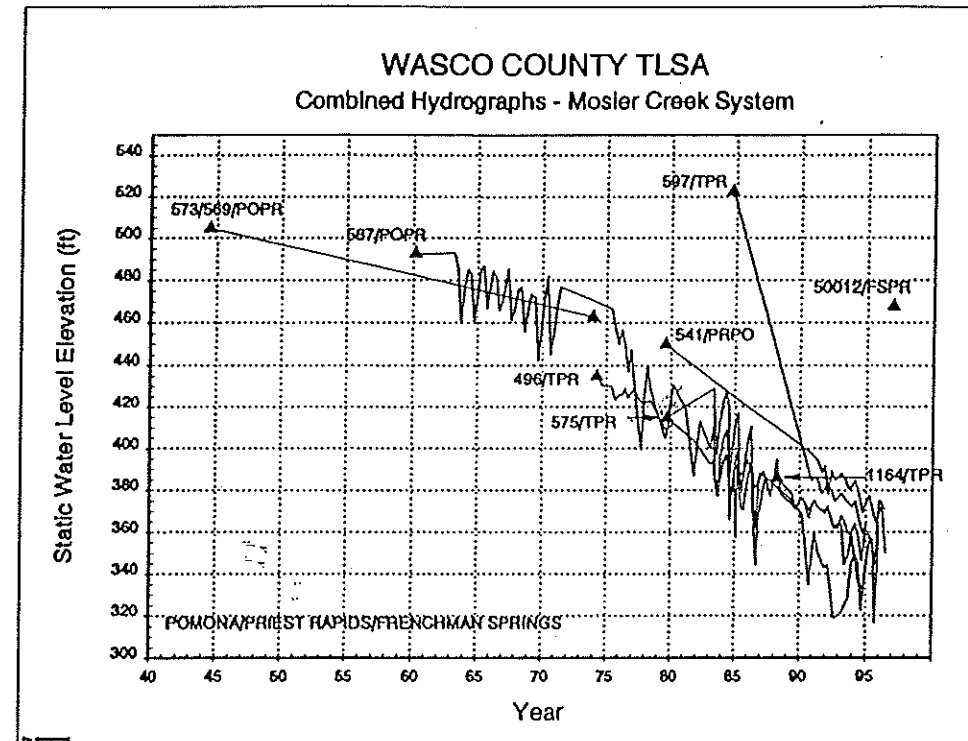


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

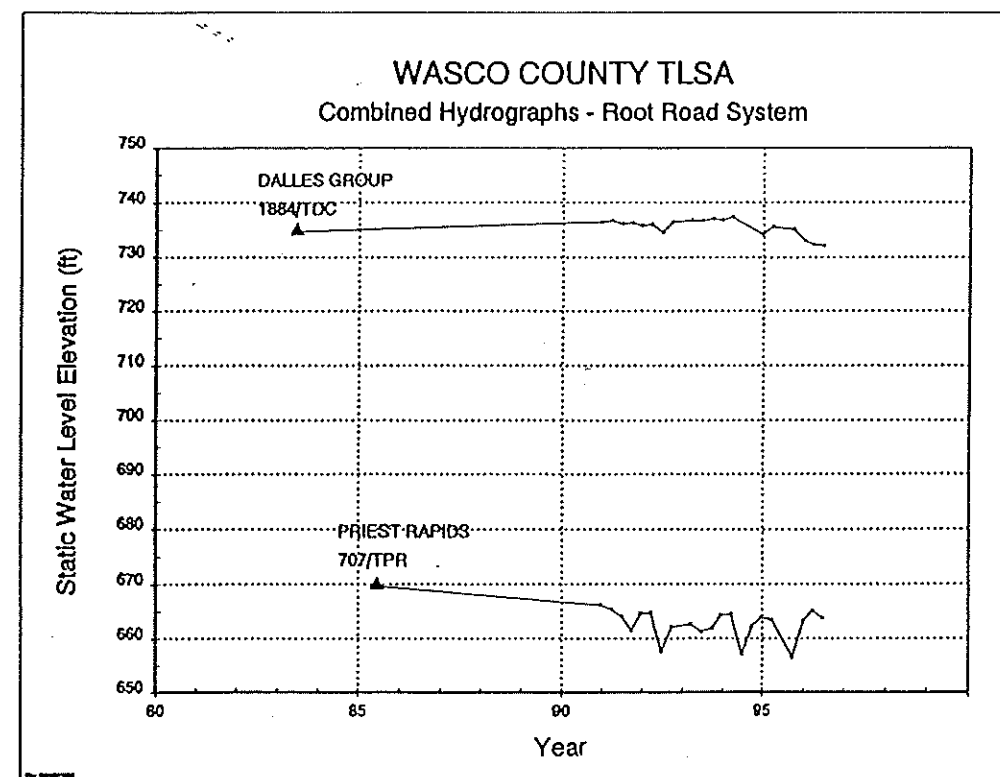


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

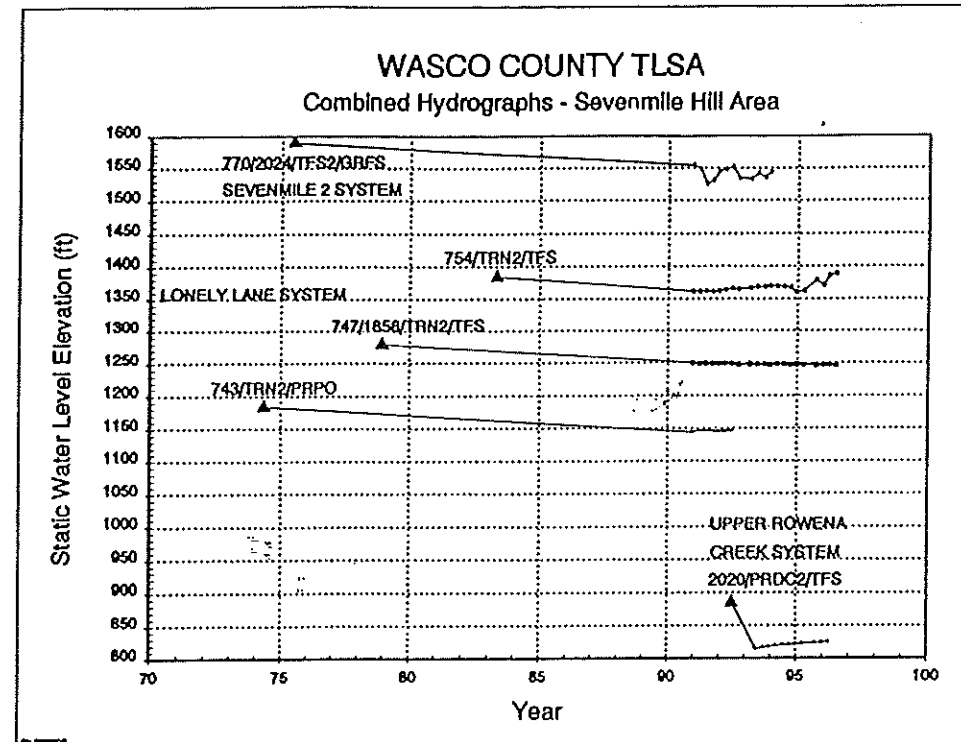


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

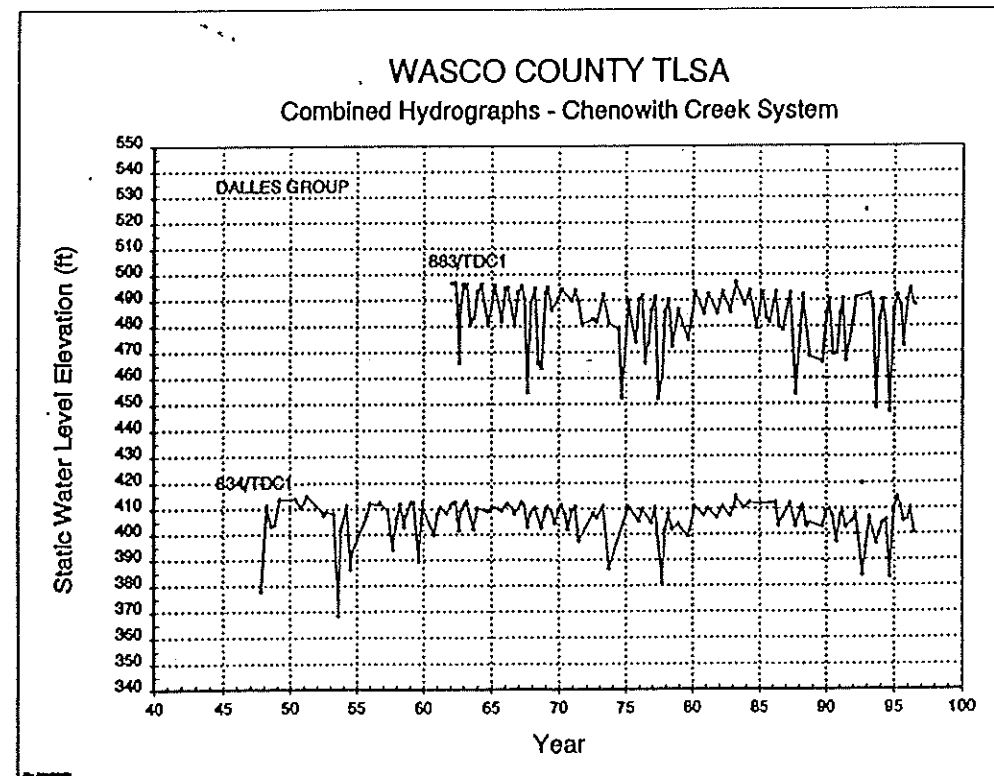


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

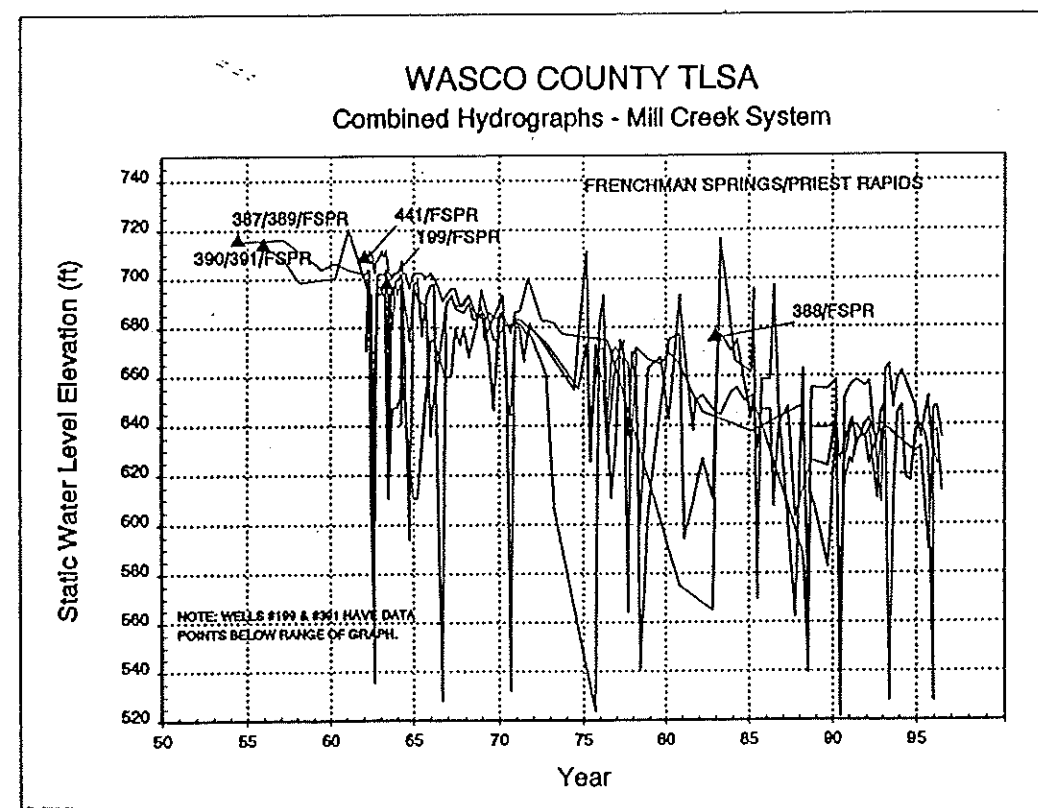


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.



prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no

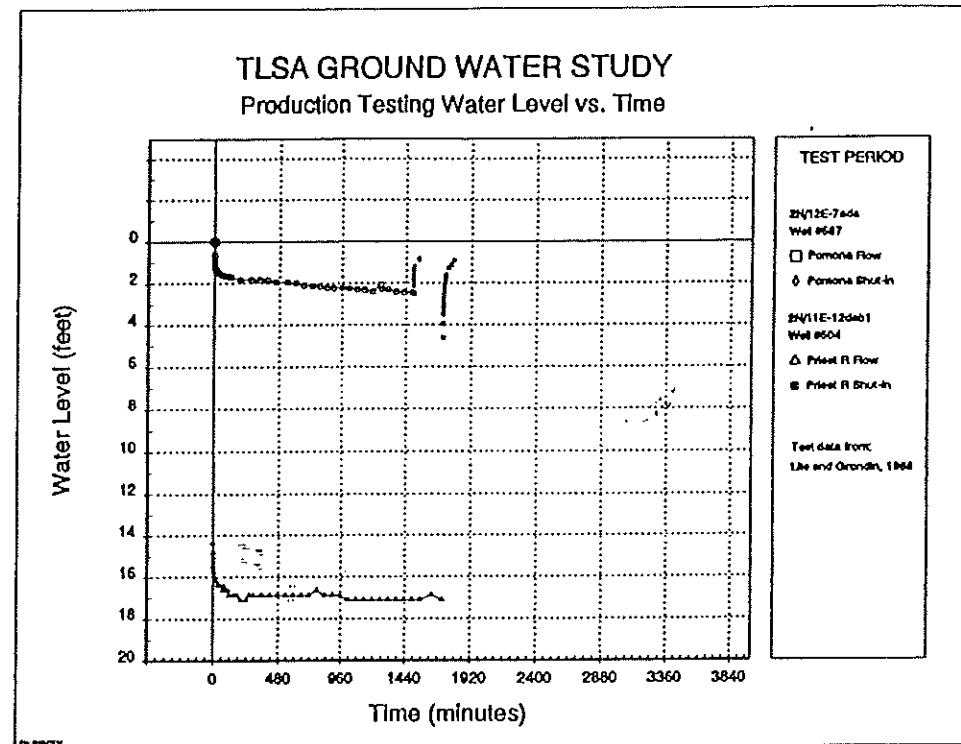


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

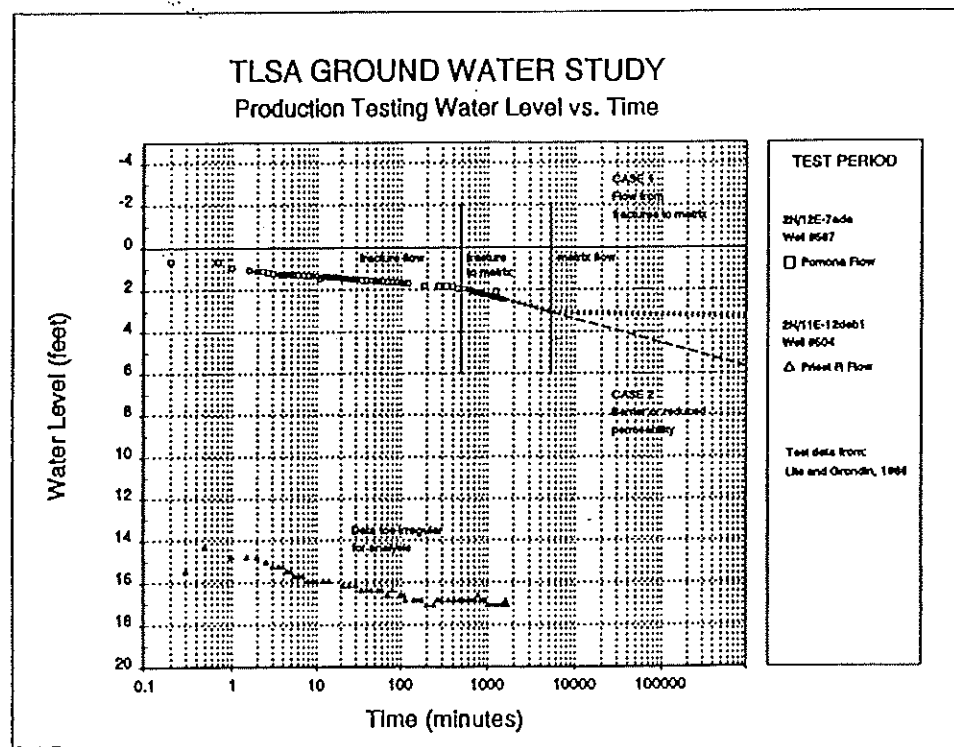


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

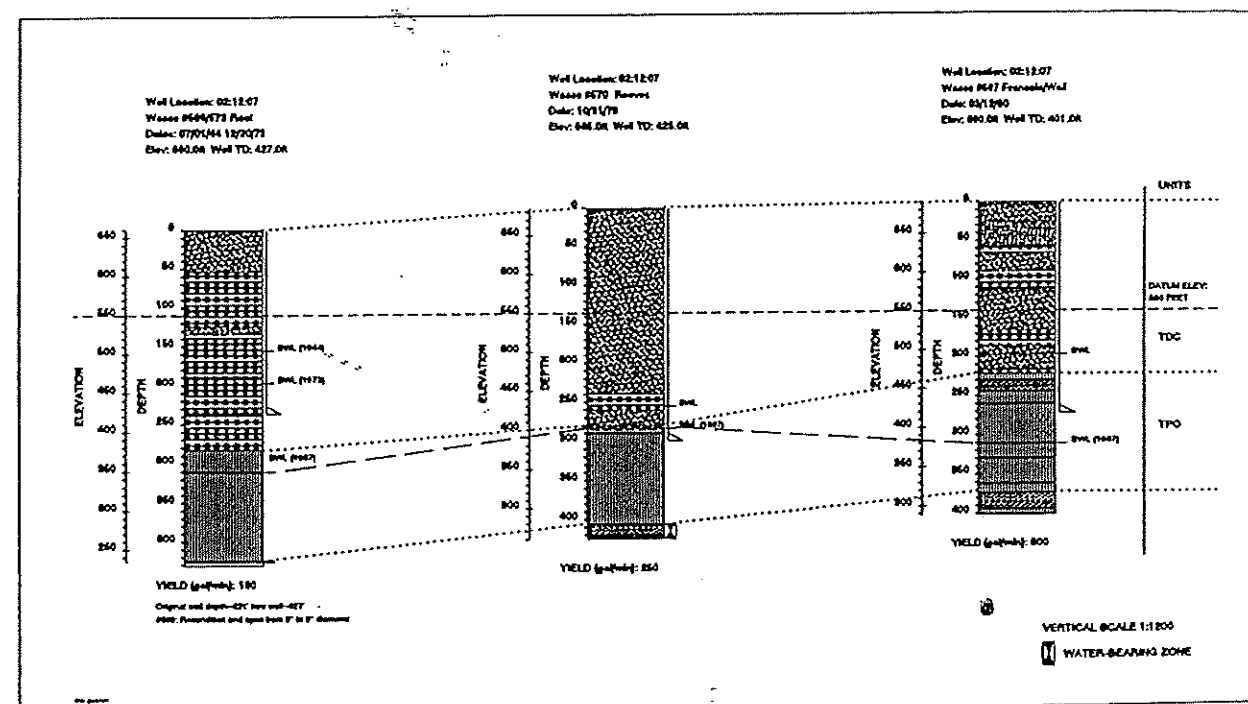


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

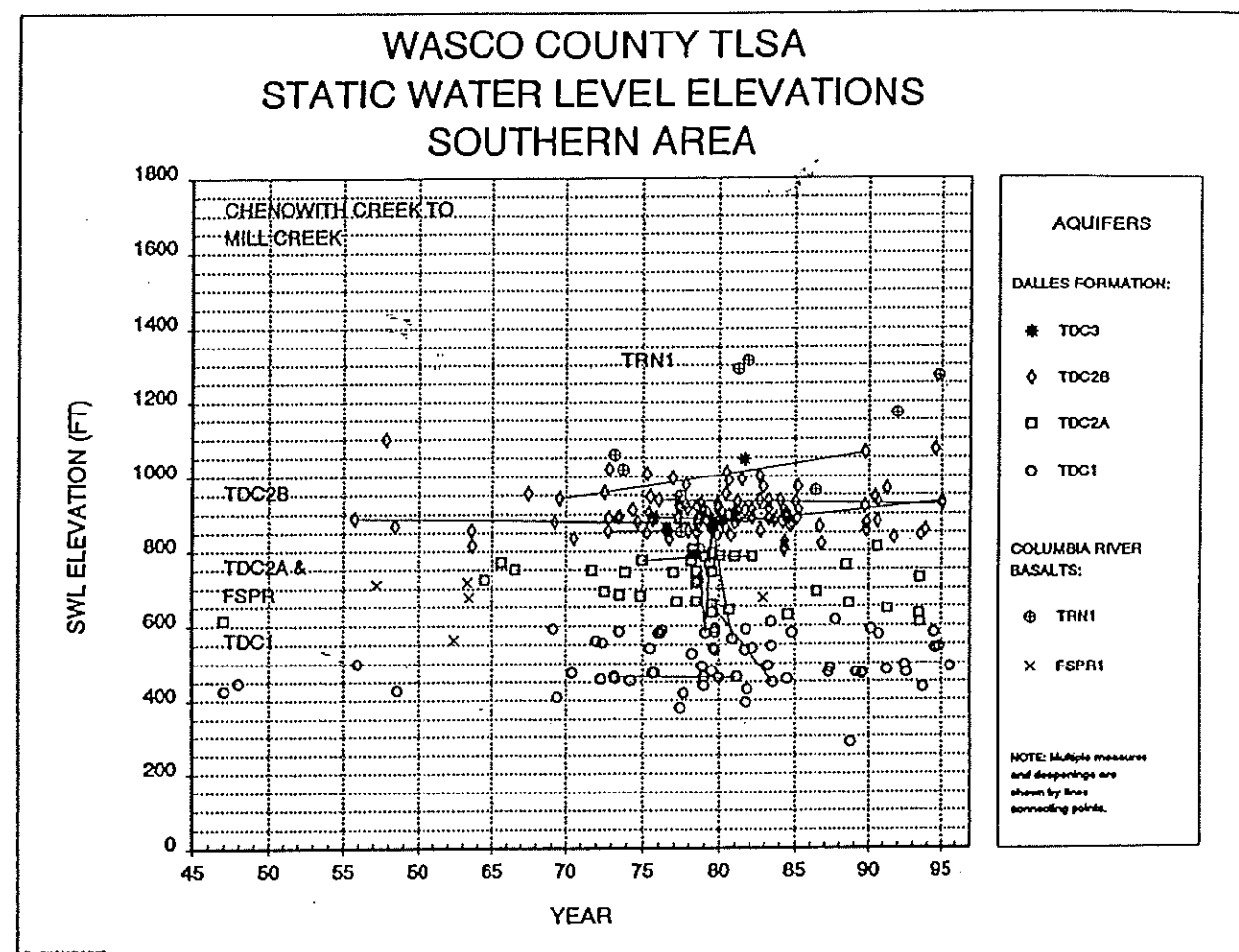


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.



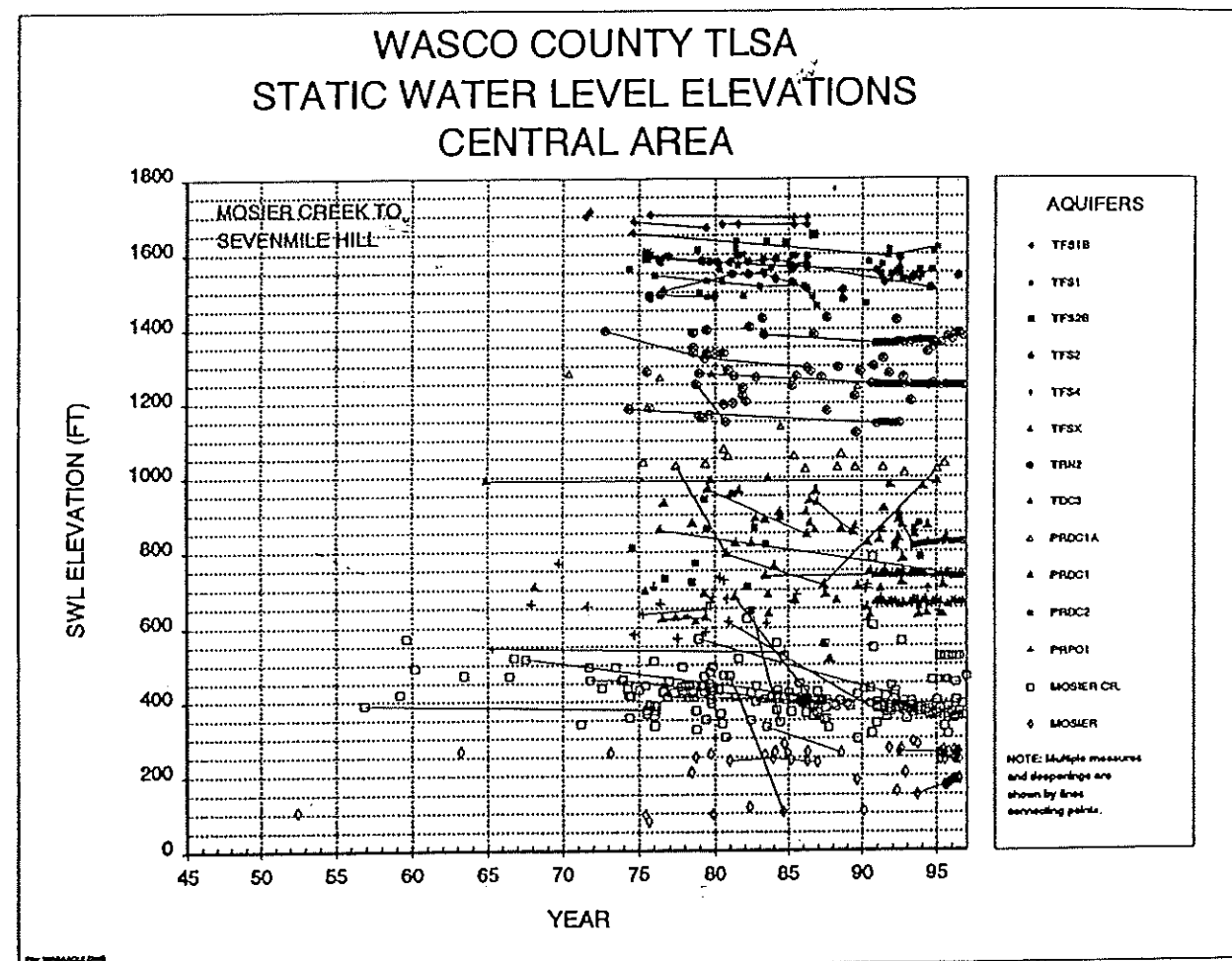


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.

significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPENED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A

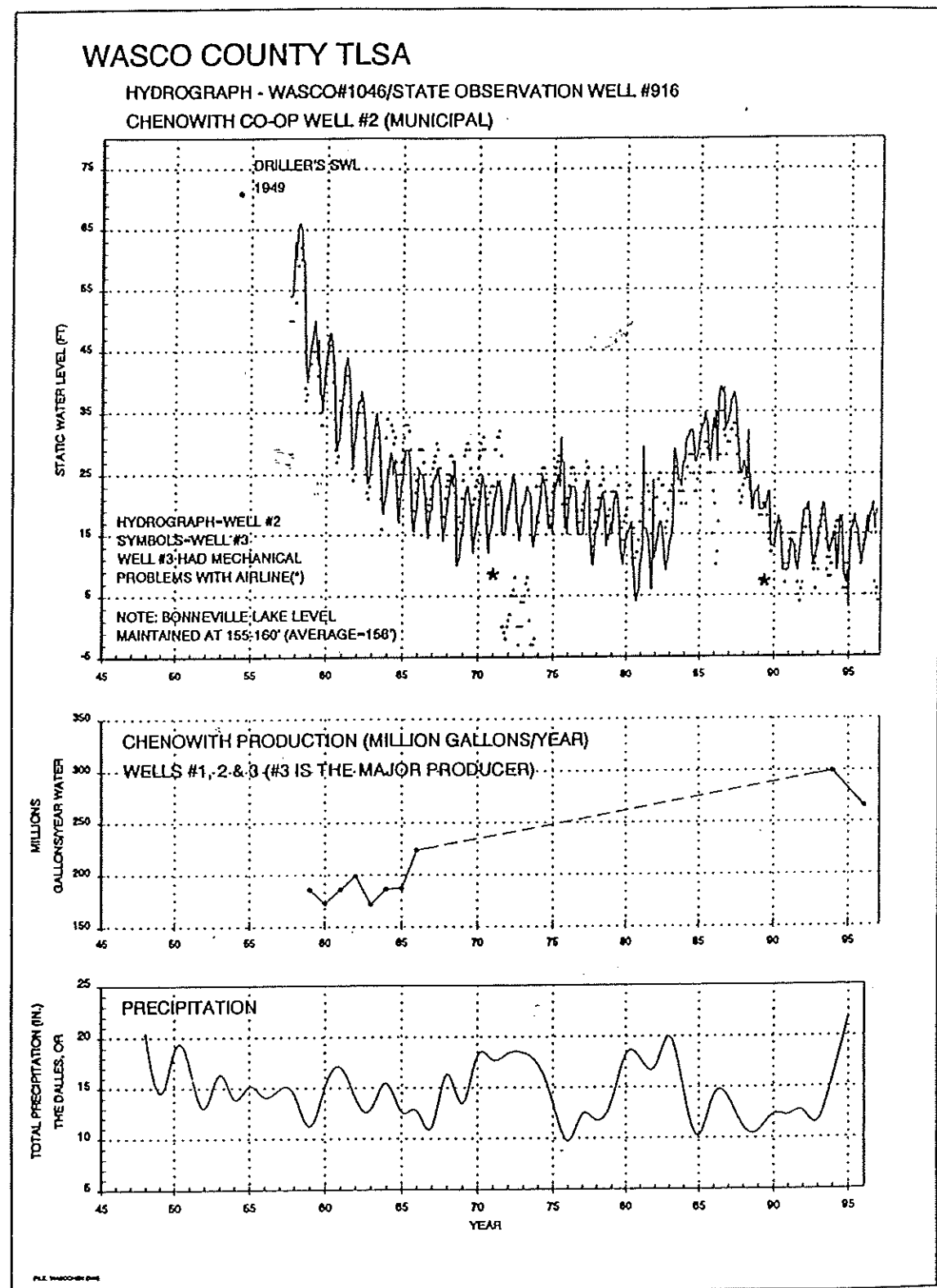


Figure 14. Chenowith Co-op water well data, 1949-1996.

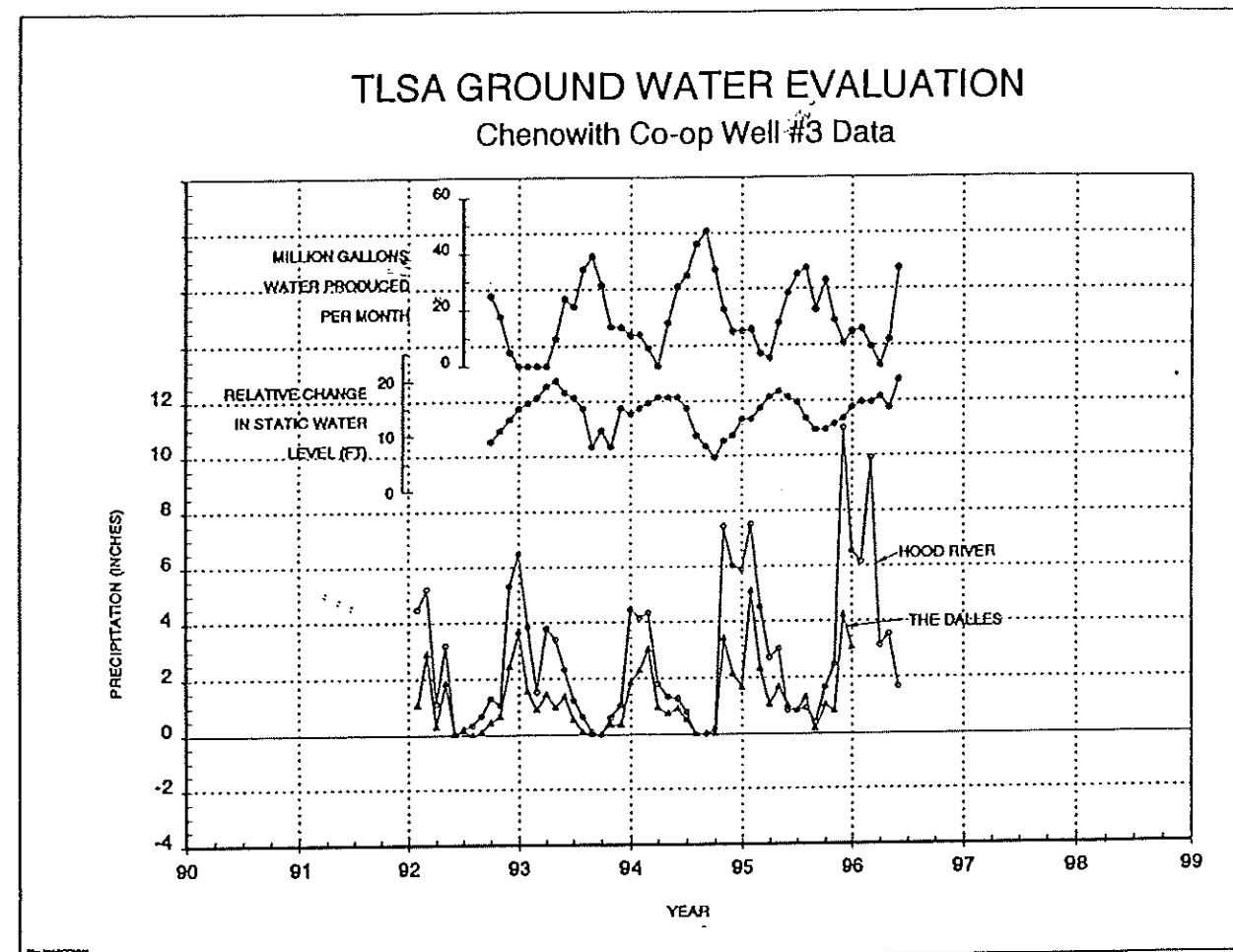


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.



similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

#### 1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

#### 2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.

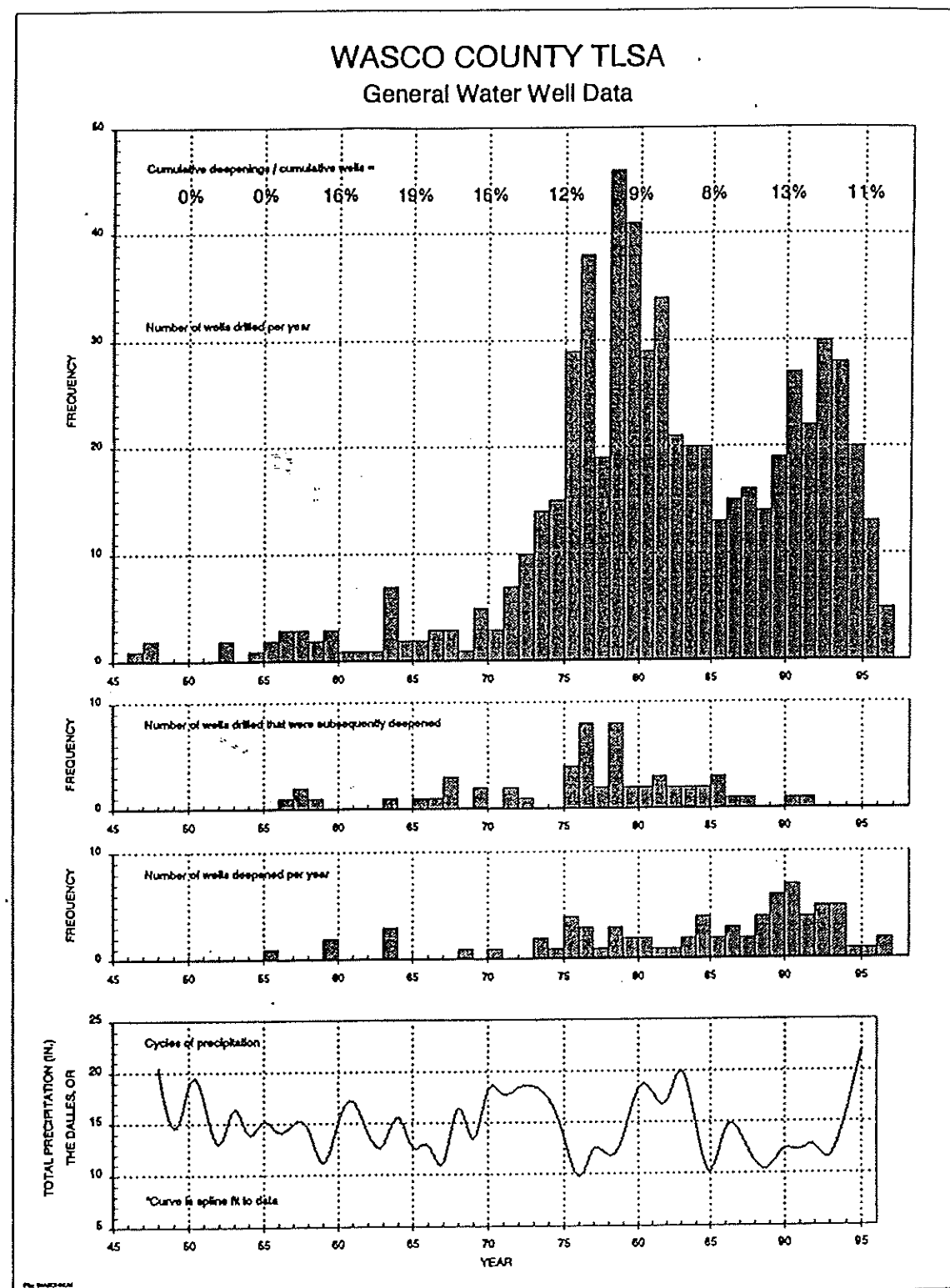


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

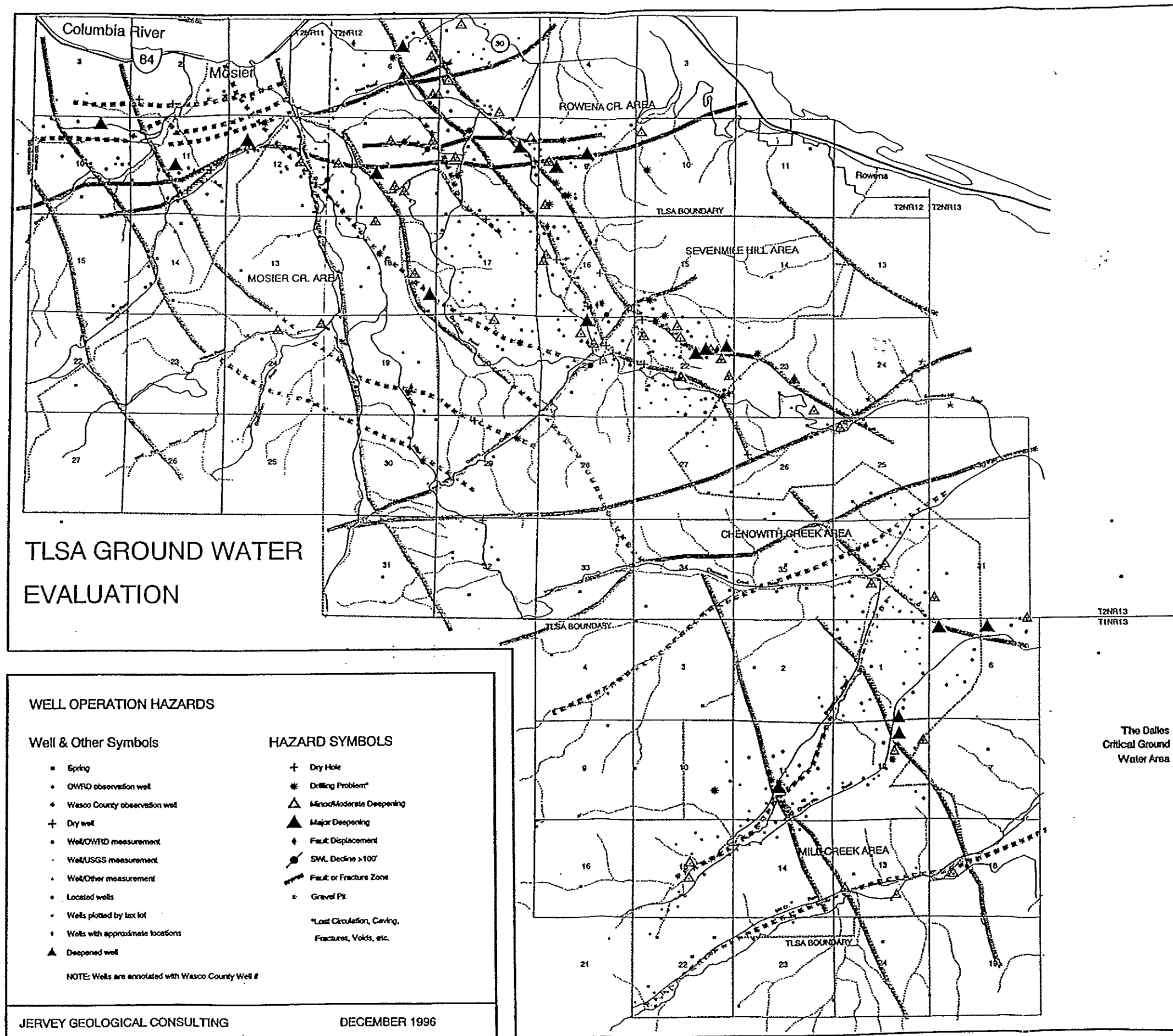






Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

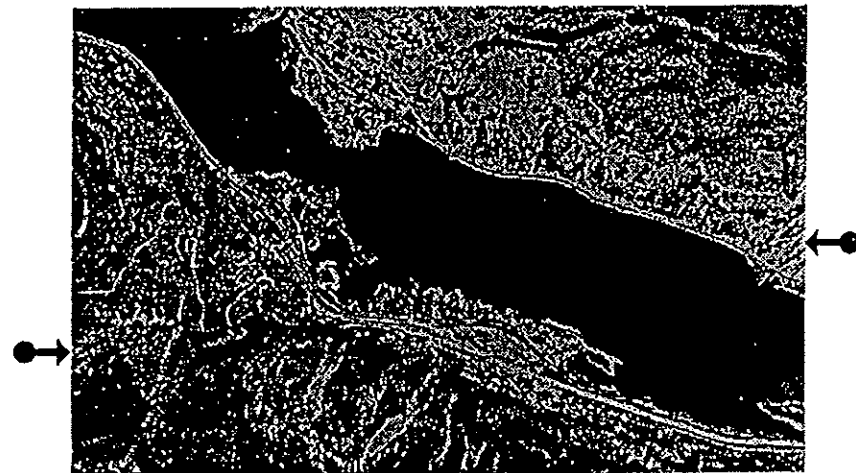


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

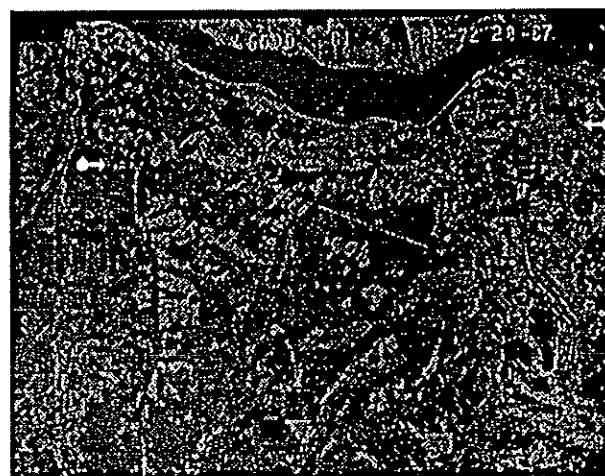


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.

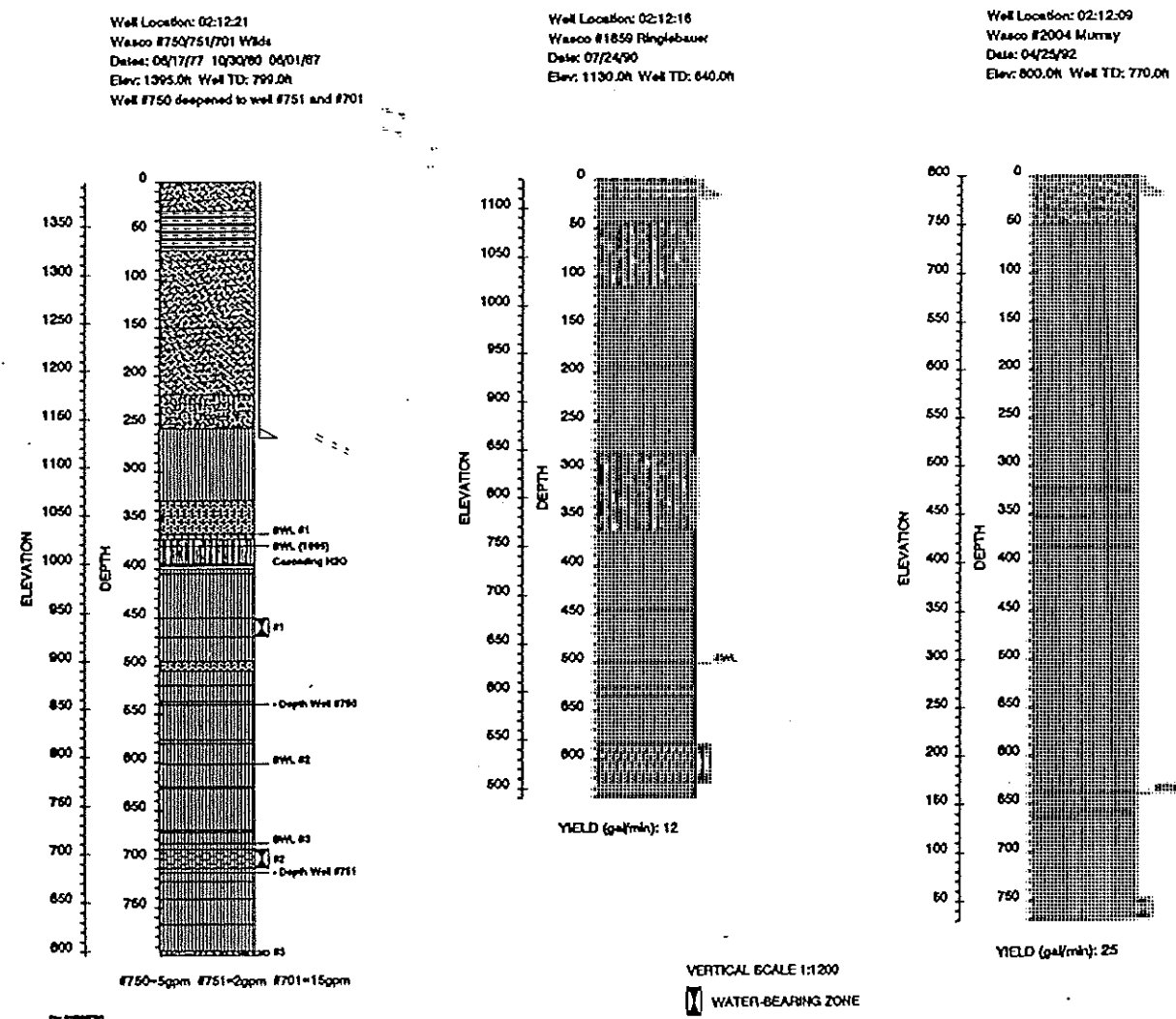


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

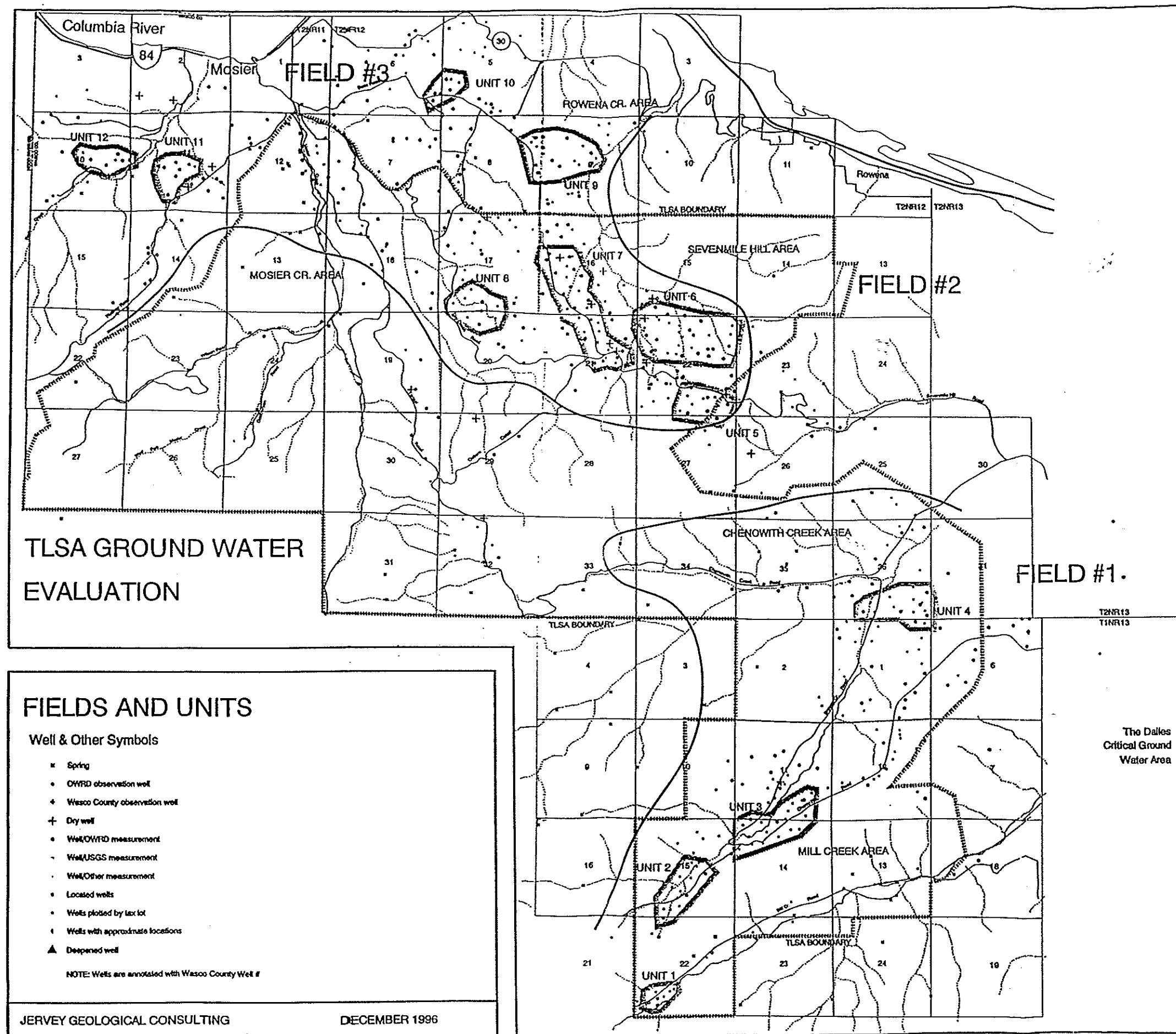
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.





REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by landowners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		AVERAGE WELL DISTANCE FEET	AVERAGE LOWER 1/3 WELL DISTANCE FEET	DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	PER ACRES WELL				
1	TDC2A	8	49	6	388	318	3
2	TDC2A&D	12	142	12	604	416	4
3	TDC2B	19	212	11	653	478	5
4	TDC1&2B	17	177	10	708	491	5 HIGH
5	TPS1&1B	12	123	10	602	393	4
6	TF62/TRN2	33	342	10	599	386	3 HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3 HIGH
8	PRDC1	9	138	15	798	580	8
9	PRPO1 HC TPSX	18	216	12	-	-	- HIGH
10	HC	7	68	10	-	-	-
11	MT/RC	7	97	14	-	-	-
12	RC	7	91	13	-	-	-

Table 3. Summary of well spacing in TLISA units.

than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

## ACKNOWLEDGEMENTS

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

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Steven Cain	Delbert and Elaine Huskey	Bill and Jeanne Reeves
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Linda Cartwright	Ken and Wendy Huskey	Carole Schmidt
Janine and Joseph Czerniecki	Wayne and Helen Huskey	Tamara Shannon
Betty Daniel	Greg Koonce	Mary Soden
Jim Deaton	Frank and Mary Kurz	Fred and Sylvian Stewart
Jackie Fulps	Nick and Mary Linebarger	

### PUBLIC AGENCIES/PRIVATE COMPANIES

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Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenowith Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

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All well drillers in the past and present have contributed information to this study. Those who were especially helpful (in the detail of their well records and/or their comments on the subject) include:

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Gilbert Clayton, Jr. and Sr.	Richard Murray
Harry Douthit	Clyde Root

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.

**EXHIBIT 5**

**Soil Information – 49C and 50D**

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY					
				(PCT)	4	10	40	200		INDEX				
0-7 IL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		IML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 IWB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS K	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY	STEEL	CONCRETE
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	DEPTH (IN)	HARDNESS (IN)	TOTAL (IN)	GRP	FROST ACTION
NONE			>6.0							10-60	HARD			MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY	ROADFILL	FAIR-AREA RECLAIM, THIN LAYER				
SEWAGE LAGOON AREAS	SEVERE-SLOPE	SAND	IMPROBABLE-EXCESS FINES				
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	GRAVEL	IMPROBABLE-EXCESS FINES				
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE	TOPSOIL	FAIR-SLOPE				
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER	POND RESERVOIR	WATER MANAGEMENT SEVERE-SLOPE				

BUILDING SITE DEVELOPMENT														
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE						EMBANKMENTS					SEVERE-PIPING		
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE						EXCAVATED PONDS					SEVERE-NO WATER		
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE						DRAINAGE					DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE						IRRIGATION					SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION						TERRACES AND DIVERSIONS					SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE						GRASSED WATERWAYS					SLOPE, ERODES EASILY		



RECREATIONAL DEVELOPMENT			
CAMP AREAS	MODERATE-SLOPE, DUSTY	PLAYGROUNDS	SEVERE-SLOPE
PICNIC AREAS	MODERATE-SLOPE, DUSTY	PATHS AND TRAILS	SEVERE-ERODES EASILY

[illegible]

(e) severe limitations  
erosion

ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY COMMON TREES	SITE INDEX	TREES TO PLANT
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	170	PONDEROSA PINE

Index of potential productivity @ avg. total ht. and 100yrs.

74 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac.  $\triangleleft$

A = slight or no limitations.

U.S. Avg. = 41 ft<sup>3</sup>/ac/yr.

Index of potential productivity @ avg. total ht. and 100 g/s.

$$64 \text{ cubic metres/hectare/yr.} = 57.2 \text{ ft}^3/\text{ac.}$$

A = sized or no limitations.

U.S. Avg = 41 ft<sup>3</sup>/ac/yr.

[illegible][illegible]

POTENTIAL NATIVE PLANT	COMMONITY	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	
IDAHO FESCUE	FEID	45
BLUEBUNCH WHEATGRASS	AGSP	10
SANDBERG BLUEGRASS	POSE	5
ARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	QUGA4	5
PONDEROSA PINE	PIPO	5

FAVORABLE YEARS  
NORMAL YEARS  
UNFAVORABLE YEA

$$\begin{array}{r} 950 \\ 800 \\ 450 \\ \hline \end{array}$$

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

50D WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY			
				(PCT)	4	10	40	200		INDEX			
0-7	1L	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28	1L, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44	1L, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	1UWB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY		
											STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY, SLOPE			FAIR-AREA RECLAIM, THIN LAYER, SLOPE			
ABSORPTION FIELDS				ROADFILL			
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL			POOR-SLOPE
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS			SEVERE-PIPING
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			DIKES AND LEVEES			
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS			SEVERE-NO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			AQUIFER FED			
LOCAL ROADS AND STREETS	SEVERE-SLOPE			DRAINAGE			DEEP TO WATER
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			IRRIGATION			SLOPE, ERODES EASILY
				TERRACES AND DIVERSIONS			SLOPE, ERODES EASILY
				GRASSED WATERWAYS			SLOPE, ERODES EASILY



## RECREATIONAL DEVELOPMENT

SEVERE-SLOPE		SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS	
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

[illegible]

## WOODLAND SUITABILITY

[illegible]

# WINDBREAKS

[illegible]

## WILDLIFE HABITAT SUITABILITY

[illegible]

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL	PERCENTAGE COMPOSITION (DRY WEIGHT)
IDAHO FESCUE	FEID	45
SANDBERG BLUEGRASS	POSE	5
BLUEBUNCH WHEATGRASS	AGSP	10
NARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	OUGA4	5
PONDEROSA PINE	PIPO	5
POTENTIAL PRODUCTION (LBS./AC. DRY WT):		
FAVORABLE YEARS		950
NORMAL YEARS		800
UNFAVORABLE YEARS		450

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FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

# **EXHIBIT 6**

## **Guide for Using Soil Surveys**



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**



GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.

## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty



Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.

Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:



<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0

Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.



A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	

Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.



These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.

#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.



Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.



The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.



Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:



Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.

## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.



selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other

important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.



XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.

FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.



## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.

TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

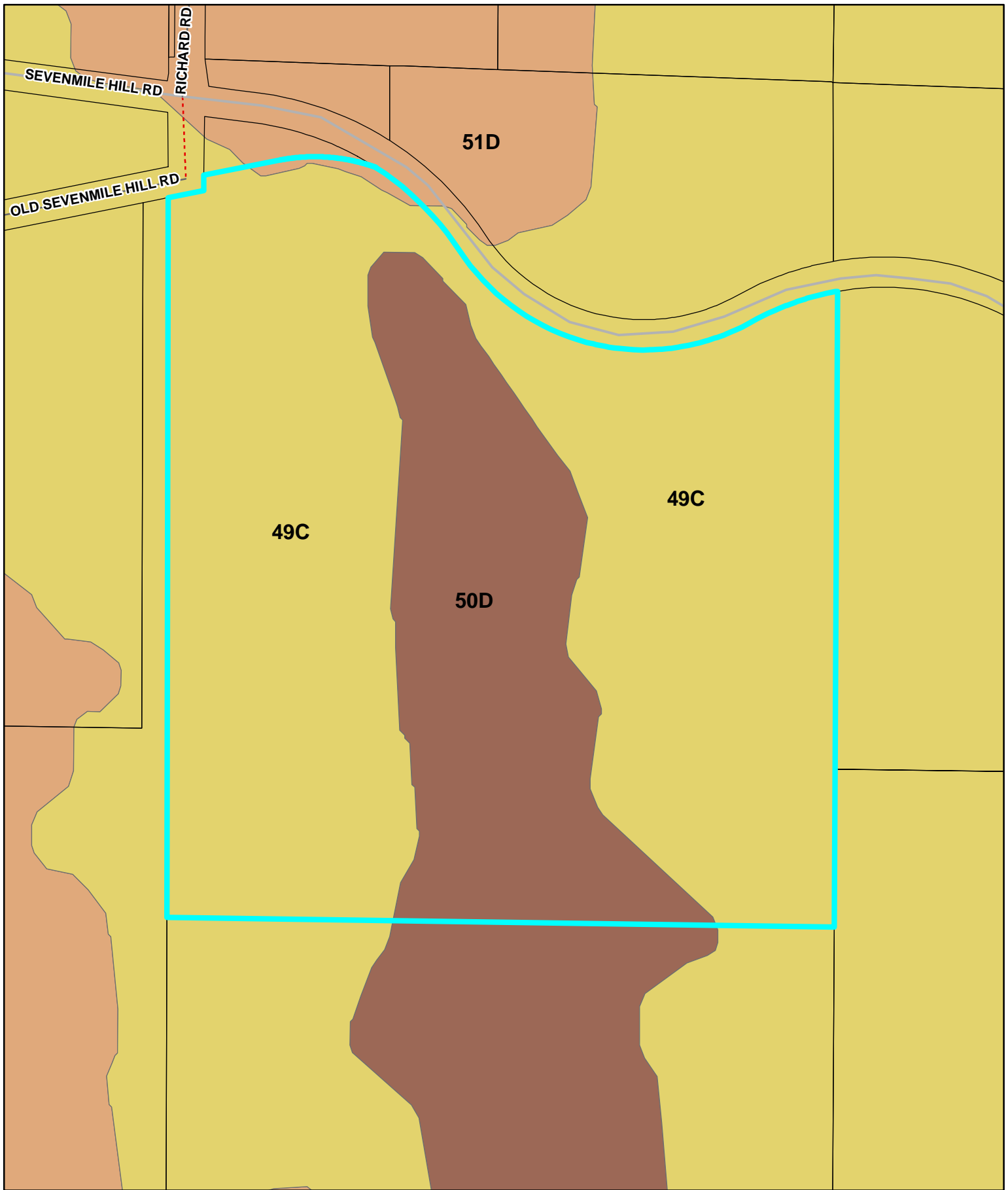
Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982

## **EXHIBIT 7**

### **Soil Map**



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

## Soil Map



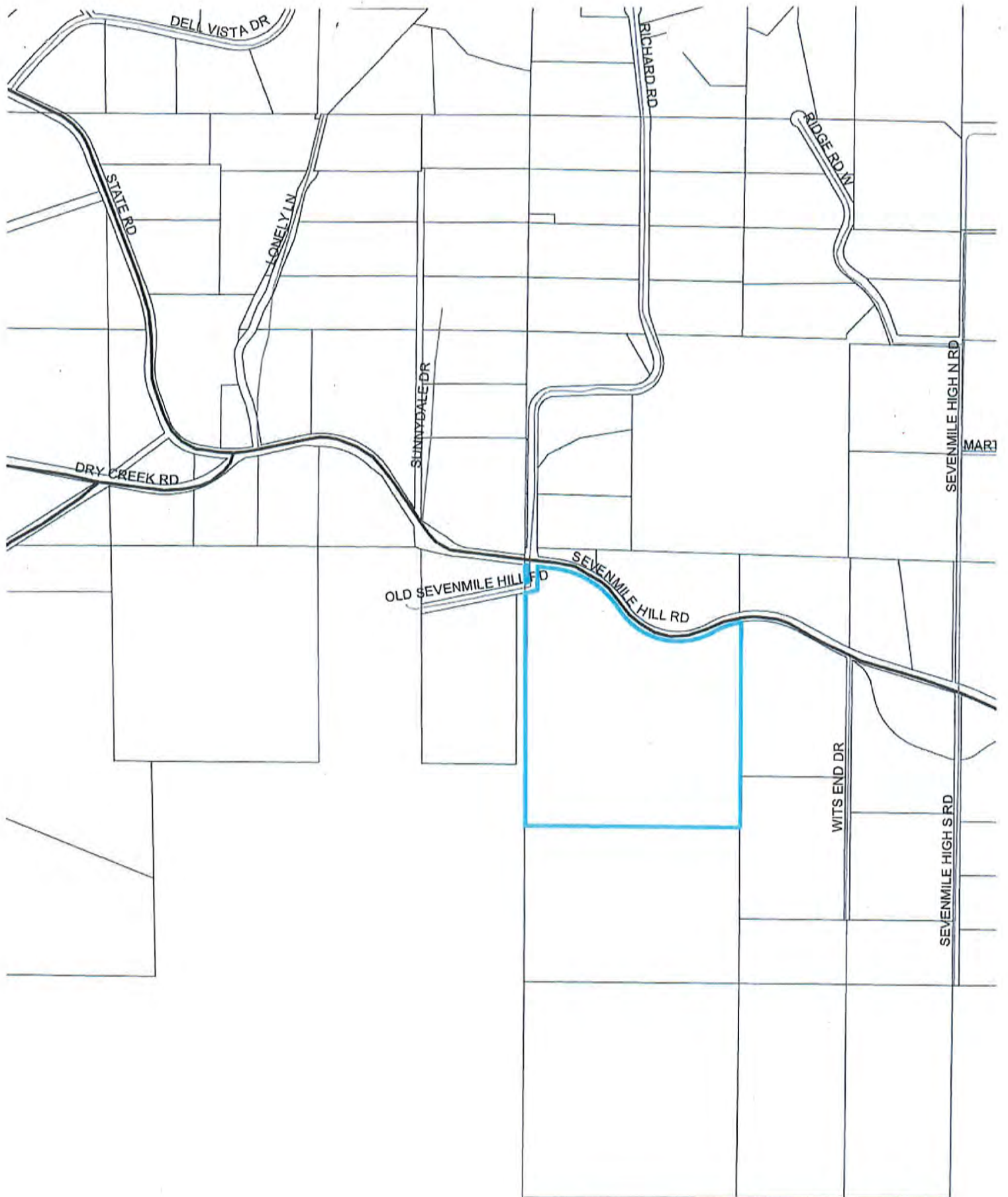
0 50 100 200 300 400 Feet

This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



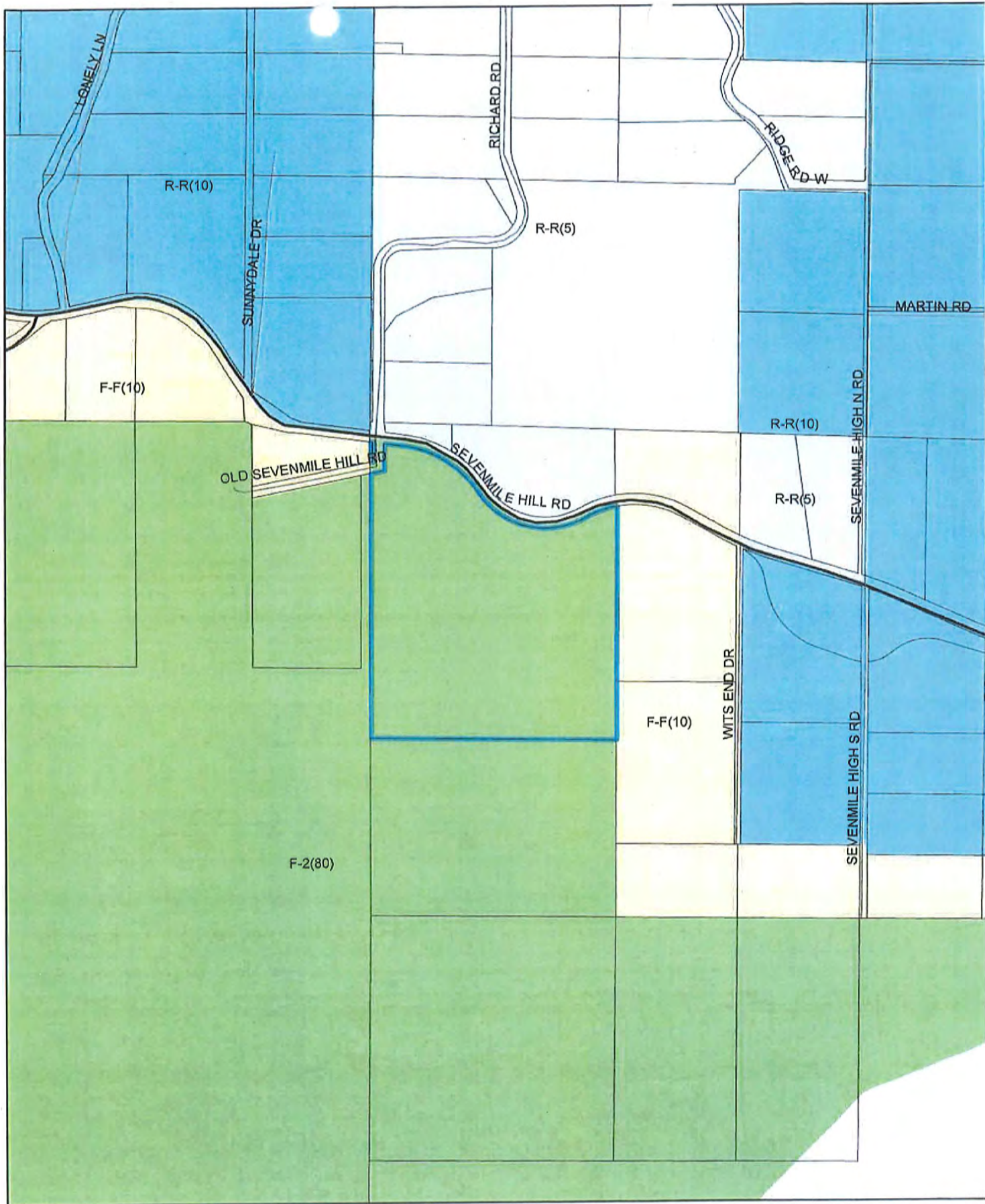
## **EXHIBIT 8**

### **Submitted Maps**



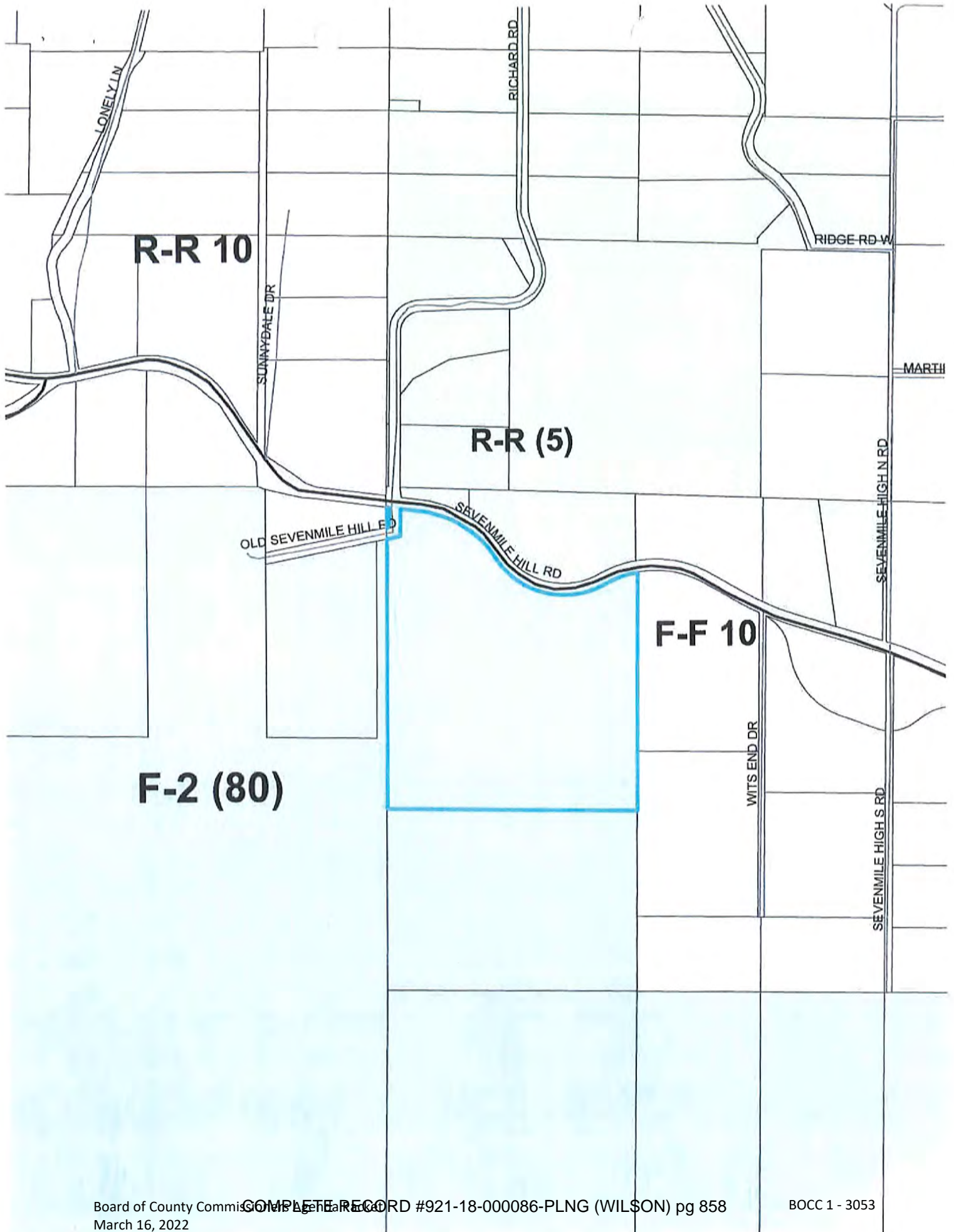






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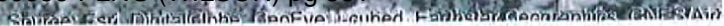








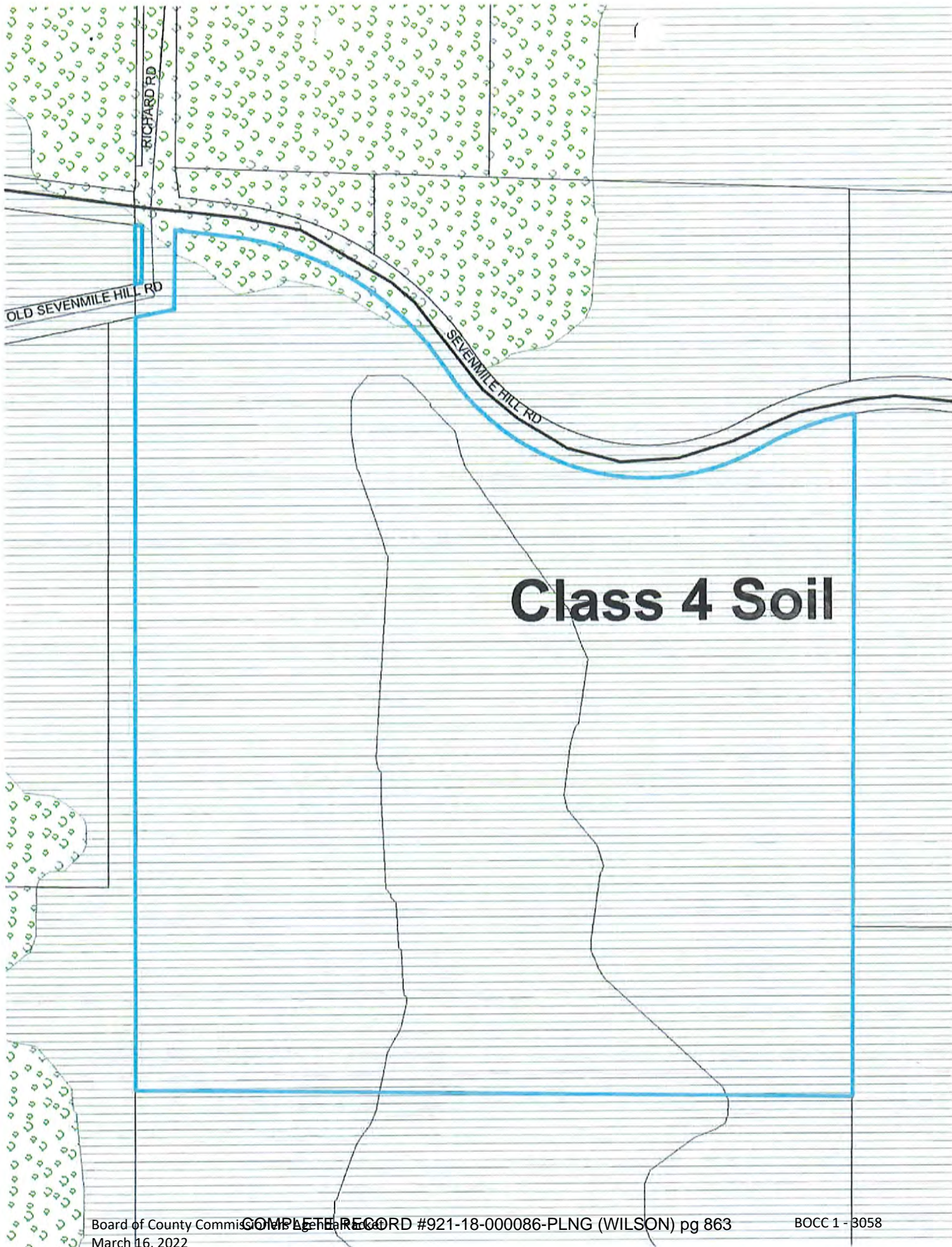




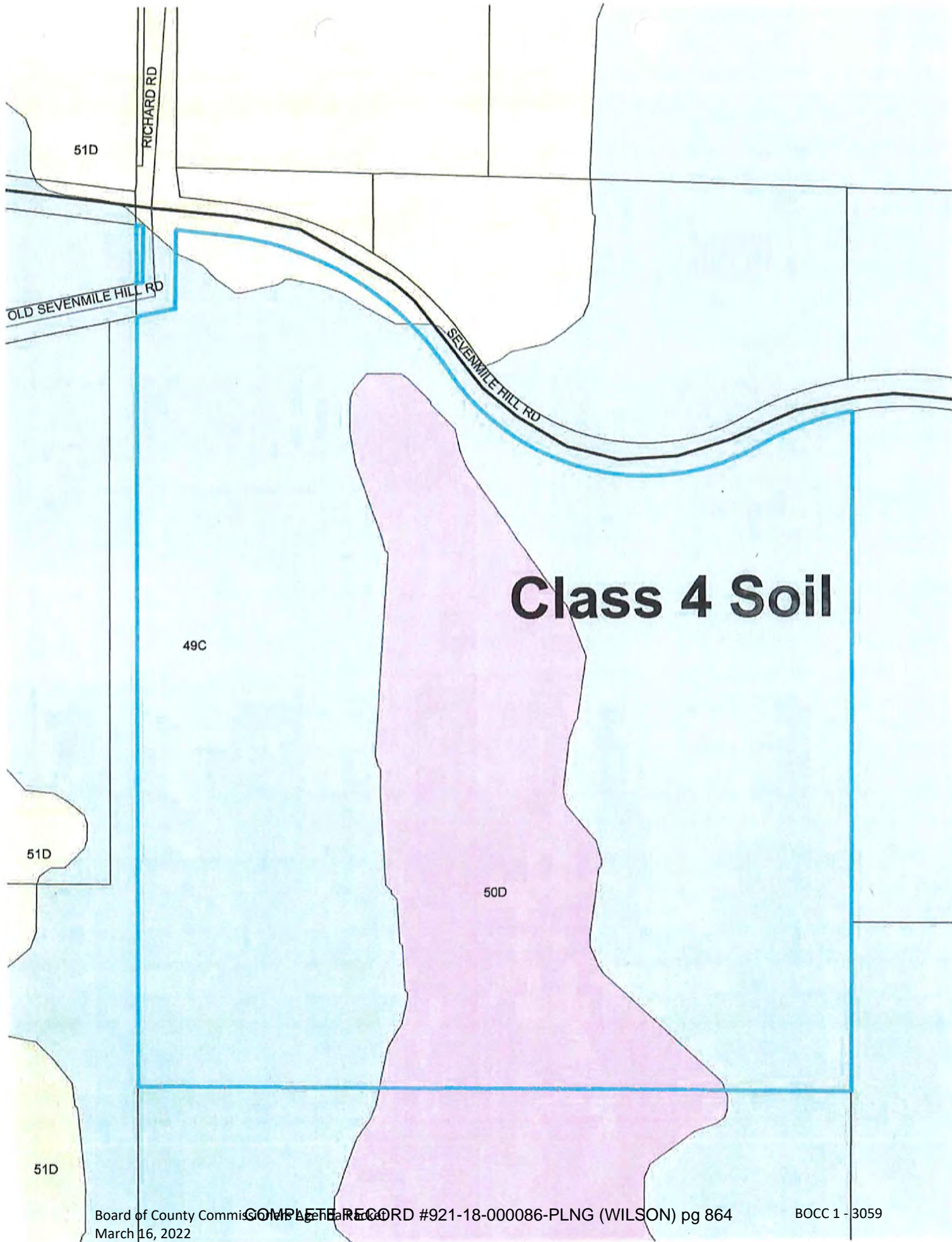




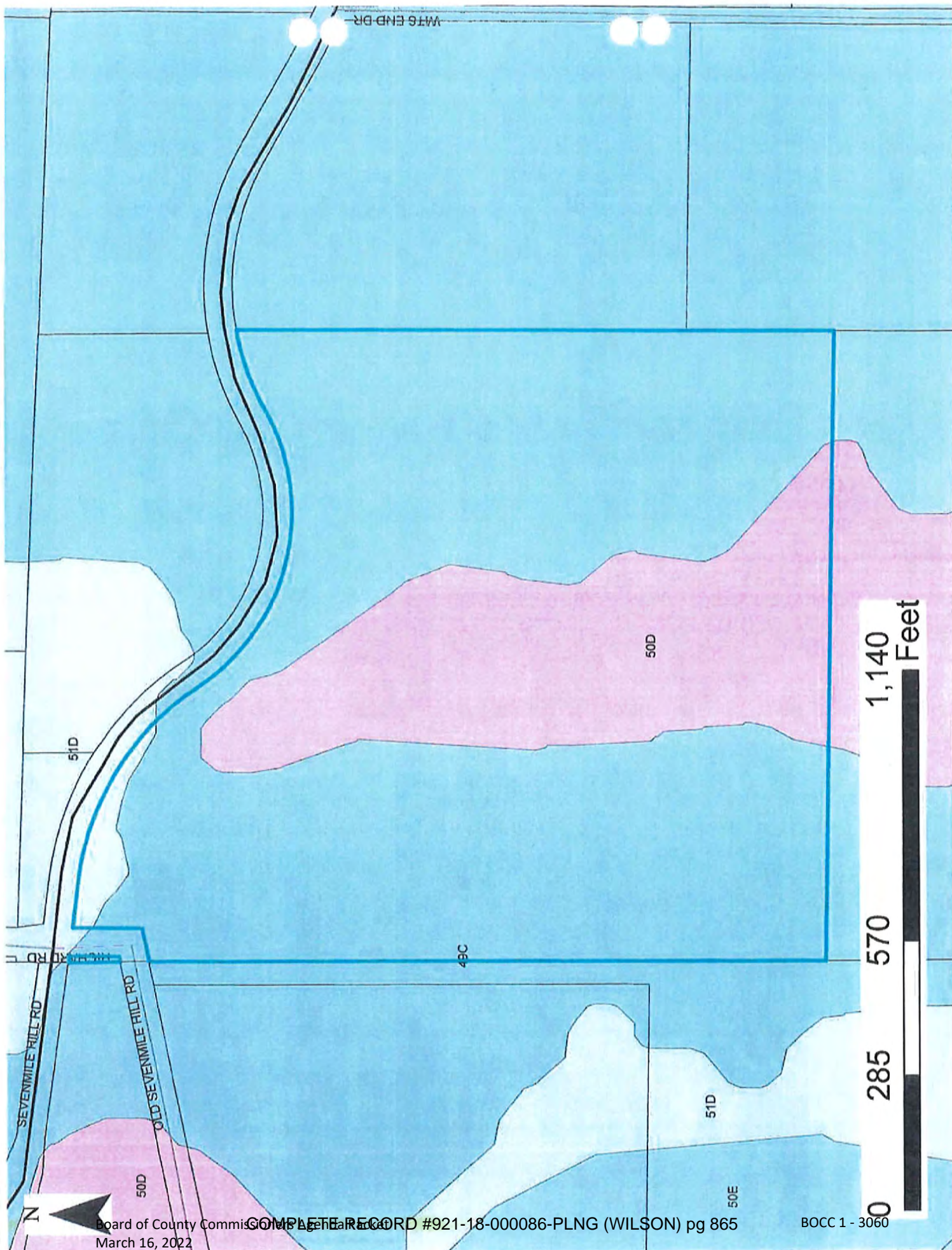














**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
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FILE NUMBER: 921-18-000086-PLNG

FEE: 0 (paid previously)

**LAND USE APPLICATION COVERPAGE**

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>APPLICANT INFORMATION</b>		<b>OWNER INFORMATION</b>	
Name: <u>David W. Wilson</u>		Name: <u>Same</u>	
Address: <u>7100 Seven Mile Hill Road</u>		Address: _____	
City/State/Zip: <u>The Dalles, Oregon 97058</u>		City/State/Zip: _____	
Phone: <u>(541) 490-3730</u>		Phone: _____	
Email: _____		Email: _____	

**PROPERTY INFORMATION**

Township/Range/Section/Tax Lot(s)	Acct #	Acres	Zoning
2N 12E 22 4400	884	40.1	F-2

Property address (or location): 7100 Seven Mile Hill Road

Zoning Designation: F-2 Environmental Protection District: EPD 8

Proposed Use: F-F Permitted Subject to Section: \_\_\_\_\_

Water source: Well Sewage disposal method: Septic

Are there wetlands/waterways on your property? ☒ NO ☐ YES (description) \_\_\_\_\_

Name of road providing access: Seven Mile Hill Road

Current use of property: Residential Use of surrounding properties: Residential, farm

Do you own neighboring property? ☐ NO ☒ YES (description) Tax lots 4800, 2100

**DETAILED PROJECT DESCRIPTION (proposed use, structures, dimensions, etc.):** \_\_\_\_\_

Zone change from F-2 to F-F

☐ Additional description/maps/pictures attached

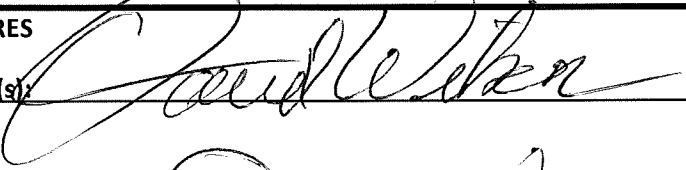
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**LEGAL PARCEL STATUS**

Partition, Subdivision, OR

Most Recent Pre-9/4/1974 Deed #: PLAPAR-17-05-0002 Date Filed: September 8, 2017

Current Deed #: \_\_\_\_\_ Date Filed: \_\_\_\_\_

*The deed and a map showing the property described in the deed(s) must accompany this application.***SIGNATURES**Applicant(s):  Date: 5/4/18Property Owner(s):  Date: 5/4/18

Date: \_\_\_\_\_

Date: \_\_\_\_\_

---

**PLEASE NOTE:** Before this application will be processed, you **must** supply all requested information and forms, and address **all listed or referenced criteria**. Pursuant to ORS 215.428, this office will review the application for completeness and notify Applicant of any deficiencies within 30 days of submission. By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.**ALL LAND USE APPLICATIONS MUST INCLUDE:**

- ☐ Application Fee – Cash or Check (credit cards now accepted with additional fee)
- ☐ Site Plan
- ☐ Elevation Drawing
- ☐ Fire Safety Self-Certification
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_**APPLICATIONS FOR PROPERTIES IN THE NATIONAL SCENIC AREA MUST ALSO INCLUDE:**

- ☐ Scenic Area Application/Expedited Review
- ☐ Color and Material Samples
- ☐ Landscaping Plan
- ☐ Grading Plan
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_

**SHADED AREA TO BE COMPLETED BY PLANNING DEPARTMENT**

**Legal Parcel**

Deed/Land Use Action: \_\_\_\_\_

☐ NO

☐ YES

**Previous Map and Tax Lot:** \_\_\_\_\_

**Past Land Use Actions:** If yes, list file #(s) \_\_\_\_\_

☐ NO

☐ YES

Subject to previous conditions?

☐ NO

☐ YES

**Assessor Property Class:** \_\_\_\_\_

**Zoning:** \_\_\_\_\_

**Environmental Protection Districts – List applicable EPDs:**

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

**Water Resources**

Are there bodies of water or wetlands (seasonal or permanent) on property or adjacent properties? ☐ NO ☐ YES

Describe (include setback distances): \_\_\_\_\_

☐ Fish bearing ☐ Non fish bearing ☐ Seasonal Creek

☐ Irrigation ditch ☐ Wetland ☐ Pond/Lake ☐ Not identified

*(Note: Check buffers. Different zones have different setback requirements that may require a more extensive permitting process.)*

**Access:**

County or ODOT approach permit on file? ☐ NO ☐ YES, # \_\_\_\_\_

**Address:**

Address exists and has been verified to be correct?

☐ NO

☐ YES

Address needs to be assigned after approval?

☐ NO

☐ YES

**Fire District:** \_\_\_\_\_

**Fees (List Review Type and Cost):** \_\_\_\_\_



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FILE NUMBER: PLAZNC

FEE: \_\_\_\_\_

## ZONE CHANGE APPLICATION

Date Received: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

Date Complete: \_\_\_\_\_

Planner Initials: \_\_\_\_\_

### Current Zoning

Comprehensive Plan Map Designation: FOREST

Zoning Designation: F.2 (80)

### Proposed Zoning

Comprehensive Plan Map Designation: FOREST- FARM

Zoning Designation: F.F (10)

Total Acreage to be Rezoned: 40.10

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. Describe how the original zoning was the product of a mistake; or
3. Establish that:
  - a. The rezoning will conform with the Comprehensive Plan (including but not limited to all applicable goals and policies); and,
    - Goal 1: Citizen Involvement
    - Goal 2: Land Use Planning
    - Goal 3: Agricultural Lands
    - Goal 4: Forest Lands
    - Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources
    - Goal 6: Air, Water and Land Resources Quality
    - Goal 7: Areas Subject to Natural Disasters and Hazards
    - Goal 8: Recreational Needs
    - Goal 9: Economy of the State
    - Goal 10: Housing
    - Goal 11: Public Facilities and Services
    - Goal 12: Transportation
    - Goal 13: Energy Conservation
    - Goal 14: Urbanization



- b. The site is suitable to the proposed zone (taking into consideration among other things slope, access, flooding, traffic, availability of public facilities and services, and impact to adjacent properties); and
  - c. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.
4. What effect would the proposed change have on surrounding properties? Include a description of the existing land uses within 1,000 feet of the proposed zone change.
  5. Is there a public need or demand to support this requested zone change? ☐ No ☐ Yes. If YES, please describe.
  6. Fire Safety. If converting Farm or Forest zoned land to a non-resource zone, include an analysis of how future division and residential development could meet fire safety standards.
  7. Any other information which may add to the viability of the request.

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#### SITE INFORMATION

The following maps shall be required for a complete application:

**Zoning Map:** Show area of proposed re-zoning.

**Soils Map:** If converting Forest or Farm zoned land to a non-resource zone include a soils map. These are available at the Wasco County GIS Department or the Farm Services Agency.

**Site Plan Map for the area to be rezoned and lands within at least 1000' that includes the following:**

- ☐ North Arrow
- ☐ Scale
- ☐ Boundaries or properties proposed to be rezoned (dimensions)
- ☐ All waterways, wetlands, noticeable landforms and drainage of property
- ☐ Structures (including dwelling, accessory buildings, barns, walls and fences) with location and size
- ☐ Utilities (existing)
  - Electric/Communication corridors including poles
  - Septic tanks & drain fields (primary and reserve)/Wells and supply lines
- ☐ All points of ingress and egress (roads and driveways) and whether they are public or private with their length, width and surface type
- ☐ Significant terrain features and land forms including slopes over 20%

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Zone Change will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set. A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

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FILE NUMBER: **PLACPA-**\_\_\_\_\_

FEE: \_\_\_\_\_

## COMPREHENSIVE PLAN AMENDMENT

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>PROPOSED CHANGE</b>			

Indicate specific Comprehensive Plan section(s) or element(s) proposed to be amended or added:

Amend Comprehensive Plan to re-zone tax lot 2N 12E 22 4400 from F-2(80) to F-F(10)

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### FINDS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. A landowner or their representative may only initiate a quasi-judicial plan amendment. Describe how the proposal meets the standard of a quasi-judicial amendment and not a legislative amendment.

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership.

3. The amendment will be in compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable and substantial proof that such change shall not be detrimental to the spirit and intent of such goals. These goals include:

Goal 1: Citizen Involvement  
Goal 2: Land Use Planning  
Goal 3: Agricultural Lands  
Goal 4: Forest Lands  
Goal 5: Open Spaces, Scenic and Historic Areas  
and Natural Resources  
Goal 6: Air, Water and Land Resources Quality  
Goal 7: Areas Subject to Natural Disasters and Hazards

Goal 8: Recreational Needs  
Goal 9: Economy of the State  
Goal 10: Housing  
Goal 11: Public Facilities and Services  
Goal 12: Transportation  
Goal 13: Energy Conservation  
Goal 14: Urbanization

4. Demonstrate there was a mistake in the original comprehensive plan or change in the character of the neighborhood.
  5. Address factors which relate to the public need for healthful, safe and aesthetic surrounding and conditions.
  6. Include proof of change in the inventories originally developed.
  7. Amendment shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established. Provide additional studies and established need to justify the amendment.
- A response (findings of fact) to each of the questions above has been submitted? ☐ No ☒ YES

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Comprehensive Plan Amendment will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

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FILE NUMBER: PLAEXC

FEE: \_\_\_\_\_

## GOAL EXCEPTION APPLICATION

Date Received: \_\_\_\_\_ Planner Initials: \_\_\_\_\_ Date Complete: \_\_\_\_\_ Planner Initials: \_\_\_\_\_

### PROPOSED EXCEPTION

Indicate the Goal(s) for which the exception is requested:

Goal 4 - Forest Lands

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed goal exception?
2. Is there a public need or demand to support this requested Goal Exception? ☐ No ☐ Yes. If YES, please describe.
3. An exception is a decision to exclude certain land from the requirements of one or more applicable statewide goals. Goal Exceptions fall into three categories: Physically Developed; Irrevocably Committed; and Reasons.

Indicate which type of goal exception is being proposed and include findings for the review criteria listed below and any additional referenced criteria. These are directly from Oregon Administrative Rule and are available at [http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_004.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_004.html). Oregon Revised Statute criteria are available at <http://landru.leg.state.or.us/ors/>

a. Exception Requirements for Land Physically Developed to Other Uses

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.



**b. Exception Requirements for Land Irrevocably Committed to Other Uses**

- (1)** A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a)** A "committed exception" is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b)** For the purposes of this rule, an "exception area" is that area of land for which a "committed exception" is taken;
  - (c)** An "applicable goal," as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.
- (2)** Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:
  - (a)** The characteristics of the exception area;
  - (b)** The characteristics of the adjacent lands;
  - (c)** The relationship between the exception area and the lands adjacent to it; and
  - (d)** The other relevant factors set forth in OAR 660-004-0028(6).
- (3)** Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(1)(b), in Goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is "impossible." For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable:
  - (a)** Farm use as defined in ORS 215.203;
  - (b)** Propagation or harvesting of a forest product as specified in OAR 660-033-0120; and
  - (c)** Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).
- (4)** A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.
- (5)** Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.
- (6)** Findings of fact for a committed exception shall address the following factors:
  - (a)** Existing adjacent uses;
  - (b)** Existing public facilities and services (water and sewer lines, etc.);
  - (c)** Parcel size and ownership patterns of the exception area and adjacent lands:
    - (i)** Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels;

- (ii) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownerships are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.
  - (d) Neighborhood and regional characteristics;
  - (e) Natural or man-made features or other impediments separating the exception area from adjacent resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;
  - (f) Physical development according to OAR 660-004-0025; and
  - (g) Other relevant factors.
- (7) The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.
- (8) The requirement for a map or aerial photograph in section (7) of this rule only applies to the following committed exceptions:
  - (a) Those adopted or amended as required by a Continuance Order dated after the effective date of section (7) of this rule; and
  - (b) Those adopted or amended after the effective date of section (7) of this rule by a jurisdiction with an acknowledged comprehensive plan and land use regulations.
- c. Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)  
 An exception Under Goal 2, Part II(c) can be taken for any use not allowed by the applicable goal(s). The types of reasons that may or may not be used to justify certain types of uses not allowed on resource lands are set forth in the following sections of this rule:
  - (1) For uses not specifically provided for in subsequent sections of this rule or in OAR 660-012-0070 or chapter 660, division 14, the reasons shall justify why the state policy embodied in the applicable goals should not apply. Such reasons include but are not limited to the following:
    - (a) There is a demonstrated need for the proposed use or activity, based on one or more of the requirements of Goals 3 to 19; and either
    - (b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near the resource. An exception based on this subsection must include an analysis of the market area to be served by the proposed use or activity. That analysis must demonstrate that the proposed exception site is the only one within that market area at which the resource depended upon can reasonably be obtained; or
    - (c) The proposed use or activity has special features or qualities that necessitate its location on or near the proposed exception site.
  - (2) Rural Residential Development: For rural residential development the reasons cannot be based on market demand for housing, except as provided for in this section of this rule, assumed continuation of past urban and rural population distributions, or housing types and cost characteristics. A county must show why, based on the economic analysis in the plan, there are reasons for the type and density of housing planned which require this particular location on resource lands. A jurisdiction could justify an exception to allow residential development on resource land outside an urban growth boundary by determining that the rural

location of the proposed residential development is necessary to satisfy the market demand for housing generated by existing or planned rural industrial, commercial, or other economic activity in the area.

- (3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts include, but are not limited to, the following:
- (a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports; or
  - (b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or
  - (c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.
- (4) Expansion of Unincorporated Communities: For the expansion of an Unincorporated Community defined under OAR 660-022-0010(10), appropriate reasons and facts include but are not limited to the following:
- (a) A demonstrated need for additional land in the community to accommodate a specific rural use based on Goals 3-19 and a demonstration that either:
    - (i) The use requires a location near a resource located on rural land; or
    - (ii) The use has special features necessitating its location in an expanded area of an existing unincorporated community, including:
      - (a) For industrial use, it would have a significant comparative advantage due to its location (i.e., near a rural energy facility, or near products available from other activities only in the surrounding area; or it is reliant on an existing work force in an existing unincorporated community);
      - (b) For residential use, the additional land is necessary to satisfy the need for additional housing in the community generated by existing industrial, commercial, or other economic activity in the surrounding area. The plan must include an economic analysis showing why the type and density of planned housing cannot be accommodated in an existing exception area or UGB, and is most appropriate at the particular proposed location. The reasons cannot be based on market demand for housing, nor on a projected continuation of past rural population distributions.
  - (b) Need must be coordinated and consistent with the comprehensive plan for other exception areas, unincorporated communities, and UGBs in the area. Area encompasses those communities, exception areas, and UGBs which may be affected by an expansion of a community boundary, taking into account market, economic, and other relevant factors;
  - (c) Expansion requires demonstrated ability to serve both the expanded area and any remaining infill development potential in the community at time of development with the level of facilities determined to be appropriate for the existing unincorporated community.
- (5) Expansion of Urban Unincorporated Communities: Expansion of an urban unincorporated community defined under OAR 660-022-0010(9) shall comply with OAR 660-022-0040.

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information pursuant to the attached instructions. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Goal Exception will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

In case of Appeal: Written notice of the appeal must be filed with the Planning Director, within twelve (12) days of the subject decision. Forms are available at the Wasco County Planning Department.

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P:\Development Applications\GoalException.docx

Last Updated 7/13/2017



**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## BACKGROUND INFORMATION

### PROPERTY OWNERS:

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### PUBLIC FACILITIES AND SERVICES:

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells, and there is a well on the subject property serving the existing residence and associated accessory buildings. The general conclusion of the Groundwater Study is that this area has capacity to support additional residential development. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the

TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

- 1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."
- 1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."



1.3. The following provisions apply and are addressed in the following sections.

1.4. Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

1.5. Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

1.6. The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_)

### **1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is "To maintain and improve the quality of the air, water and land resources of the state." The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is "To protect people and property from natural hazards." Goal 7 calls for local governments to adopt measures "to reduce risk to people and property from natural hazards." The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts." If the zoning is changed to F-F(10), "Parks, playgrounds, hunting and fishing preserves and campgrounds" would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is "To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens." The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is "To provide for the housing needs of citizens of the state." The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid- Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the



area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

"1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - "TPR"). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## 1.9 Procedures for a Plan Amendment.

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.



## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 Forest Lands.”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 north south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.



## 2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### 2.3.1 OAR 660-004-0028(1) provides:

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### 2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### 2.3.3 (b) “the characteristics of the adjacent lands;”

#### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911;

Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

#### 2.3.4 (c) The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of

these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

- (a) Farm use as defined in ORS 215.203;
- (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;
- (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other



agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice." Webster's New World Dictionary, 2nd College Edition, 1980. Capable means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (unabridged ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of "forest products" can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores."

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, "peripheral" farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared

for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject

property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) "Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations."

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 "(d) Neighborhood and regional characteristics;"

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 "(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;"

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas



to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6** (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7** “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3 OAR 660-004-0040(6) and (7) provide:**

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;



(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

"Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);"

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<sup>1</sup> Missing text in published version of Section 9.010.

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  1. The rezoning will conform with the Comprehensive Plan; and,
  2. The site is suitable to the proposed zone;
  3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable

plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff s office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

### Goal 12-Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road



is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property, which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and

increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.







## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

POST-FREE PERIOD IS 100 TO 150 DAYS.																																																							
ESTIMATED SOIL PROPERTIES																																																							
DEPTH (IN.)		USDA TEXTURE		UNIFIED		AASHTO		FRACTURE IN 3" PASSING SIEVE NO.				LIQUID LIMIT		PLASTICITY																																									
								(PCT) 4 10 40 200						INDEX																																									
0-7 IL		ML, CL-ML		A-4		0		95-100 95-100 90-95 55-75				20-25		NP-5																																									
7-28 IL, SIL		ML, CL-ML		A-4		0		95-100 95-100 90-95 55-75				20-25		NP-5																																									
28-44 IL, SCL		ML		A-4		0		95-100 95-100 90-95 55-75				30-35		5-10																																									
44 UWB																																																							
DEPTH (IN.)		CLAY (PCT)		MOIST BULK DENSITY (G/CM3)		PERMEABILITY (IN/HR)		AVAILABLE WATER CAPACITY (IN/IN)		SOIL REACTION (PH)		SALINITY (MMHOS/CM)		SHRINK-SWELL POTENTIAL		EROSION FACTORS		WIND EROD. GROUP		ORGANIC MATTER (PCT)		CORROSIVITY STEEL CONCRETE																																	
0-7		15-25		1.10-1.30		0.6-2.0		0.19-0.22		6.6-7.3		-		LOW		1.49		4		-		1-2 MODERATE LGW																																	
7-28		18-27		1.20-1.35		0.6-2.0		0.19-0.22		6.6-7.3		-		LOW		1.43																																							
28-44		20-30		1.30-1.45		0.2-0.6		0.13-0.15		6.6-7.3		-		LOW		1.43																																							
44																																																							
FLOODING				HIGH WATER TABLE				CEMENTED PAN				BEDROCK				SUBSIDENCE				HYDRO-POTENTIAL																																			
FREQUENCY				DURATION				MONTHS				DEPTH				HARDNESS				DEPTH				HARDNESS																															
NONE								26.0				-				140-60				HARD				- 1 B MODERATE																															
SANITARY FACILITIES														CONSTRUCTION MATERIAL																																									
SEPTIC TANK ABSORPTION FIELDS														SEVERE-PERCS SLOWLY														ROADFILL														FAIR-AREA RECLAIM, THIN LAYER													
SEWAGE LAGOON AREAS														SEVERE-SLOPE														SAND														IMPROBABLE-EXCESS FINES													
SANITARY LANDFILL (TRENCH)														SEVERE-DEPTH TO ROCK														GRAVEL														IMPROBABLE-EXCESS FINES													
SANITARY LANDFILL (AREA)														MODERATE-DEPTH TO ROCK, SLOPE														TOPSOIL														FAIR-SLOPE													
DAILY COVER FOR LANDFILL														FAIR-AREA RECLAIM, SLOPE, THIN LAYER														POND RESERVOIR AREA														SEVERE-SLOPE													
																																										WATER MANAGEMENT													
SHALLOW EXCAVATIONS														MODERATE-DEPTH TO ROCK, SLOPE														EMBANKMENTS DIKES AND LEVEES														SEVERE-PIPING													
DWELLINGS WITHOUT BASEMENTS														MODERATE-SLOPE														EXCAVATED PONDS AQUIFER FED														SEVERE-NO WATER													
DWELLINGS WITH BASEMENTS														MODERATE-DEPTH TO ROCK, SLOPE														DRAINAGE														DEEP TO WATER													
SMALL COMMERCIAL BUILDINGS														SEVERE-SLOPE														IRRIGATION														SLOPE, ERODES EASILY													
LOCAL ROADS AND STREETS														MODERATE-SLOPE, FROST ACTION														TERRACES AND DIVERSIONS														SLOPE, ERODES EASILY													
LAWNS, LANDSCAPING AND GOLF FAIRWAYS														MODERATE-SLOPE														GRASSED WATERWAYS														SLOPE, ERODES EASILY													

RECREATIONAL DEVELOPMENT												
CAMP AREAS	MODERATE-SLOPE, DUSTY					PLAYGROUNDS		SEVERE-SLOPE				
PICNIC AREAS	MODERATE-SLOPE, DUSTY					PATHS AND TRAILS		SEVERE-ERODES EASILY				
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)												
	CAPABILITY	WHEAT (BU)	GRASS HAY (TONS)									
	NI	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	
	4E	35	1.5									
<i>Severe limitations (e) erosion</i>												
WOODLAND SUITABILITY												
ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY						
	EROSION	EQUIP.	SEEDLING	WINDTH.	PLANT	COMMON TREES			TREES TO PLANT			
	HAZARD	LIMIT	MORTY.	HAZARD	COMPET.	SITE INDEX						
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK			170. PONDEROSA PINE			
<i>4 cubic yds / 1000 lbs / 1000 ft</i>												
WINDBREAKS												
SPECIES		HT	SPECIES		HT	SPECIES		HT	SPECIES		HT	
NONE												
WILDLIFE HABITAT SUITABILITY												
POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:						
GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWOOD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPEN WETLAND	WOODLAND	WETLAND	RANGELAND	
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	-	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)												
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)										
IDAHO FESCUE	FE10	45										
BLUEBUNCH WHEATGRASS	AGSP	10										
SANDBERG BLUEGRASS	POSE	5										
NARROWLEAF BALSAMROOT	BASA3	2										
ANTELOPE BITTERBRUSH	PUTR2	10										
OREGON WHITE OAK	QUGA4	5										
PONDEROSA PINE	PIPO	5										
POTENTIAL PRODUCTION (LBS./AC. DRY WT):												
FAVORABLE YEARS		950										
NORMAL YEARS		800										
UNFAVORABLE YEARS		450										
FOOTNOTES												

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLAS- TICITY						
					3 10 40 200		INDEX						
0-7 IL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5						
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5						
28-44 IL, SCL		ML	A-4	0	95-100 95-100 90-95 55-75	30-35	5-10						
44 LUWB													
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL K I T GROUP	EROSION WIND FACTORS (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE			
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING													
				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
				DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
FREQUENCY				DURATION	MONTHS	(FT)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	ACTION
NONE						>6.0			10-50	HARD	-		MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY	SLOPE		ROADFILL	FAIR-AREA RECLAIM	THIN LAYER	SLOPE
ABSORPTION FIELDS							
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	SLOPE		GRAVEL	IMPROBABLE-EXCESS FINES		
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL	POOR-SLOPE		
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			POND RESERVOIR AREA	SEVERE-SLOPE		
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING		
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS	SEVERE-NO WATER		
				AQUIFER FED			
				DRAINAGE	DEEP TO WATER		
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			IRRIGATION	SLOPE, ERODES EASILY		
LOCAL ROADS AND STREETS	SEVERE-SLOPE			TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY		
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			GRASSED WATERWAYS	SLOPE, ERODES EASILY		

RECREATIONAL DEVELOPMENT													
CAMP AREAS	SEVERE-SLOPE					PLAYGROUNDS				SEVERE-SLOPE			
PICNIC AREAS	SEVERE-SLOPE					PATHS AND TRAILS				SEVERE-ERODES EASILY			
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)													
	CAPA-BILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)										
	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR
	4E	35	1.5										
WOODLAND SUITABILITY													
ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY				TREES TO PLANT				
	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT. %	WINDTH. HAZARD	PLANT COMPET.	COMMON TREES				ISITE INDEX	TREES TO PLANT		
14A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK				70	PONDEROSA PINE		
WINDBREAKS													
	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT			
	NONE												
WILDLIFE HABITAT SUITABILITY													
POTENTIAL FOR HABITAT ELEMENTS													
GRAIN & SEED		GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD	WOODLD	WETLAND	RANGELD	
POOR		FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR		
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)													
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)											
IDAHO FESCUE	FEID	45											
SANDBERG BLUEGRASS	POSE	5											
BLUEBUNCH WHEATGRASS	AGSP	10											
NARROWLEAF BALSAMROOT	BASA3	2											
ANTELOPE BITTERBRUSH	PUTR2	10											
OREGON WHITE OAK	OUGA4	5											
PONDEROSA PINE	PIPO	5											
POTENTIAL PRODUCTION (LBS./AC. DRY WT.):													
FAVORABLE YEARS		950											
NORMAL YEARS		800											
UNFAVORABLE YEARS		450											

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



RECEIVED 9-25-92  
FROM ODF

Ponderosa Pine Site Classes and Site Index Table  
Compared with Cubic Foot Site Classes

	Site Index												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Site Index →													
Potential Yield Cubic Feet Per Acre Gross Cubic Foot	20	20-49			50-84		85-119		120-164		165-224		225+
Cubic Foot Site Class	7	6			5		4		3		2		1

Red Fir - Noble Fir - Pacific Silver Fir Site Index and  
Cubic Foot Site Class Table (Forest Survey)

	Site Index				
	20	30	40	50	60
Potential Yield Cubic Feet/Acre	50-84	85-119	120-164	165-224	
Cubic Foot Site Class	5	4	3	2	

Sitka Spruce Site Index and Cubic Foot  
Site Class Table (Forest Survey)

	Site Index														
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
Potential Yield Cubic Feet/Acre	20-49	50-84		85-119		120-164		165-224			225+				
Cubic Foot Site Class	6	5		4		3		2			1				



**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## BACKGROUND INFORMATION

### PROPERTY OWNERS:

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### PUBLIC FACILITIES AND SERVICES:

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A



Geologic Survey was published in 1996 as part of the TLISA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLISA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLISA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLISA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."

1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm

uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

**1.3.** The following provisions apply and are addressed in the following sections.

**1.4.** Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

**1.5.** Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

**1.6.** The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_\_\_\_)

**1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.

6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception



is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built

and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most

appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:



“1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - “TPR”). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and



(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 'Forest Lands.’”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 feet north/south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other commercial agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot

sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## **2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.**

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### **2.3.1 OAR 660-004-0028(1) provides:**

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### **2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:**

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### **2.3.3 (b) “the characteristics of the adjacent lands;”**

### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the



parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911; Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the

area. The subject property has never produced merchantable timber or been logged commercially.

**2.3.4 (c)** The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice.” Webster’s New World Dictionary, 2nd College Edition, 1980. Capable means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (unabridged ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject



parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of “forest products” can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.”

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons

explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

**2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be

irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current

designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

2.3.9.6 (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

2.3.9.7 “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.



**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3** OAR 660-004-0040(6) and (7) provide:

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

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**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:



“Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);”

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process

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<sup>1</sup> Missing text in published version of Section 9.010.

there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject

property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

#### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

#### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

#### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

#### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

#### Goal 12 -Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

#### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

#### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property,



which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## CONCLUSION

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.

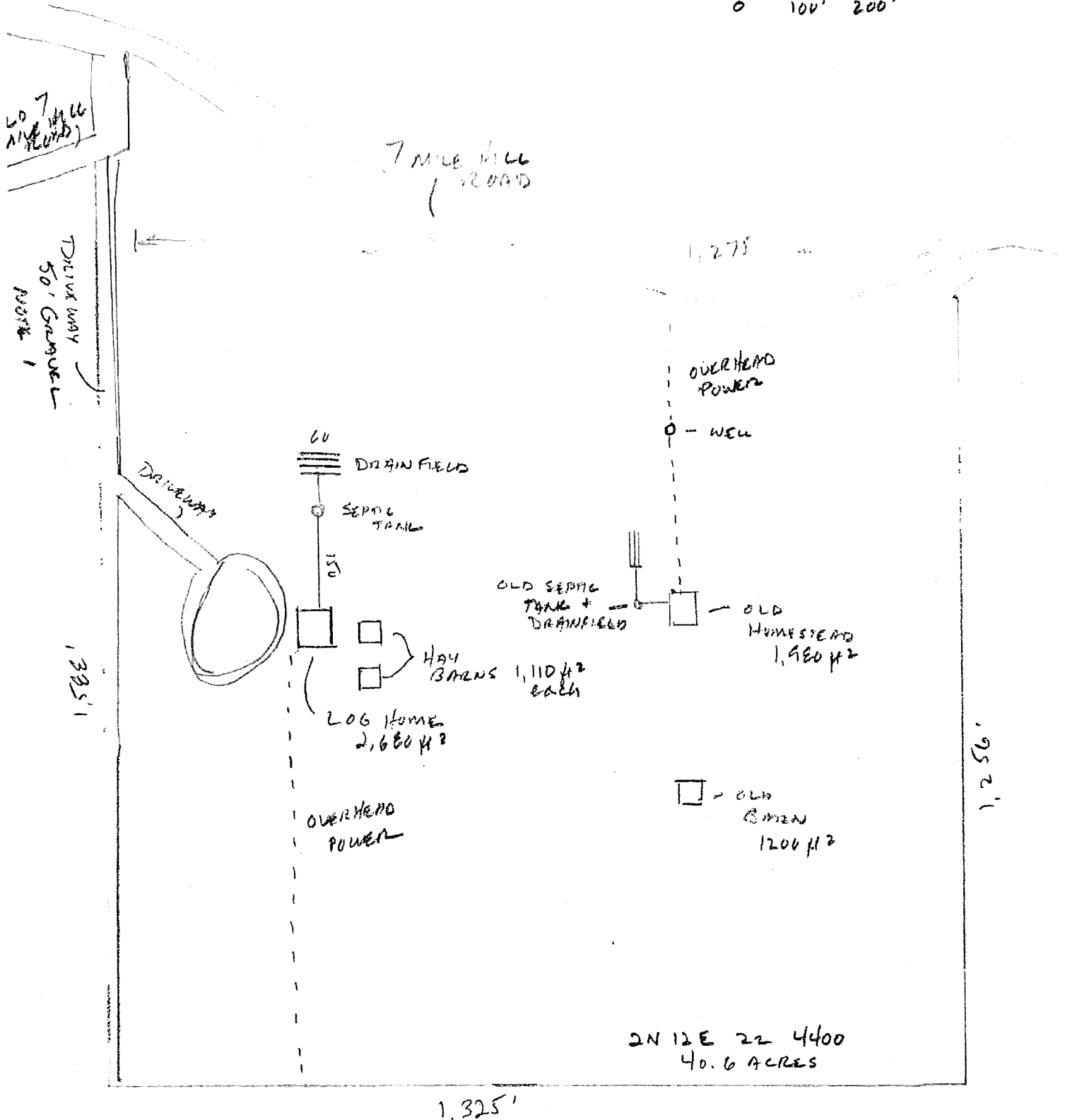


# WILSON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'







STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.785)

RECEIVED

WASC  
003105

24/2E-22cb

APR 20 1987

(1) OWNER:

Name Richard J. Murray Well Number: WATER RESOURCES DEPT  
Address 2175 Ridge Rd SALEM, OREGON  
City The Dalles, State Oregon Zip 97058

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 3/20 ft.  
Explosives used ☐ Yes ☒ No ☐ Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount
meter	From	To	Material	From	To	sacks or pounds
12	0	24	Bentonite	0	24	700#

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other Rodded

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:

☐ Perforations Method \_\_\_\_\_  
☐ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing ☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done? ☐ Yes By whom NO  
Did any strata contain water not suitable for intended use? ☒ Too little  
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:

County Wasco Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Seven Mile Rd

(10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found		240	
From	To	Estimated Flow Rate	SWL
230	270	5	
334	350	2 1/2 50	150

(12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number 606  
Signed \_\_\_\_\_ Date 4/17/87

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 4/17/87

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Do not write above this line)

WV4500

State Well No. 2N-12E-22

State/Permit No. ....

003111

Contractor's License No. 2222 Date 11/11/11, 1811

March 16, 2022

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

RECEIVED

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WASC

WATER WELL REPORT

STATE OF OREGON

MAY 28 1974

State Well No.

2N/12E-22

003131

(Please type or print)

STATE ENGINEER

State Permit No.

SALEM, OREGON

(1) OWNER:

Name Samuel Decker

Address Route 4, Box 210

The Dalles, Oregon 97058

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒

6" Diam. from 0 ft. to 41 ft. Gage 250

" Diam. from " ft. to " ft. Gage "

" Diam. from " ft. to " ft. Gage "

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name

Type Model No.

Diam. Slot size Set from ft. to ft.

Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Air Bailer test 50 gal./min. with 100 ft. drawdown after 9 hrs.

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite - cement

Well sealed from land surface to 40 ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 4 sacks

Number of sacks of bentonite used in well seal 2 sacks

Brand name of bentonite Yellowstone

Number of pounds of bentonite per 100 gallons

of water 65 lbs./100 gals.

Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☐ Yes ☒ No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Wasco Driller's well number

NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.

Static level 33 ft. below land surface. Date 5-14-74

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

Water Well Contractor's Certification:

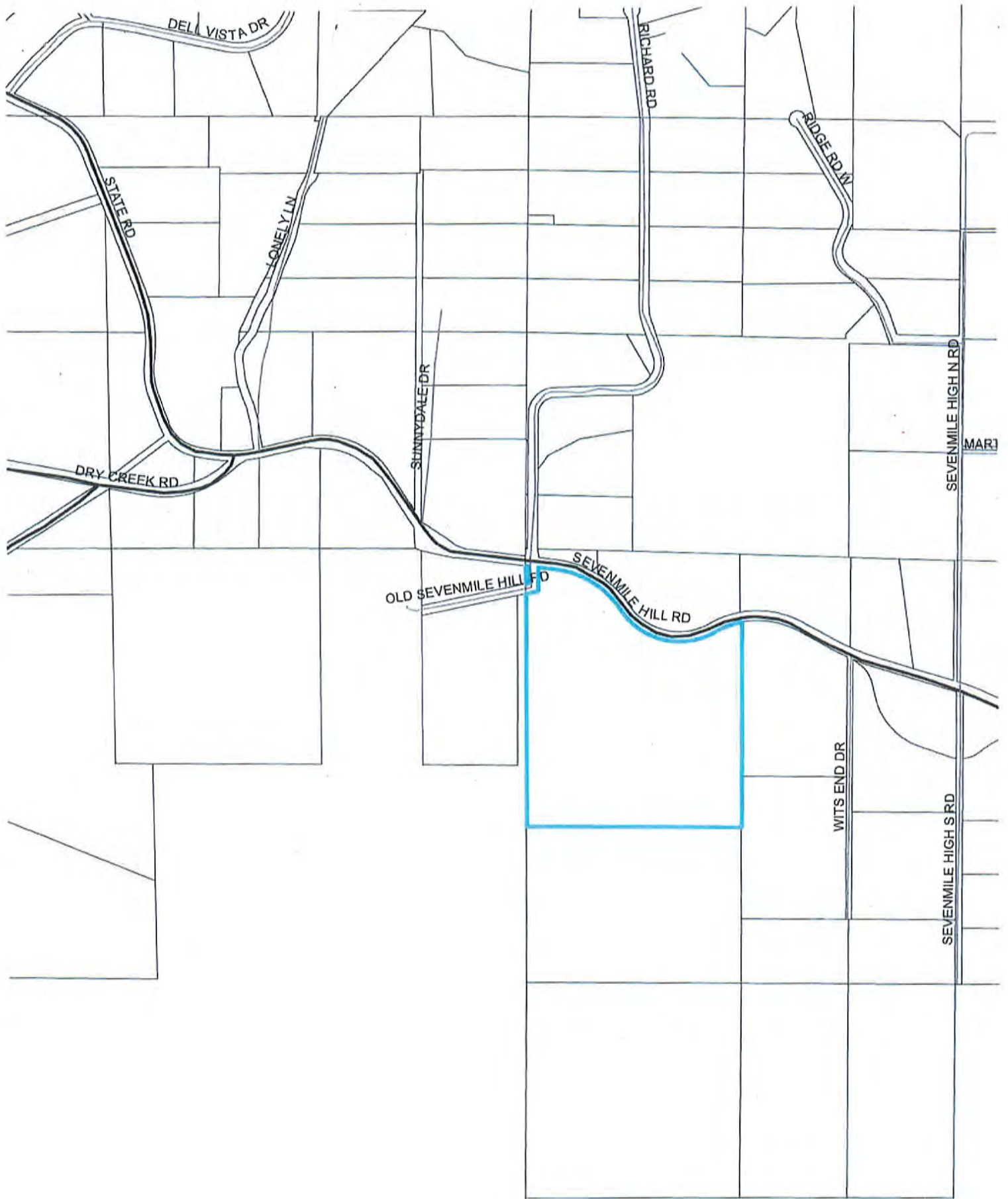
This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt 1, Box 61-A, The Dalles, Oregon

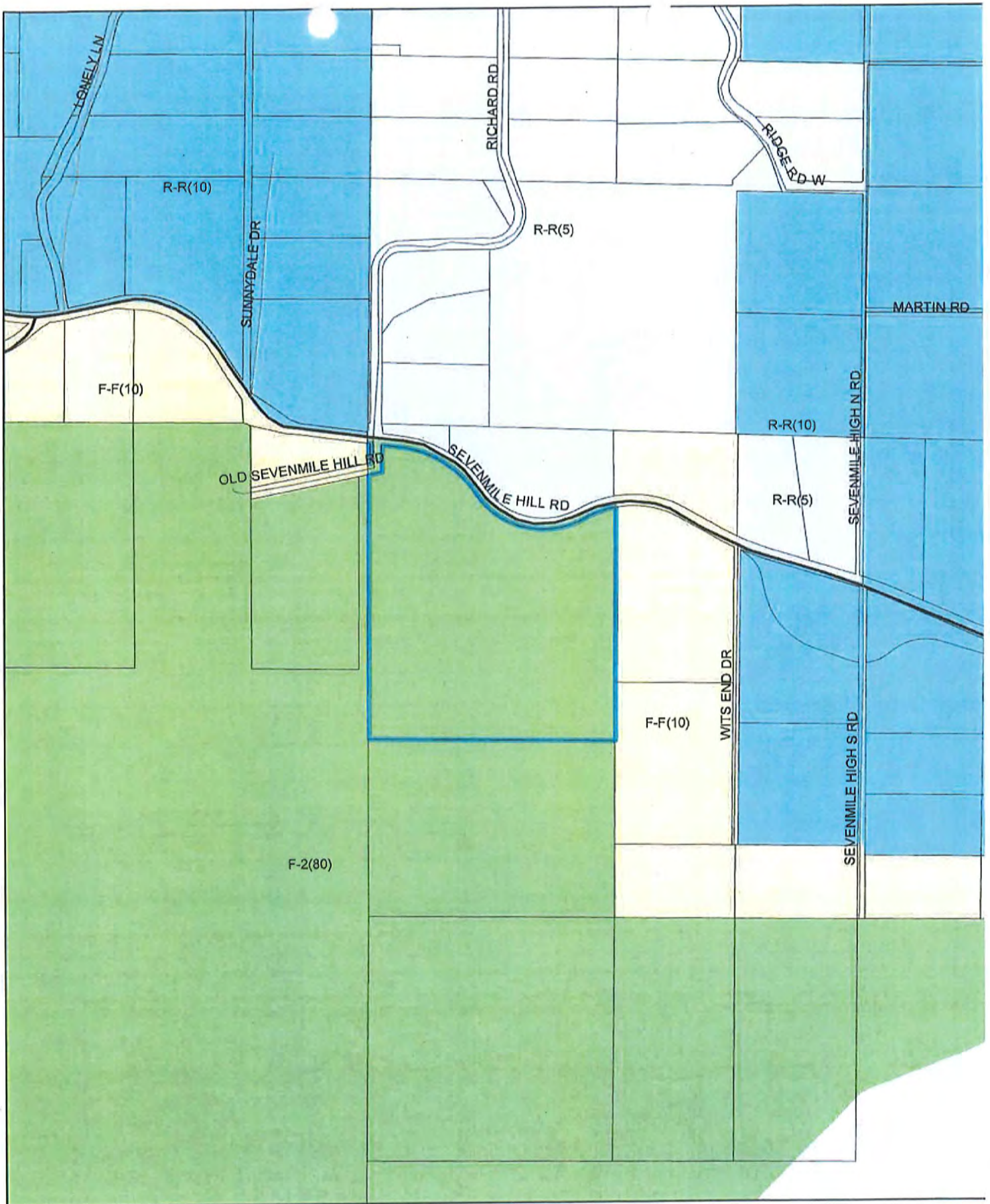
[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

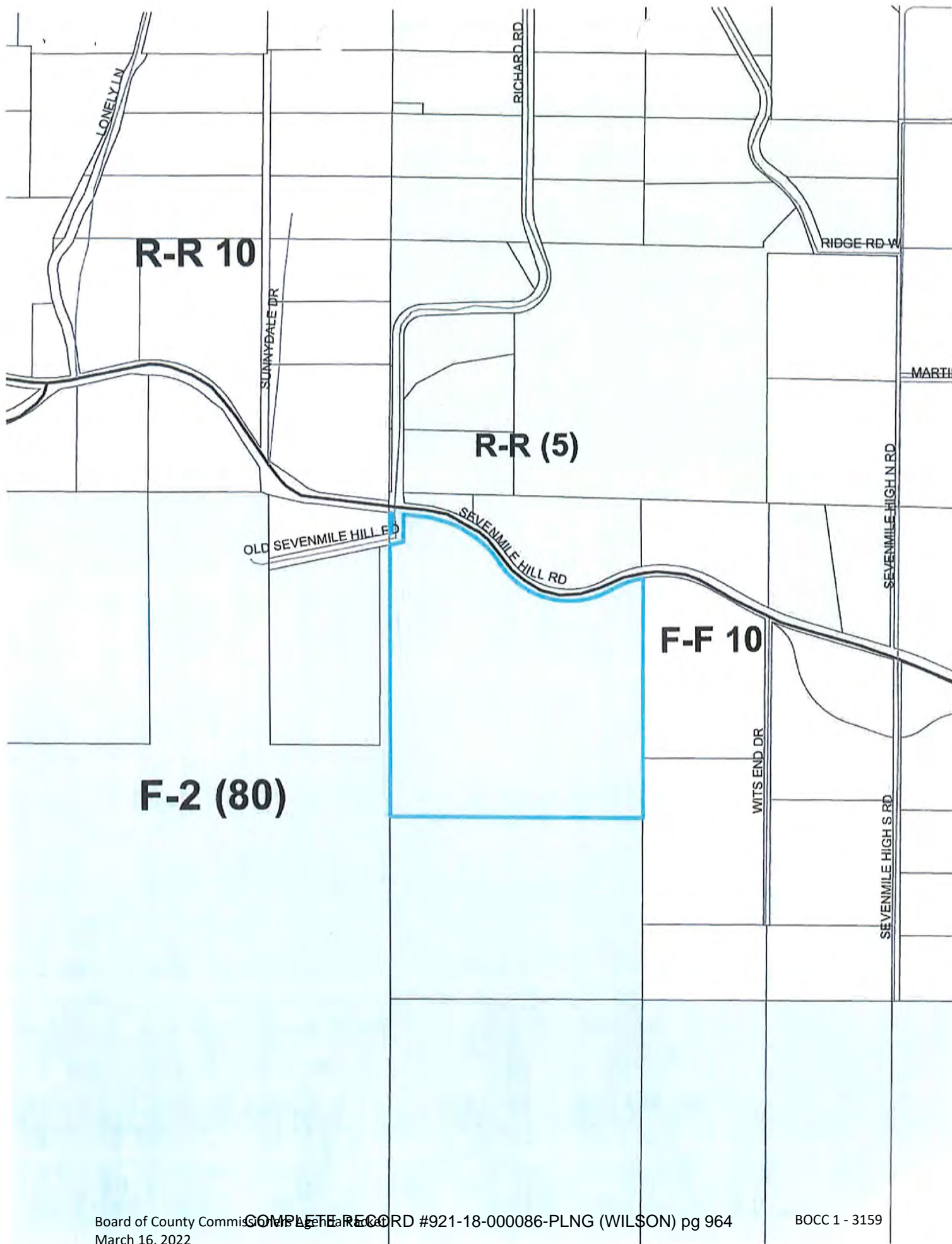








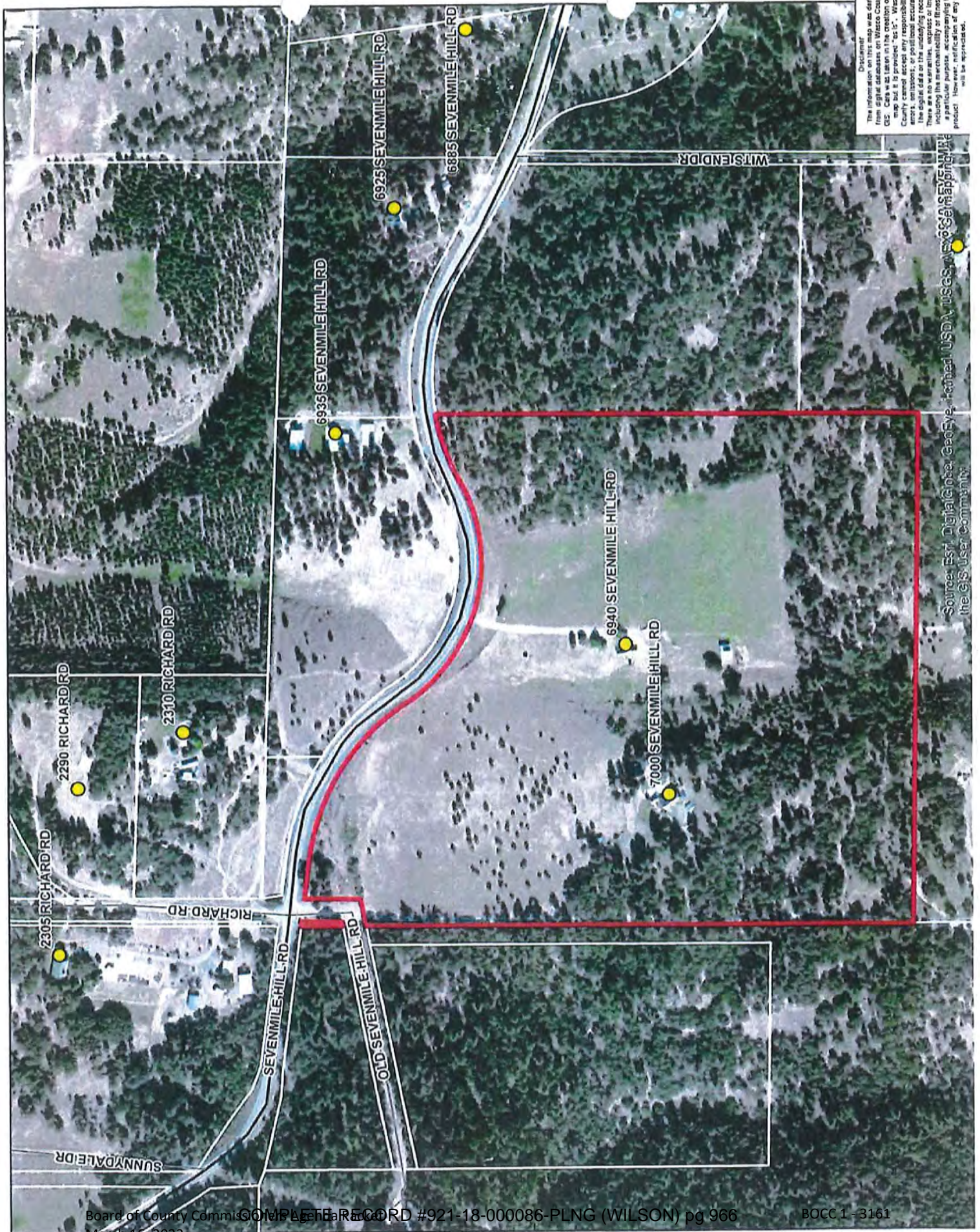




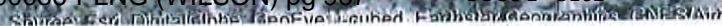








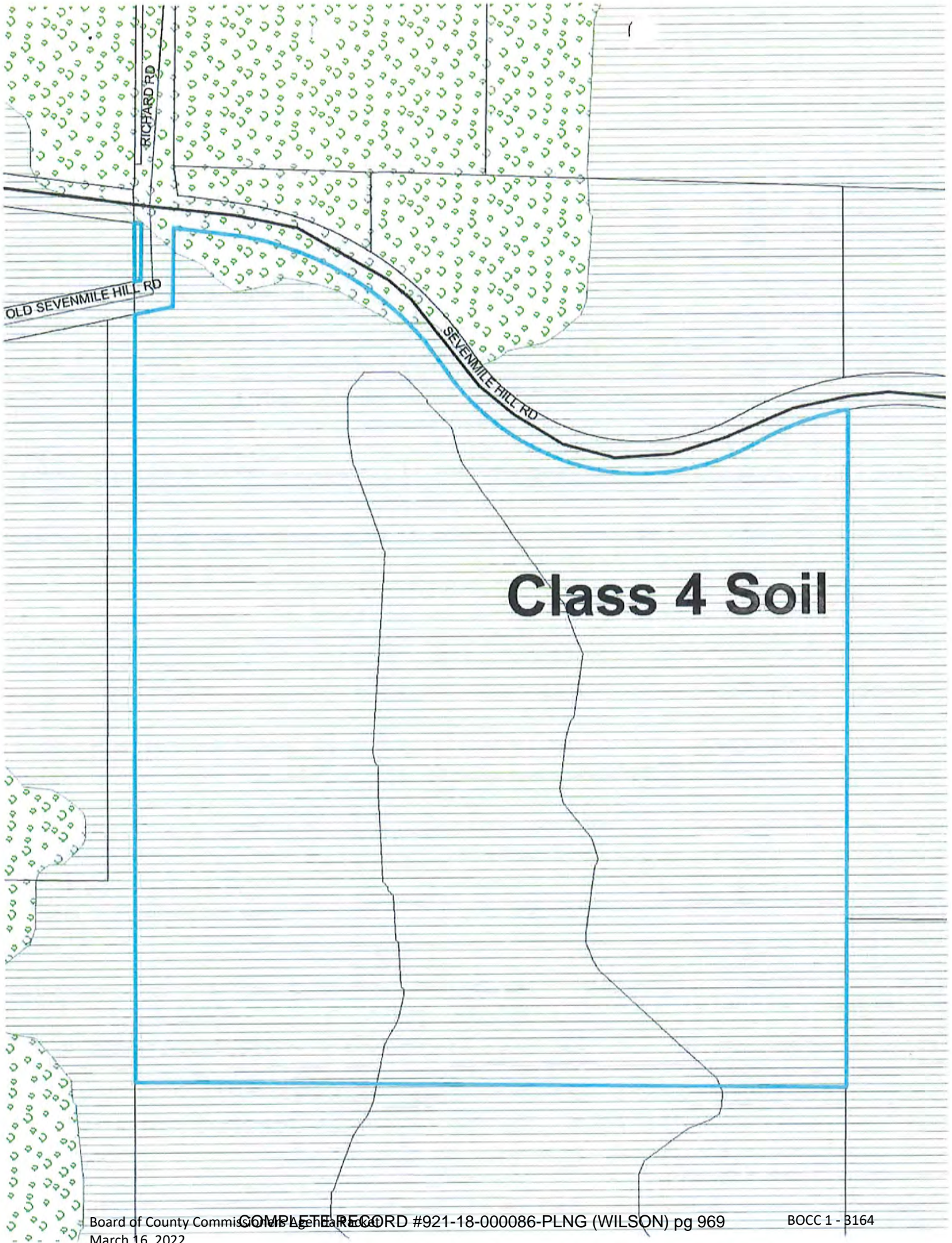




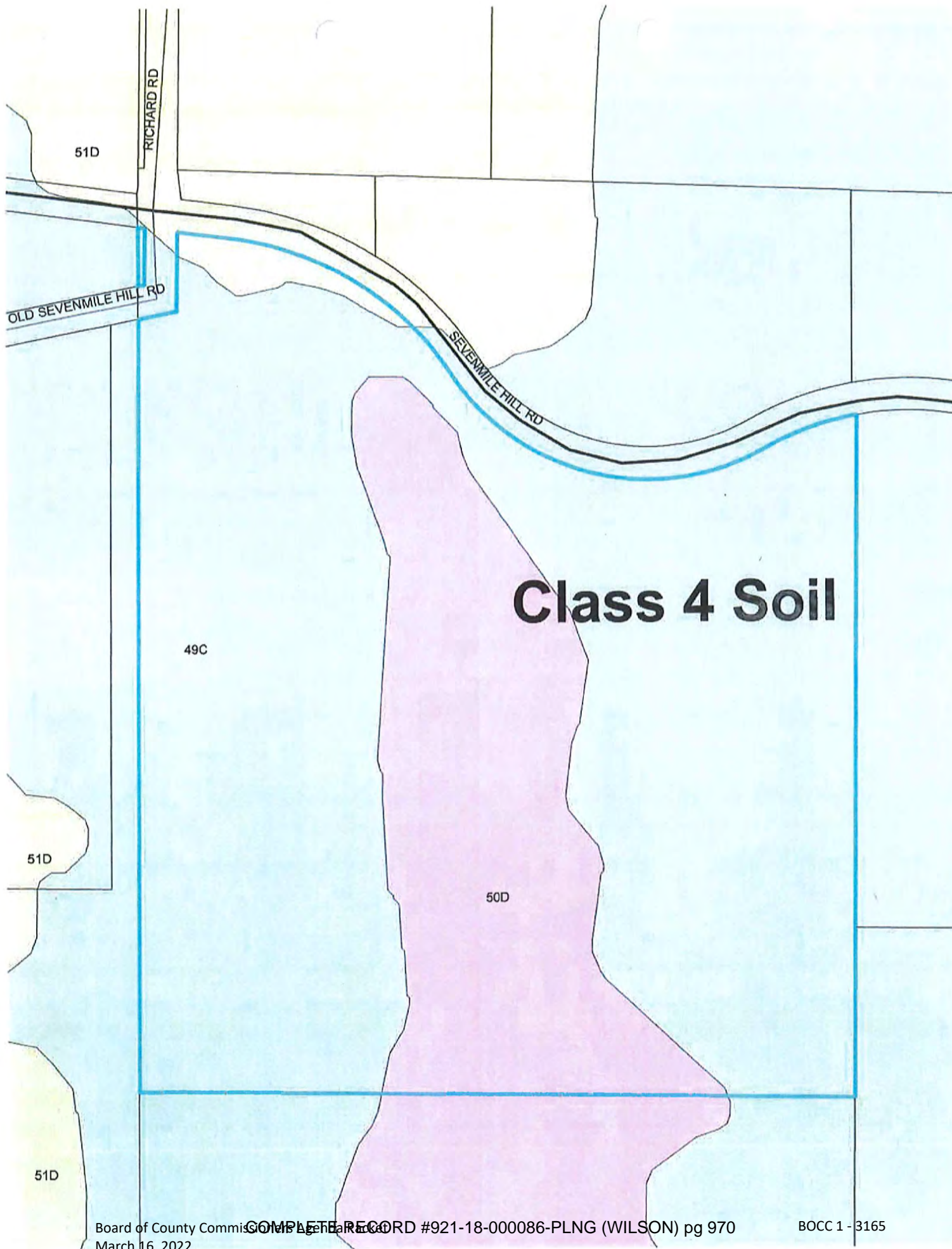




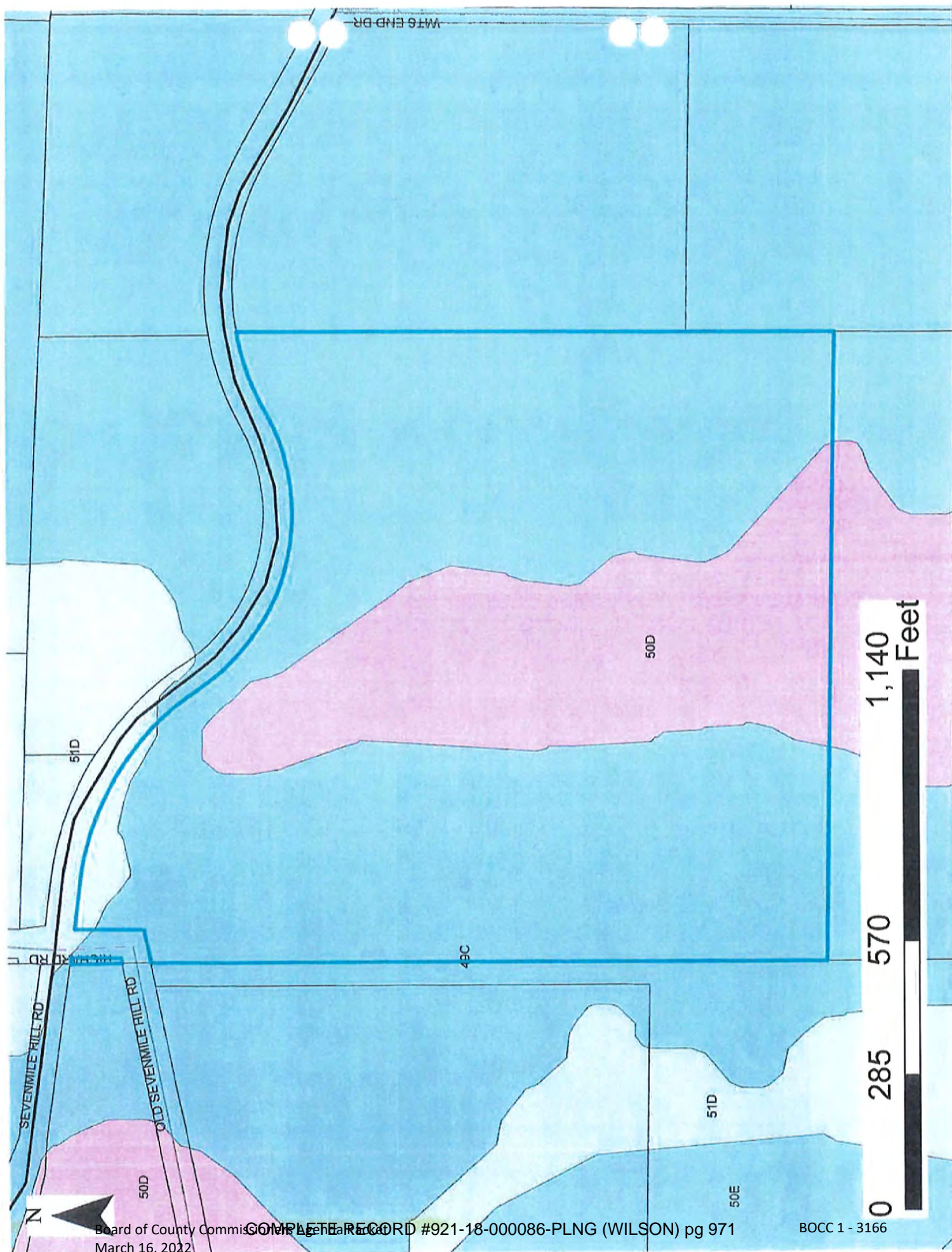
















PLANNING DEPARTMENT



Board of Commissioners  
Public Hearing  
June 5, 2019

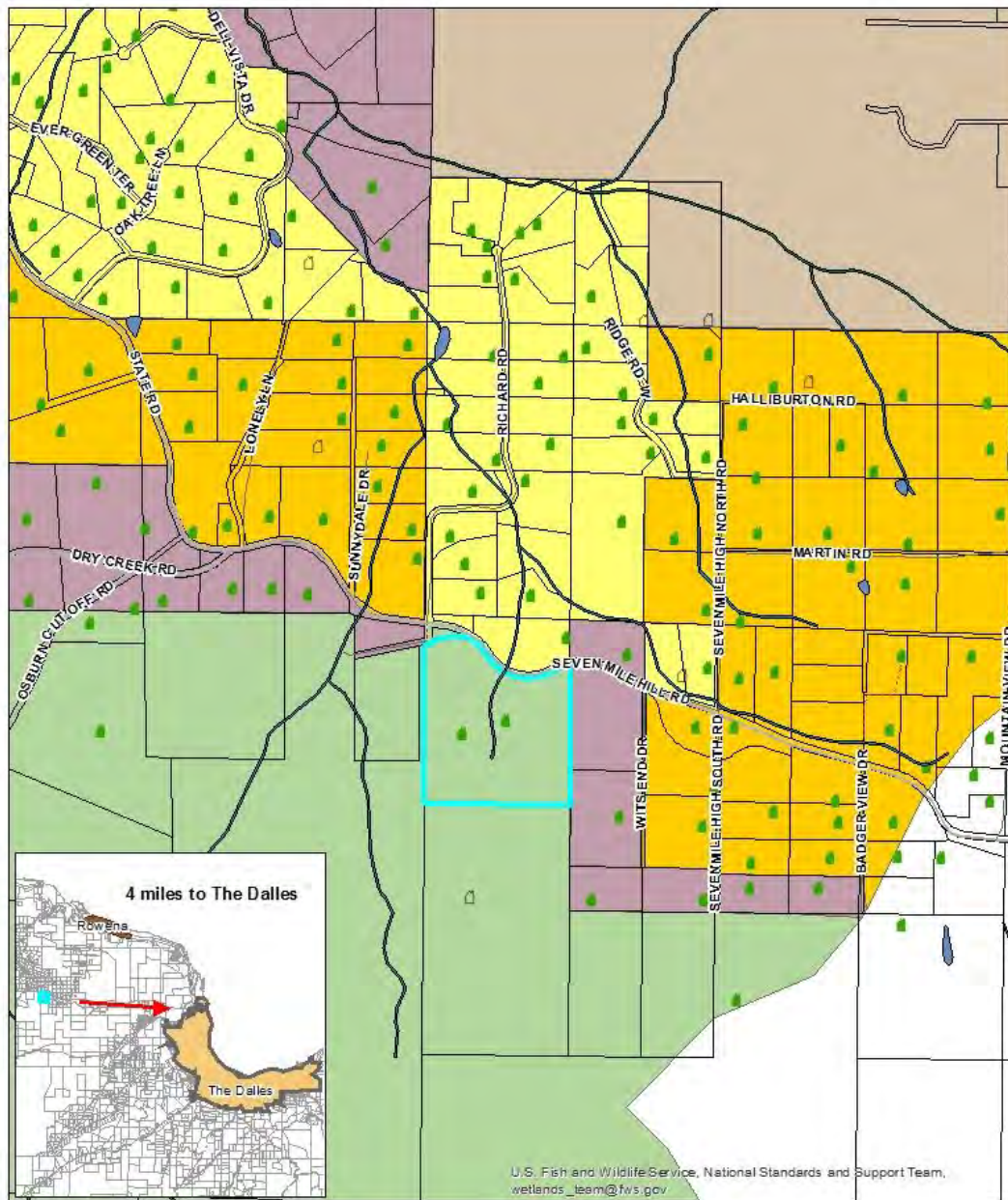
Applicant/Owner: David Wilson  
(921-18-000086-PLNG)

# Request

- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm
  - Applicant/Owner: David Wilson
  - Location: 7100 Seven Mile Hill Road
  - Size: ~40 acres



# Vicinity Map



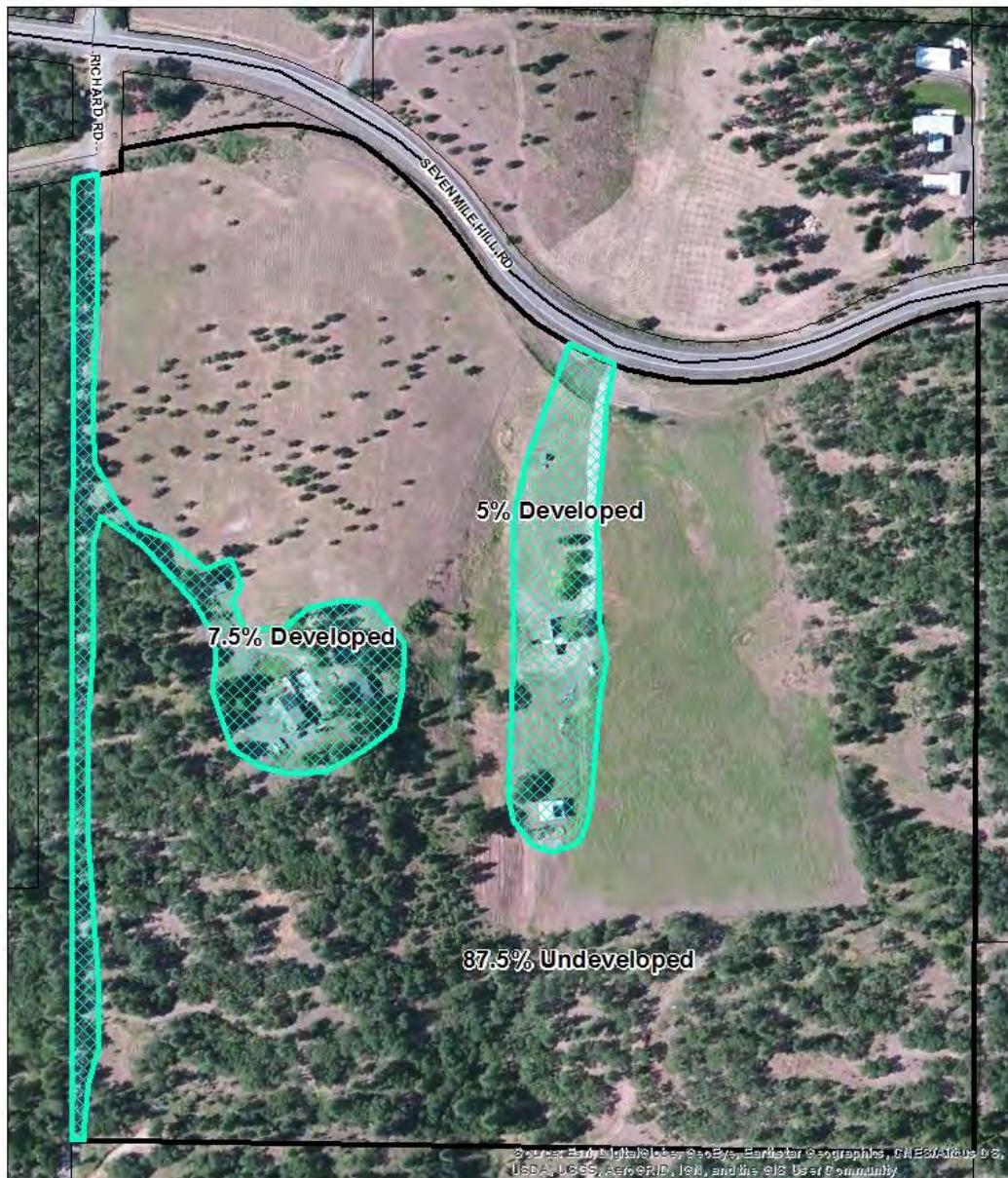
- A-1(160)
  - R-R(10)
  - Riverine
  - Freshwater Pond
  - F-2(80)
  - R-R(5)
  - Wilson Property
  - Taxlots
  - F-F(10)
  - Addresses
- Board of County Commissioners Agenda Item COMPLETE RECORD #921-18-000086-PLNG (WILSON) pg 974  
March 16, 2022

# Planning Commission Recommendation

- On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend APPROVAL of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.



# Site Visit Photos





Source: Earthstar Digital, Inc. © 2018, Earthstar Geographics, LLC. All rights reserved. USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Wilson Property



0 40 80 160 240 320 Feet

-  Developed Property
-  Wilson Property

Total Acreage = 40 Acres  
Undeveloped Property = 35 Acres  
Developed property = 5 Acres

Total percentage undeveloped = 87.5%  
Total developed = 12.5%

Board of County Commissioners Agenda  
March 16, 2022

COMPLETE RECORD #921-18-000086-PLNG (WILSON) pg 976

BOCC 1 - 3171

*Pioneering pathways to prosperity.*





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21



# State Standards Addressed

## Oregon Administrative Rules (OAR)

- OAR 660
  - Division 4 – Interpretation of Goal 2 Exception Process
  - Division 6 – Goal 4 Forest Lands

## Oregon Revised Statute (ORS)

- 197.732 – Goal Exceptions

# County Standards Addressed

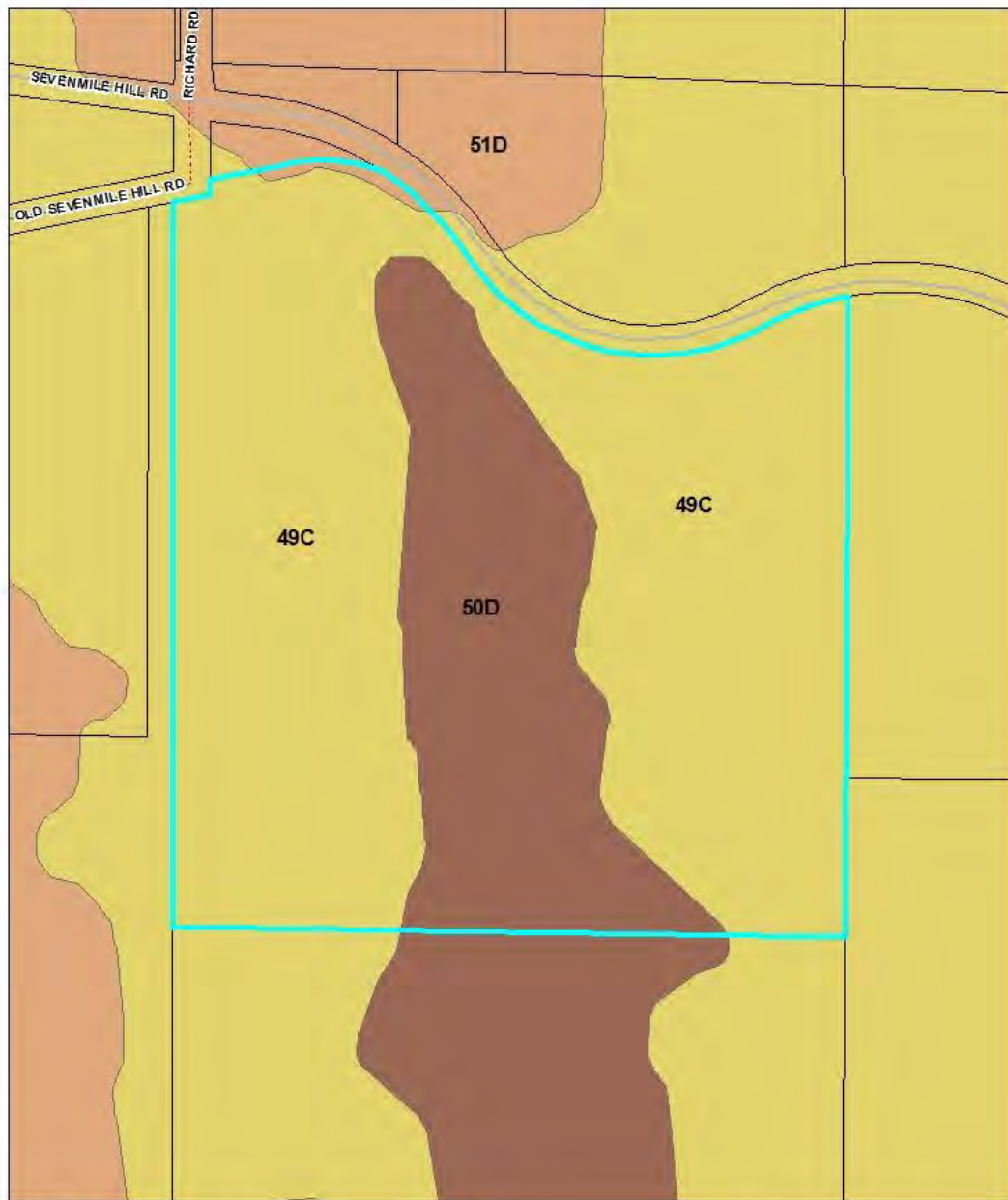
- Comprehensive Plan
  - Chapter 11 - Revisions Process
    - Section A. Intent and Purpose
    - Section B. Form of Comp Plan Amendment
    - Section C. Who May Apply for a Plan Revision
    - Section E. Quasi-Judicial Revisions
    - Section H. General Criteria
    - Section I. Transportation Planning Rule Compliance
    - Section J. Procedure for the Amendment process

# County Standards Addressed (cont.)

- Wasco County Land Use & Development Ordinance
  - Chapter 9 – Ordinance Amendments
    - Section 9.010 - Application for Zone Change
    - Section 9.020 - Criteria for Decision
    - Section 9.030 - Transportation Planning Rule Compliance
    - Section 9.040 - Conditions Relative to the Approval of a Zone Change
    - Section 9.050 - Amendments to the Zoning Ordinance
    - Section 9.070 - Notice of Planning Commission Recommendation
    - Section 9.080 - Action by County Governing Body

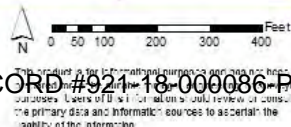


# Soil Map



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property**
- Taxlots**

Soil Map



Board of County Commissioners Agenda Item COMPLETE RECORD #921-18-000086-PLNG (WILSON) pg 986  
March 16, 2022

BOCC 1 - 3181

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# Staff Comments

- Apprehensions
  - Conducting forestry operations are not currently impracticable (Goal 4).
  - More residences would result in the loss of more wildlife habitat (Goal 5).
  - The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
  - The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).
- Advantages
  - Three new dwellings will increase rural residential housing supply (Goal 10).
  - On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

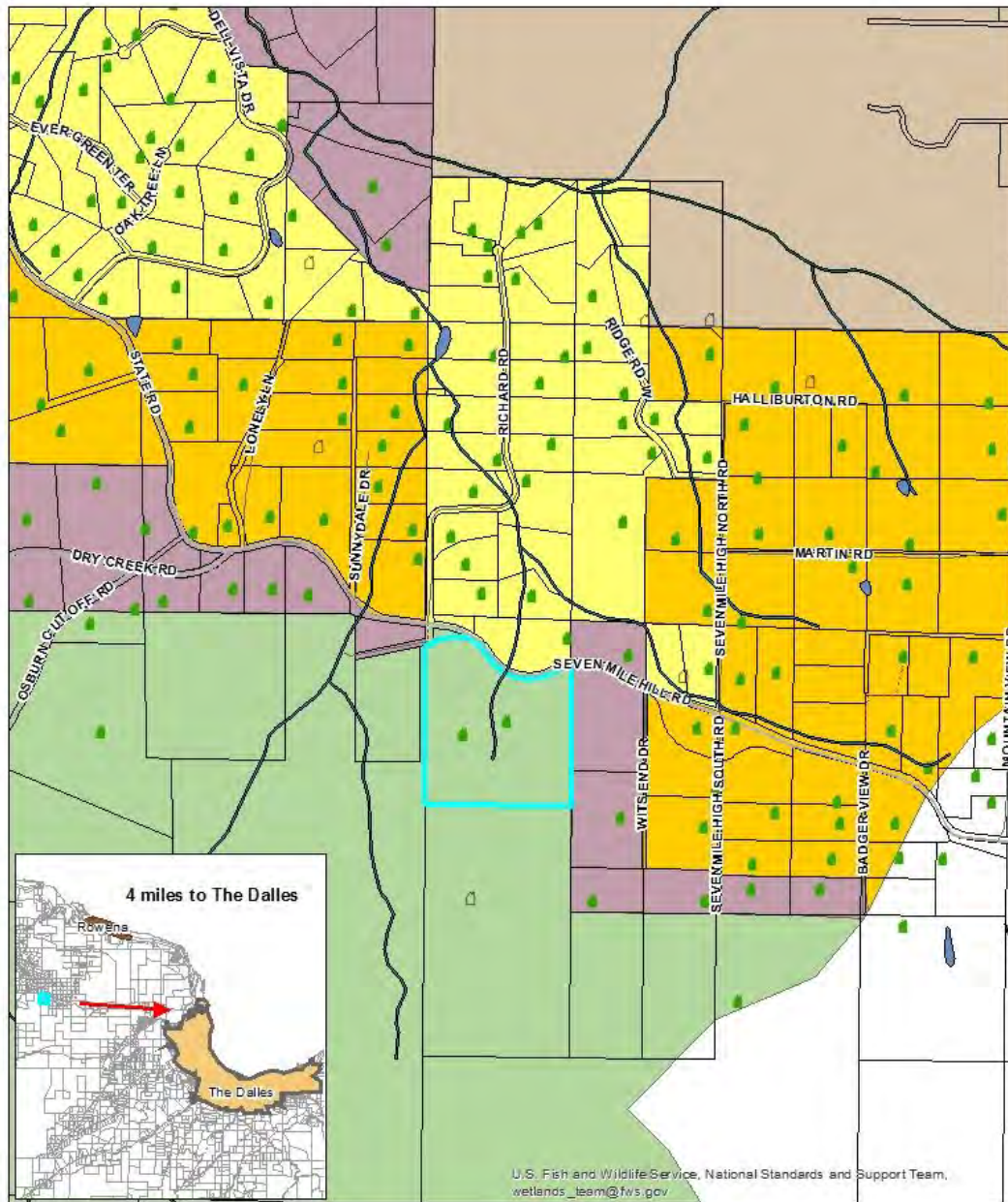
# Questions?

# Next Steps

- Applicant presentation
- Presentations from those already on the record, if they wish
- Applicant rebuttal
- Questions of staff, applicant, or those on the record
- Commissioner deliberation/decision
- Decision mail out (no earlier than 6/6)
- 21 day appeal period to LUBA



# Vicinity Map





*Pioneering pathways  
to prosperity.*

**WASCO COUNTY PLANNING COMMISSION HEARING**

**April 2, 2019**

**3:00 p.m.**

**The Columbia Gorge Discovery Center**

**5000 Discovery Drive**

**The Dalles, OR 97058**

**CALL TO ORDER**

**ROLL CALL:**

**Members Present:** Chair Mike Davis; Vice-Chair Chris Schanno (arrived at 3:13); Vicki Ashley; Lynne MacIntyre; Russell Hargrave; Kate Willis; Alternate LeRoy Booth

**Absent Members:** Brad DeHart

**Staff Present:** Planning Director Angie Brewer, Senior Planner Will Smith, Planning Coordinators Brenda Coleman and Jensi Smith

**Chair Davis** opened the hearing at 3:04 p.m.

**Chair Davis** asked for roll call.

**PUBLIC COMMENT:**

**Chair Davis** asked for comments on non-agenda items. There were none.

**APPROVAL OF PAST MINUTES:**

**Chair Davis** called for comments on the Minutes from March 5, 2019.

**Commissioner MacIntyre** motioned to approve the Minutes from March 5, 2019. **Commissioner Ashley** seconded. No other discussion.

**Chair Davis** called for the vote.

**The motion was unanimously approved 6 to 0, 2 absent (Commissioner DeHart; Commissioner Schanno)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis – yes

Alternate Booth – yes

**Chair Davis** asked for comment on the Minutes from March 12, 2019.

Commissioner Ashley moved to accept as submitted Minutes from March 12, 2019. Commissioner MacIntyre seconded. No other discussion.

Chair Davis called for the vote.

The motion was unanimously approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Schanno)

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – absent

Commissioner Hargrave – yes

Commissioner DeHart – absent

Commissioner Ashley – yes

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**REVIEW OF FILE #921-18-000086-PLNG, A REQUEST BY DAVID WILSON FOR A COMPREHENSIVE PLAN AMENDMENT, ZONE CHANGE FROM FOREST, F-2 (80) TO FOREST-FARM F-F (10) AND EXCEPTION TO STATEWIDE PLANNING GOAL 4**

Chair Davis opened the Hearing in the following manner:

**Opening the Hearing**

We will now open the Planning Commission Quasi-Judicial Hearing on agenda item 921-18-000086-PLNG, a request for a Comprehensive Plan Amendment, an Exception to Statewide Planning Goal #4 – Forest Lands, and a Zone Change from Forest, F-2 (80), to Forest-Farm, F-F (10).

The property involved is described as Tax Lot 2N 12E 22 4400; account number 884.

The criteria for approval of the land use decisions includes: Chapter 2 (Development Approval Procedures); Review Criteria: Oregon Administrative Rules (OAR) Division 4, Interpretation of Goal 2 Exception Process and Division 6, Goal 4 Forest Lands; Oregon Revised Statute (ORS) 197.732, Goal Exceptions; Wasco County Comprehensive Plan Chapter 11 – Revision Process, Sections A, B, C, E, H, I, and J; and Wasco County Land Use & Development Ordinance (LUDO) Chapter 9 – Ordinance Amendments, Sections 9.010, 9.020, 9.030, 9.0404, 9.050, 9.070, and 9.080.

The proposal must comply with applicable provisions contained in the Wasco County Comprehensive Plan, and State Law. Generally, unless otherwise noted, if a request is found to be consistent with the LUDO it is considered consistent with the Comprehensive Plan.

The procedure I would like to follow is:

- a. Disclosure of Interest, Ex Parte Contact or Potential Conflicts
- b. Reading of the Rules of Evidence
- c. Planning department will present their report
- d. Those who wish to speak in favor of the proposal
- e. Those who wish to speak in opposition of the proposal
- f. Rebuttal
- g. Questions by Planning Commission of staff, proponent, or opponent
- h. Close the hearing and record and begin deliberation (only Planning Commission can talk during this time)

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**Disclosure of Interest, Ex Parte Contact or Potential Conflicts:**

- a. Does any planning commissioner wish to disqualify themselves for any personal or financial interest in this matter? There were none. Does any Planning Commissioner wish to report any significant ex parte or pre-hearing contacts? (Staff contact is not ex parte and does not need to be disclosed.) There were none.
- b. Does any member of the audience wish to challenge the right of any planning commissioner to hear this matter? There were none.
- c. Is there any member of the audience who wishes to question the jurisdiction of this body to act on behalf of Wasco County in this matter? There were none.

**Planning Commissioner Disclosure of Site Visit**

For the record, have any Planning Commissioners conducted a site visit to the subject property? There were none.

**Party Recognition**

Anyone can speak for or against the proposal today. However, only those who have "party" status will be able to appeal a decision reached by this commission.

**A party is defined in Section 1.090 as:**

- a. *The applicant and all owners or contract purchasers of record, as shown in the files of the Wasco County Assessor's Office, of the property which is the subject of the application.*
- b. *All property owners of record, as provided in (a) above, within the notification area, as described in section 2.080 A.2., of the property which is the subject of the application.*
- c. *A Citizen Advisory Group pursuant to the Citizen Involvement Program approved pursuant to O.R.S. 197.160.*
- d. *Any affected unit of local government or public district or state or federal agency.*
- e. *Any other person, or his representative, who is specifically, personally or adversely affected in the subject matter, as determined by the Approving Authority.*

If you want party status, please say so at the beginning of your testimony. At the end of the public testimony, the planning commission will deliberate about granting party status to each person who requested it.

**The Rules of Evidence are as follows:**

- a. No person shall present irrelevant, immaterial, or unduly repetitious testimony or evidence.
- b. Evidence received shall be of a quality that reasonable persons rely upon in the conduct of their daily affairs.
- c. Testimony and evidence must be directed toward the criteria applicable to the subject hearing or to criteria that the party believes apply to the decision.
- d. Failure to raise an issue with sufficient specificity may preclude raising it before the Land Use Board of Appeals.
- e. Failure to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow Wasco County to respond to the issue precludes an action for damages in circuit court.

Any party of record may request that the record remain open for at least seven (7) days prior to the conclusion of the initial evidentiary hearing.

Failure of persons to participate in the public hearing, either orally or in writing precludes that person's right of appeal to the Board of Commissioners. Written testimony submitted prior to the hearing constitutes participation in the hearing.

Chair Davis stated Senior Planner Smith would present.

Senior Planner Smith shared his presentation (See Attachments A & B)



During his presentation, **Senior Planner Smith** shared a Findings Checklist and sections of the Staff Report to help Commissioners analyze each part of the proposal. (See Attachment C)

During the presentation, **Senior Planner Smith** noted an error on Wasco County LUDO section - 9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. Planning Commission should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed in above sections.

**Senior Planner Smith** summarized: (41:40)

- There is apprehension on one side but there are advantages on the other
- Conducting forestry operations are currently not impractical. Trees could be planted and harvested (Ponderosa Pine).
- More residences would result in the loss of wildlife habitat, but a small impact.
- With increase in residences, it increases the wildlife/urban interface.
- More residences could impact water supply.
- The advantage would be in increase dwellings, as adequate housing is an issue in the County.
- Not in the current recent history has the property been used to harvest forest products so it would not be taking away commercial forest use. It would take the potential away.
- There are economic impacts on housing.

**Senior Planner Smith** asked for questions.

It was asked if this was in the Big Game Overlay. It was established it is in EPD 8, Low Impact area, which is exempt from requirements.

It was noted during the discussion that this property had been involved in a previous request to change zoning, with a settlement of an appeal (in a Legislative action) to have the County look at rezoning in this area. That did not happen for a number of years, and then in 2012 there was a request for 29 new houses on 280 acres. The Staff Report during that time did not have a recommendation. The Planning Commission voted to approve the zone change, but the Board of County Commissioners voted to deny it. There have not been any comments on the current application but it was noted there had been comments on the previous request regarding concerns over fire and water. It was not appealed further and it was resolved with the County's good faith effort to look at it.

It was stated there is currently one residence on this property, but if request is granted, there could be up to four. It was also discussed that it is hard to quantify how much water is available in the area and noted the Water Master has said there was a general concern, with levels dropping every year. It was also discussed that Mosier or Mid-Columbia Fire District would be the ones to respond to a fire, with a substation close to the property.

**Chair Davis** asked for testimony from the applicant or their representative. (54:41)

**Bill Summerfield**, Attorney for the applicant spoke. He shared a visual aid to present and hard copy hand out. (See Attachments D & E) He spoke regarding the water issue. In the findings and conclusions, there is a statement showing there are two wells on the subject property. One produces 50 gallons per minute, one at 60 gallons per minute. The home where the applicant lives has its own well that produces 35 gallons per minute. He feels that the wells that are on the proposed rezoned property will be sufficient to support development, without any new ones added to the aquifers. He references four reports – noting one for when the well was drilled, one for when it was serviced and another is for a second well on the property. He stated that the 50 gallon per minute well is servicing the house located there and the other one is not doing much currently, but is available. He said they would probably do a shared well agreement or some other form of sharing water for the property at such time that development was implemented. A lot of that will be developmental criteria at the time the property would be subdivided.

**Mr. Summerfield** said they are trying to change that one green spot to a purple spot (referencing the map in Attachment B, slide 3). Everything along Sevenmile Hill Road is residential. There is no Resource land that touches Sevenmile Hill Road. He stated they are asking for common sense on this. This is the one parcel that is zoned differently. Having done some research, they haven't found a rhyme or reason to that. The Transitional Lands Study Area (TLSA) didn't touch that property, with no explanation as to why. **Mr. Summerfield** said it makes sense to rezone to keep it with the properties around it, in keeping with the neighborhood. There was a question about water in the TLSA. There is a map in the agenda packet, (PC-125) that show ground water levels in the area. The shared well reports are consistent with the TLSA map showing adequate ground water.

**Mr. Summerfield** said he isn't sure that the prior history of zoning has any relevance. This application stands on its own. The property stands on its own. The applicant was not part of the prior zoning request. They are not trying to implement anything that went on before or be part of any settlement. This is a new and unique application, pertaining to just this one 40 acre parcel.

**Mr. Summerfield** spoke regarding the Criterion. The physically developed and irrevocably committed seem to be very closely related to one another. Regarding the physically developed, he doesn't believe you just inventory what is on the property. You need to take a more holistic view of what is on the property. What does it look like, feel like, how is it being used. There is a log home, possibly a historic home from around the early 1900s. To build (this) home, the log home had to be de-commissioned. It is currently being used as an AG building. **Mr. Summerfield** stated **Mr. Wilson** hopes that someday the log home would be rehabilitated. The house in the meadow area seems to indicate that this area has never been used as forest land. **Mr. Summerfield** stated that **Mr. Wilson** has indicated he has been nurturing some trees for around 20 years and they have not grown very quickly. **Mr. Summerfield** indicated on the map a draw that runs through Ken Thomas's property. He showed a section of the map the **Mr. Wilson** has referenced as to where Eastern Oregon begins. **Mr. Summerfield** indicated on the map where a section is green and does well and another area that seems to be more scrubby. **Mr. Summerfield** showed south of that on the property where **Mr. Wilson** lives is scrubby as well. You don't see the canopy firs and others that you see on the other section.

**Mr. Summerfield** stated that when you look at the physically developed and irrevocably committed, there is the old pioneer house, barn, shed, and other structures. How would you develop that as a wood lot? What would it mean to the other people who live nearby? What would it mean for the other structures? You don't just measure the square footage of the structures; you look at the property as a whole. Doesn't look or feel like a commercial forest property.

**Mr. Summerfield** said he feels the same with the irrevocably committed. If you zoom out and look at the neighborhood. What would a commercial forest operation on Sevenmile look like, in the middle of this residential area? Each dot on the map is a home. It is pretty heavily developed. Those are factors in determining whether something is irrevocably committed. Is it compatible with its neighborhood? There is a sense when you drive down there that it is a rural residential neighborhood. It's not forest land. One of the questions is whether a mistake was made in the Comp Plan. **Mr. Summerfield** said it is hard to say that a mistake was made when you look at that map with one little green parcel that touches Sevenmile. You wonder what that's doing there. Without a stated reason for why it's there, it seems obvious it was either overlooked or ignored or a mistake was made there. **Mr. Summerfield** said that was 20 years ago and it's possible the surrounding neighborhood looked different than it does today. The subject property stands out as an anomaly.

**Mr. Summerfield** said there is a lot of talk in the Staff Report about the need to buffer resource zones from other uses around it. He said the buffer he sees is FF-10. That is what we are asking to do. This would help with the buffer and help resource zones themselves. He stated agreement with most of the green findings in the Staff Report (SR). He feels they are supported with the record in front of them.

**Mr. Summerfield** addressed the fire issue. He said the SR stated that most of the development has been north of Sevenmile, but if you look further out, there is residential development to the south, a lot of subdivisions. He



stated he doesn't feel that is a hugely valid concern. There is a natural fire break with the BPA powerline that runs through there. He doesn't see changing the zone on this property would be a public health, safety or welfare concern.

**Mr. Summerfield** also talked about big game. He feels that has been fixed. He said they looked at it and thought it was a non-issue. He would like to leave the record open to address, if it is an issue. He said other things like transportation, meeting or not meeting other goals are non-issues. If we are not addressing it, there is no conflict. We are hopeful to get a recommendation for a zone change.

**Chair Davis** called for questions. (1:11:00)

During questioning, it was established that **Mr. Wilson** lives on the property behind the subject property. Questions regarding the casing of the wells were brought up, noting if they are not cased they need to be. It was stated they go through multiple aquifers.

The applicant, **Mr. David Wilson** testified. (1:13:12) He stated he was not sure if the wells were cased, as it was before his time on the property. He stated he went to the well master and got copies of what was done there. He stated one is in the ravine by the old log home that provides water to log home and the historic house. **Mr. Wilson** stated the property used to look like a wrecking yard. He stated the motor had been knocked off the well head, the casing and everything went down into the well. This happened since he lived there. They had to pull the casing out, pull the pump out and did a bunch of casing work on the thing. On the well logs, the later dated one shows that they did improvements. He is not sure how far they are cased. **Mr. Wilson** was asked when the last time the wells were tested, where the head is. **Mr. Wilson** state he found out that if work is done on a well now, they have to put in separate PVC in so they can gage it. He said none of his wells have had that, they do not have separate PVC. He stated he is not in the survey. **Mr. Wilson** was asked if he has spoken to the Water Master to assure it is rated for domestic use. **Mr. Wilson** state two houses on one well are allowed. Otherwise a water district must be created. **Mr. Wilson** was asked if he irrigates pasture land. He replied no. He said the lower property well had a 300 horse pump on it at one time. Since then it has been switched out to a regular domestic pump. He found records that date back to the historic house, stating it is very old. He said he had worked to keep it (historic house) from falling in by jacking it up but found he couldn't do anything with it without getting it on its own parcel. He has to subdivide the property to do anything with the historic house.

There were no other questions for the applicant.

**Chair Davis** asked if anyone else wanted to speak in favor. There were none.

**Chair Davis** asked if anyone wished to speak in opposition. (1:17:42)

**Sheila Dooley** introduced herself and said she wanted to address the four concerns stated in the Staff Report. These included conducting forest operations are not currently impractical. She stated she had been involved in the TLSA study. This was not rezoned due to the value as forest land, the property is still capable to use for commercial use. This zoning is not a mistake. Across the road trees have been replanted and are growing. Just because this property has not been replanted for forest use does not make it less valuable as forest land. Looking at the map, there is forest land all around it. Conversion of this property will result in further encroachment of residential use onto Resource zones. Approving this is setting a precedent. The applicant owns an addition 69 acres of forest land. She feels the same arguments on this could be used to rezone that property. When Ken Thomas had applied for rezoning, the Land Conservation and Development Commission (LCDC) had objected because it is good forest land. In the application, the development pattern references the old farm house. The owner decided to build a second house instead of using the farm house. She stated an increase in residences will decrease the amount of wildlife habitat and would increase the wildland/urban interface fire risk. If a fire starts here, it will spread to the adjoining forest lands. She noted it takes 60-80 years to grow marketable timber. Many of these areas are not in a fire district and are rated extreme fire risk by the Department of Forestry. Response time is low due to the terrain and

distance. Fire risk and intensity have increased over the years. The residences increase the fire risk which is related to public safety and welfare in this area. Sevenmile hill was intended as a buffer, with development on one side and forestry on the other. Three new Single Family Dwellings (SFD) would impact available water supply. Water issues are increasing. Ms. Dooley stated a residence just up the road had their well go dry. She referenced information in the SR that the Water Master said the water table has been dropping two feet a year. If it only takes one criteria not being met to deny, she feels the request should be denied. These could be second homes that do nothing for housing shortage. She feels the housing issue should be addressed in incorporated areas with higher density. The fact that it is not currently used for forest land is not relevant.

The Commission did not have any questions for Ms. Dooley.

Jill Barker spoke in opposition to the request. She stated she had many of the same concerns as Ms. Dooley. She stated the property just down the street from the subject property had their well drop 50 feet during the winter. There is a lower water supply in this area. She was involved with the Ken Thomas proposal and there was overwhelming opposition to that from the Forestry Department, Fish & Wildlife, and LCDC. It is common knowledge that area has a dwindling water supply. North of Sevenmile is all small parcels and that is a huge demand on the aquifer. She understood that the subject parcel was part of the earlier Ken Thomas proposal which was denied, with good reason. Big game winter range is included there. The site is not suitable for the proposed reason. Ms. Barker said she believes if there is a fire, the power line isn't going to do anything to be a fire break.

Ms. Barker said it has been noted the soils (4s and 5s) are adequate for commercial forest use. In regards to the old historic farm house, it was being lived in in the 1970s. It wasn't that long ago that was a home. She feels the fire danger isn't if, it is when. She feels there is too much development and too much demand on the water. It is very dry and we are getting less water each year. There is already one house on that property already where it is 80 acre minimum, this one is on 40 acres. Ms. Barker stated that one of the reasons there is development south of Sevenmile is that many of those lots were pre-existing, during the TLSA study. Just left of this property, got a special conditional use to develop it and there was controversy for years. The other properties by Dry Creek Road have been there for years. She stated she was not sure about new development, not sure when they were approved. She feels it is a bad idea, a dangerous idea. The one home is adequate for that property.

There were no questions from the Commission for Ms. Barker.

There were no others to speak in opposition.

Chair Davis asked if the Applicant wish to refute any of the testimony.

Mr. Summerfield spoke regarding the comments related to the Ken Thomas proposal. We haven't had that with this. He feels you could draw inference from that. As to the fire danger, that would be addressed with buffers and such at the Building Permit stage, and adequately addressed elsewhere. The driveway is Dave's and any new development would be served by that driveway. It is very wide, any development would be served off that.

Chair Davis called for questions.

During the question and answer segment it was established the drainage from the homestead goes north. It was stated there may be a spring. It was also established that grass is grown there, with it being baled sometimes. There is no tax exemption; it is believed it is residential.

There was a question regarding the comment that the zoning was not a mistake. Ms. Dooley was asked if she had evidence of that. Ms. Dooley responded that the TLSA study was based on the soil types, the slopes. It looked at a lot of different factors. For clarification, Ms. Dooley was asked if the subject property was unique. Ms. Dooley responded no, it was not rezoned, they could have chosen to rezone it but they didn't.



**Chair Davis** called for further questions. There were none.

**Chair Davis** closed the Hearing at 4:41 pm. (1:37:12)

Deliberation:

**Chair Davis** noted the handouts that staff had given. He stated he would like to use that during the conversation, starting with a straw poll, focusing on critical area. He noted that if one thing is denied, the whole thing must be denied.

Straw poll:

- Commissioner Ashley – opposition to 1, 2 and 17
- Commissioner Willis – Concern with 17
- Alternate Booth – No issues
- Commissioner MacIntyre – No issues
- Commissioner Schanno – No issues
- Chair Davis – No issues
- Commissioner Hargrave had left the meeting

Discussion:

It was noted that for F2 the zoning is one home for 240 acres. This parcel is already smaller than that. There are residential areas with relatively small lots all around when heading up the hill towards this property. If you look around, how does this sit relative to the neighborhood? There are a lot of residences.

It was noted that the error that **Senior Planner Smith** indicated on Wasco County LUDO section - 9.020.A would be resolved during the discussion, deciding if there had been a mistake or not and findings written as such in the recommendation.

The soils classification was discussed with note there had not been any evidence presented that timber could not be grown on this property. It was also stated that just because it could support commercial forestry, does that mean that it should, considering the location and development pattern. The discussion also mentioned that forest practices would have timber harvest equipment and travel on a residential road. Commercial timber harvesting would also increase the fire risk, with the high wind zone. Even with a large fire break but in a high wind area, the fire will jump, crowning from tree to tree. It was noted there would be serious concern if it were a timbered area. There would also be the potential to have noise complaints from residents in the area. In the conversation, it was noted that if the request were granted to FF, trees could still be harvested.

It was stated that if it is approved, the issue of the water would need to be addressed and the wells should be cased. The water table and reduced water availability were noted as concerns.

The aquafer for the area was discussed. **Senior Planner Smith** stated he did not have an Aquafer map so he did not know if the residents there were all on the same aquafer. It was noted that the TLSA map had indicated there were two aquafer, of different types, in the area. The Water Master is quoted in the Staff Report. The amount of water per minute is not something the Planning Department regulates typically. The capacity is not just for household use, but also for irrigation and fire suppression. **Director Brewer** stated the Fire Safety Standards Ordinance does have standards for residential fire suppression and that would be applied at the time of future development. It was also stated that the wells would have to be tested to utilize the water and cased appropriately. It was questioned if the Water Master had expressed concern, is that enough to deny the request. It was stated the Water Master would be the one to determine if another well would be allowed there or if existing wells could be shared. The properties would need to pass a perk test, and if not, it would not be approved for development.

There was discussion about the TLSA report and if it missed or didn't miss this property. The comment was made that all along that line is FF and some of these issues would be addressed when the request is taken to the next level. **Director Brewer** stated the Oregon State Land Use protects Resource Lands over residential uses, so if the

outcome is there would be a negative impact to the residential area, you are actually saying in that context is this area is irrevocably committed to a rural residential use. Therefore it is more appropriate for this part of the county to have more residential use and not commercial. She stated that if that was the consensus, it would help with concerns noted about items #1 & #2.

**Chair Davis** called for a motion.

**Commissioner Schanno** moved to recommend approving the change in zone. **Alternate Booth** seconded.

**Chair Davis** opened for further discussion. (2:01:10)

The discussion included what the criterion is for this property to be irrevocably committed and if it is considered physically developed. This included looking at the use of the parcels by the subject property and what was physically located on the subject property, including the house, structures, and roads to determine if it is physically developed. Soil types were also discussed. **Senior Planner Smith** informed the Commission if there was consensus to affirm these, they could choose physically developed, irrevocably committed or both. It was stated that language could be added to clarify the findings.

There was discussion on what could happen by taking Resource land out and it was noted we are trying to protect Resource land in Wasco County. Once you lose it, it's gone. It was stated the land had been left in that zone for that purpose. It was also noted that the subject property is not isolated.

**Director Brewer** noted that the language for the findings has to stand on its own for this property. The same criteria would have to be used for other future proposals on other property.

**Chair Davis** called for a break. (2:26:44)

**\*\*Break\*\***

**Chair Davis** resumed the Hearing at 5:42pm.

**Chair Davis** stated there is still a motion on the table.

**Commissioner Willis** moved to approve and amend the motion on the table. She moved to change the motion on the table and amend it, on page 13, PC 18 for the commission, in relation to OAR 660 004-0028(2) b and c to clarify the uniqueness of this property because it is surrounded on three sides by residential or potential residential development and its uniqueness in relationship to the surrounding area by being the only F-2 zoning on the Sevenmile Road. A change to the proposed F-F would complete the residential buffer to the resource area.

**Alternate Booth** seconded.

**Chair Davis** noted the motion on the table was to approve the whole thing and there has been an amendment to that motion to make that property very unique.

There was more discussion regarding the language of the amendment noting it was added to make a very tight buffer with this property to prevent creeping of the buffer. The language would just help identify this property as unique. It was also noted that anyone could come in and request a zone change, but they would have to go through the same process. It was stated that this language is to illustrate intent, to show confinement.

**Chair Davis** called for a vote on the amendment to the original motion, noting the language had been written and projected on the screen for everyone to read. **Commissioner Schanno** asked for clarification. **Senior Planner Smith** read out loud to explain the sections. It was stated the language is adding to the findings for B & C.

**The motion was approved 5 to 0; 1 abstention; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

Commissioner DeHart – absent

Commissioner Ashley – abstained

Commissioner MacIntyre – yes

Commissioner Willis - yes

Alternate Booth – yes

**Commissioner MacIntyre** stated she thought we were changing the findings. **Commissioner Ashley** stated that she believed that also. **Commissioner Schanno** stated we are adding to the findings.

**Chair Davis** stated the modification to the original motion had been approved. He called for discussion of the motion with the modifications.

**Commissioner Willis** stated the modification was to provide rationale for the findings. It was clarified that it was not taking out the finding that it was developed, but added to it. **Director Brewer** stated there was general consensus.

There was a discussion about what had been identified in the findings regarding 'development'. **Commissioner Ashley** stated she feels it is physically developed more than was indicated, demonstrated by things like the wells, outbuildings, etc.

**Commissioner Ashley** moved that we add additional findings to the approval finding to indicate the further development of the parcel, which includes wells and additional buildings for the physically developed exception finding [OAR 660 004 0025 (2)]. **Commissioner Willis** seconded.

**Commissioner Schanno** noted that most of this is in the Staff Report. **Director Brewer** stated the highlighted areas are conclusions of the larger findings above them. **Senior Planner Smith** stated he did not reference the wells in his findings. **Director Brewer** said the Staff Report consists of the rules that apply, information from the application, staff's findings of facts, and conclusions of law. She stated the requested changes can be made if that is part of the amended motion.

**Commissioner Willis** stated she feels the conclusion should include more of the laundry list of stuff. **Senior Planner Smith** said that could be added.

**Chair Davis** asked for any further discussion on this amendment to the motions. There was none.

**Chair Davis** called for a vote on the amendment to the motion.

**The motion was approved 6 to 0; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes

Vice Chair Schanno – yes

Commissioner Hargrave – absent

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Commissioner DeHart – absent  
Commissioner Ashley – yes  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated there has been a motion to approve with two amendments. He called for discussion on the last amendment.

There was a question on where in the process a discussion on item #17 would take place. **Chair Davis** stated this is the time to discuss it and can make a further amendment to the original motion, if desired.

**Commissioner Ashley** stated she wasn't sure that the public safety issues have been addressed. By changing the zoning, have we opened a can a worm for people living in or near forest zones? The number of structures and people involved with that were discussed. The transportation issues, the number of vehicles and response time for emergency services were part of the discussion. It was stated there isn't anything the Commission can do if people go beyond the design parameters. It was also stated there is another process to deal with any proposed dwellings, where there are safeguards in place.

**Chair Davis** called for further discussion. There were none.

**Chair Davis** stated there is a motion with two amendments and called for the vote.

**Chair Davis** called for the vote.

**The motion was approved 5 to 1; 2 absent (Commissioner DeHart; Commissioner Hargrave-left before the vote)**

A listing of the vote, as required by Oregon Revised Statute 192.650.c. is as follows:

Chair Davis – yes  
Vice Chair Schanno – yes  
Commissioner Hargrave – absent  
Commissioner DeHart – absent  
Commissioner Ashley – no  
Commissioner MacIntyre – yes  
Commissioner Willis - yes  
Alternate Booth – yes

**Chair Davis** stated the vote is to recommend approval with the amended language.

**Chair Davis** adjourned hearing at 6:06 p.m.



Mike Davis, Chair  
Wasco County Planning Commission



Angie Brewer, Director  
Wasco County Planning & Development



Wilson notes

Criteria and Summary

Public Facilities and Services: General overview

Land Use History: TLSA, Ken Thomas Settlement

STATE LAW

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.732: Exceptions allowed IF Physically Developed, or Irrevocably Committed. Describes process, what to look for. Actual factors addressed in OAR section

\*(1.) OAR 660-004-0025: Exception Requirements for Land Physically Developed to Other Uses: requires describing extent of development on a map, is it "Physically developed to the extent that it is no longer available for uses allowed by the applicable goal"?

- Describe management of small woodlands, soils (49C and 50D), slope, southern parcel of tract assessor information (is successfully managing to meet annual income requirements)

\*(2.) OAR 660-004-0028 (1)-(2): Irrevocably Committed: is it committed? Are existing adjacent uses making uses allowed by the applicable goal impracticable? Discuss FF and RR zones all around, use of land (development %), and relationship to southern parcel.

\*(3.) OAR 660-004-0028(3): Uses allowed by applicable goal are impracticable, specifically Goal 4 uses like forest operations, harvesting of forest products, etc. Describe how adjacent lands in residential use make it unlikely, but adjacent forest lands make it potentially possible. "just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use." Not necessary, but how would it be affected?

\*(4.) OAR 660-004-0028(4): Does the conclusion address all factors of section 6 and sufficiently explain why the facts support the impracticability?

\*(5.) OAR 660-004-0028(5): Do findings and facts discuss irrevocably committed throughout the report?

\*(6.) OAR 660-004-0028(6): Addressing the following factors: existing adjacent uses, existing public facilities and services, parcel size and ownership patterns of the area and adjacent lands, neighborhood

and regional characteristics, natural/man made features, physical development (this one has approval/denial findings)

OAR 660-004-0028(7): Does the submittal include required info? Yes

OAR 660-004-0040: Not applicable, not related to Goal 14 urbanization, not looking to allow parcels smaller than allowed by proposed new zone, any future proposals will have to comply with F-F requirements

OAR 660-004-0118: Planning and Zoning for Exception Areas, Describing area, are uses compatible with nearby resource areas, (NOTE: one semi-denial finding here – may decide to leave this in if relevant), how it relates to nearby urban areas (none) or industrial uses (none)

#### COMPREHENSIVE PLAN

Findings describe who may apply (QJR = landowner),

(factors for consideration, not specific criteria. Denials here are generally related to denials elsewhere. Are they generally satisfied? If not, could be a denial)

H 1,2: Review Goals, does this comply, and does it demonstrate substantial proof that such a change “shall not be detrimental to the spirit and intent of such goals”. \*(8.)

1. Citizen Involvement
2. Land Use Planning
3. Agricultural Lands
4. \*(9.)Forest Lands
5. Open Spaces, Scenic and Historic Areas, and Natural Resources
6. Air, Water, and Land Resources Quality
7. Areas subject to Natural Disasters and Hazards
8. Recreational Needs
9. \*(10.)Economic Development
10. Housing
11. Public Facilities and Services
12. Transportation
13. Energy Conservation
14. Urbanization

\*(11.) H 3: Mistake in original Comp plan can be demonstrated. Did TLSA resolve the mistake, or did it miss this property?

\*(12.) H 4: Factors relating to need for healthy, safe, aesthetic surrounding and conditions. Fire risk increase? Is it significant enough to matter? Does the proposal match the aesthetic of the area?

\*(13.) H 5: Proof of change in the inventories originally developed. Original inventory included this as forest, has since changed (TLSA), but not here. Stop encroachment?

\*(14.) H 6: Revisions based on special studies or other info. Has enough info been provided to justify the stated need for low density housing, for which F-F could be used?

I. Transportation Compliance. Not significant enough to trigger a Traffic Impact Analysis. 29 new ADT would not change functional class of road.

J. Procedures

Application, notification, hearings. Complied.

WC LUDO

9.010 Application presented on forms used as issued by the office.

9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. PC should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed above in sections XYZ?

\*(15.) 9.020.B.1. the rezoning will comply with Comp Plan (related to earlier discussion – it will or it won't depending on what has been decided above)

\*(16.) B.2. site is suitable to proposed zone. LUDO states purpose of F-F: "The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses." But Comp Plan says: "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." These are Class 4. Does it make sense as a residential area considering residential uses nearby?

\*(17.)B.3 consideration of public health, safety, welfare. Fire risk? Water impacts?

9.030 Transportation Planning Rule Compliance: insignificant impact

Rest of Chapter 9 = any additional conditions, recommendations, notice requirements, actions



PLANNING DEPARTMENT



Planning Commission  
Public Hearing  
April 2, 2019

Applicant/Owner: David Wilson  
(921-18-000086-PLNG)

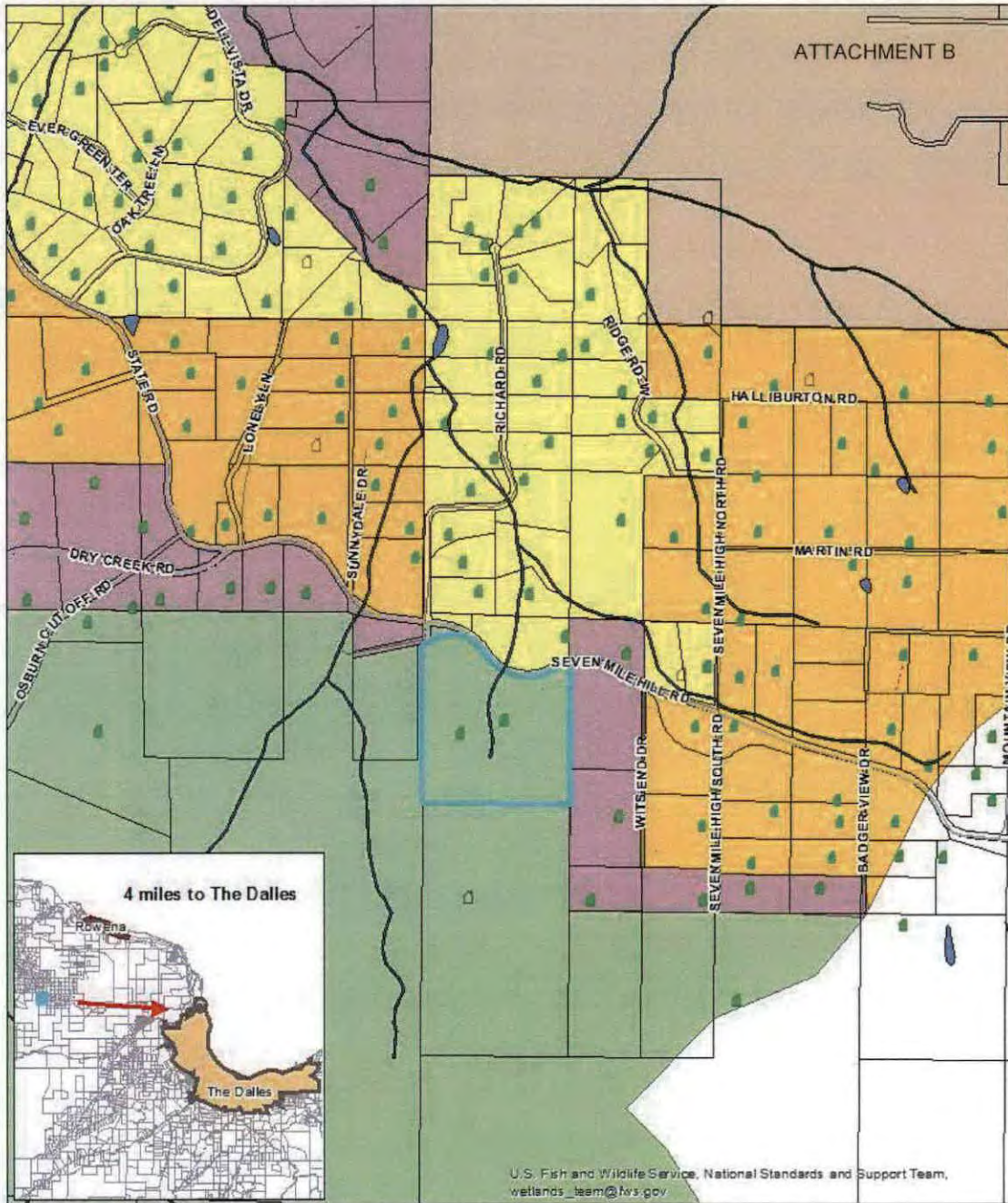


# Request

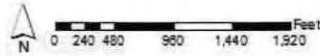
- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm
  - Applicant/Owner: David Wilson
  - Location: 7100 Seven Mile Hill Road
  - Size: @40 acres



# Vicinity Map



- |  |   |   |  |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>A-1(160)</li> <li>F-2(80)</li> <li>F-F(10)</li> </ul> | <ul style="list-style-type: none"> <li>R-R(10)</li> <li>R-R(5)</li> </ul> | <ul style="list-style-type: none"> <li>Riverine</li> <li>Freshwater Pond</li> <li>Unknown Addresses</li> <li>Addresses</li> </ul> | <ul style="list-style-type: none"> <li>Wilson Property</li> <li>Taxlots</li> </ul> |
|--|---|---|--|



This document is for informational purposes only and has not been prepared for, or the suitable for, legal, engineering, or surveying purposes. Users of this document should review or consult the primary data and information sources to ascertain the accuracy of the information.



# Staff Recommendation

- Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible.
- Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.

# Format

- Draft Findings in Green (Approval) and Yellow (Denial)
- It only takes one Criterion not being met (Yellow) to recommend denial of the request
  - (Except in the Comp Plan section)
- Today's hearing format recommendation
  - Straw Poll, discussion, identify and focus on differences



# Site Visit Photos






Total Acreage = 40 Acres  
Undeveloped Property = 35 Acres  
Developed property = 5 Acres

Total percentage undeveloped = 87.5%  
Total developed = 12.5%

## Wilson Property



0 40 80 160 240 320 Feet

-  Developed Property
-  Wilson Property
-  Taxlots



ATTACHMENT B

2018/ 6/21



ATTACHMENT B

2018/ 6/21



ATTACHMENT B





ATTACHMENT B



2018/6/21



ATTACHMENT B

2018/ 6/21



A photograph of a landscape viewed through a window, with three circular frames at the top. The scene shows a small, dark building in a grassy field, surrounded by trees. A date stamp '2018/ 6/21' is visible in the bottom right corner. The text 'ATTACHMENT B' is printed at the top center.

A photograph of a landscape viewed from an elevated position. In the foreground, there are dense evergreen trees on the left and right sides. The middle ground shows a grassy field with a small, dark-colored building or shed. In the background, there are rolling hills and mountains under a clear blue sky. A date stamp '2018/ 6/21' is visible in the bottom right corner of the image.



# State Standards Addressed

## Oregon Administrative Rules (OAR)

- OAR 660
  - Division 4 – Interpretation of Goal 2 Exception Process
  - Division 6 – Goal 4 Forest Lands

## Oregon Revised Statute (ORS)

- 197.732 – Goal Exceptions



# County Standards Addressed

ATTACHMENT B

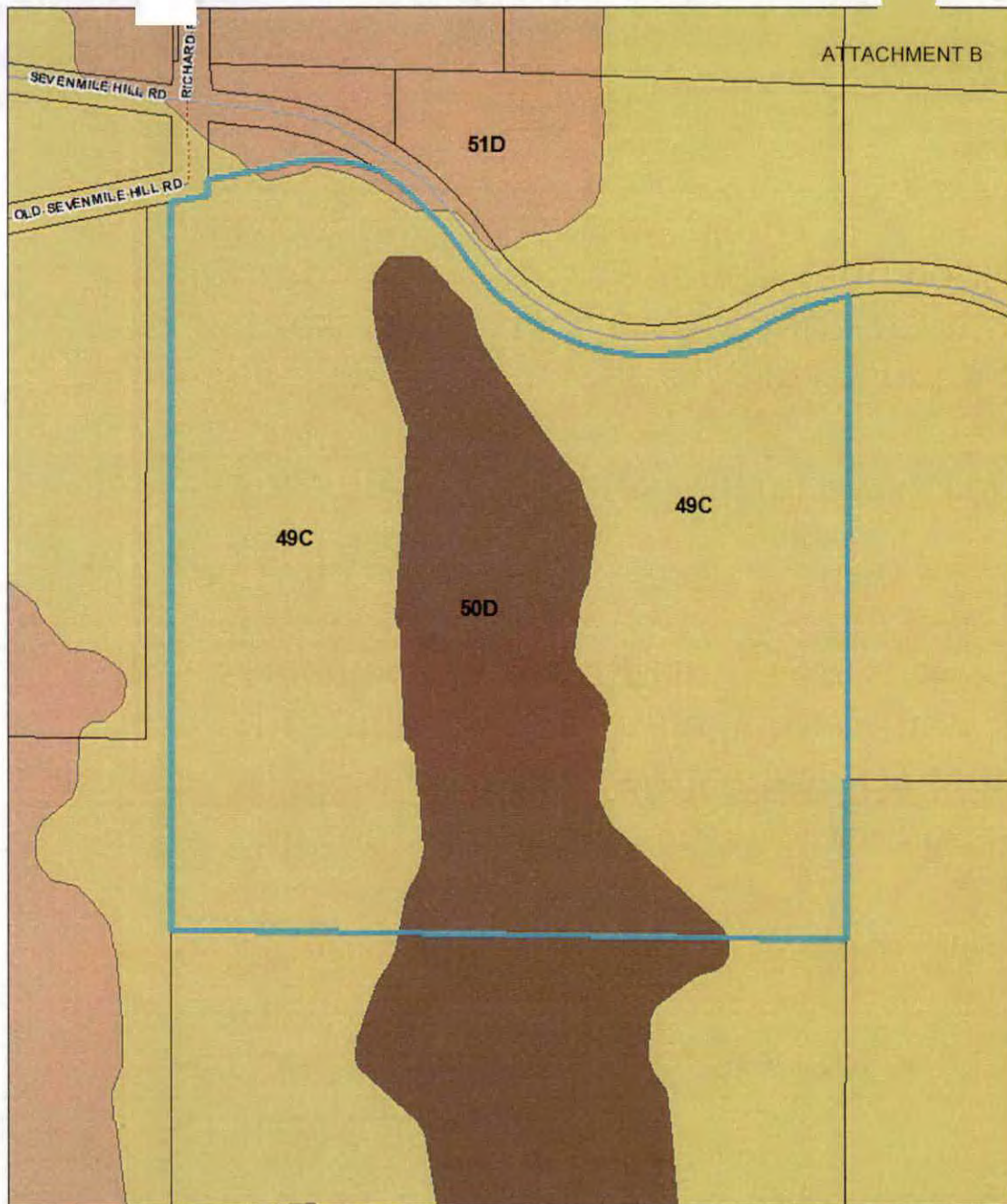
- Comprehensive Plan
  - Chapter 11 - Revisions Process
    - Section A. Intent and Purpose
    - Section B. Form of Comp Plan Amendment
    - Section C. Who May Apply for a Plan Revision
    - Section E. Quasi-Judicial Revisions
    - Section H. General Criteria
    - Section I. Transportation Planning Rule Compliance
    - Section J. Procedure for the Amendment process

# County Standards Addressed (cont.)

- Wasco County Land Use & Development Ordinance
  - Chapter 9 – Ordinance Amendments
    - Section 9.010 - Application for Zone Change
    - Section 9.020 - Criteria for Decision
    - Section 9.030 - Transportation Planning Rule Compliance
    - Section 9.040 - Conditions Relative to the Approval of a Zone Change
    - Section 9.050 - Amendments to the Zoning Ordinance
    - Section 9.070 - Notice of Planning Commission Recommendation
    - Section 9.080 - Action by County Governing Body

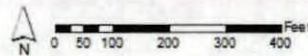


# Soil Map



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property**
- Taxlots**

## Soil Map



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# Staff Comments

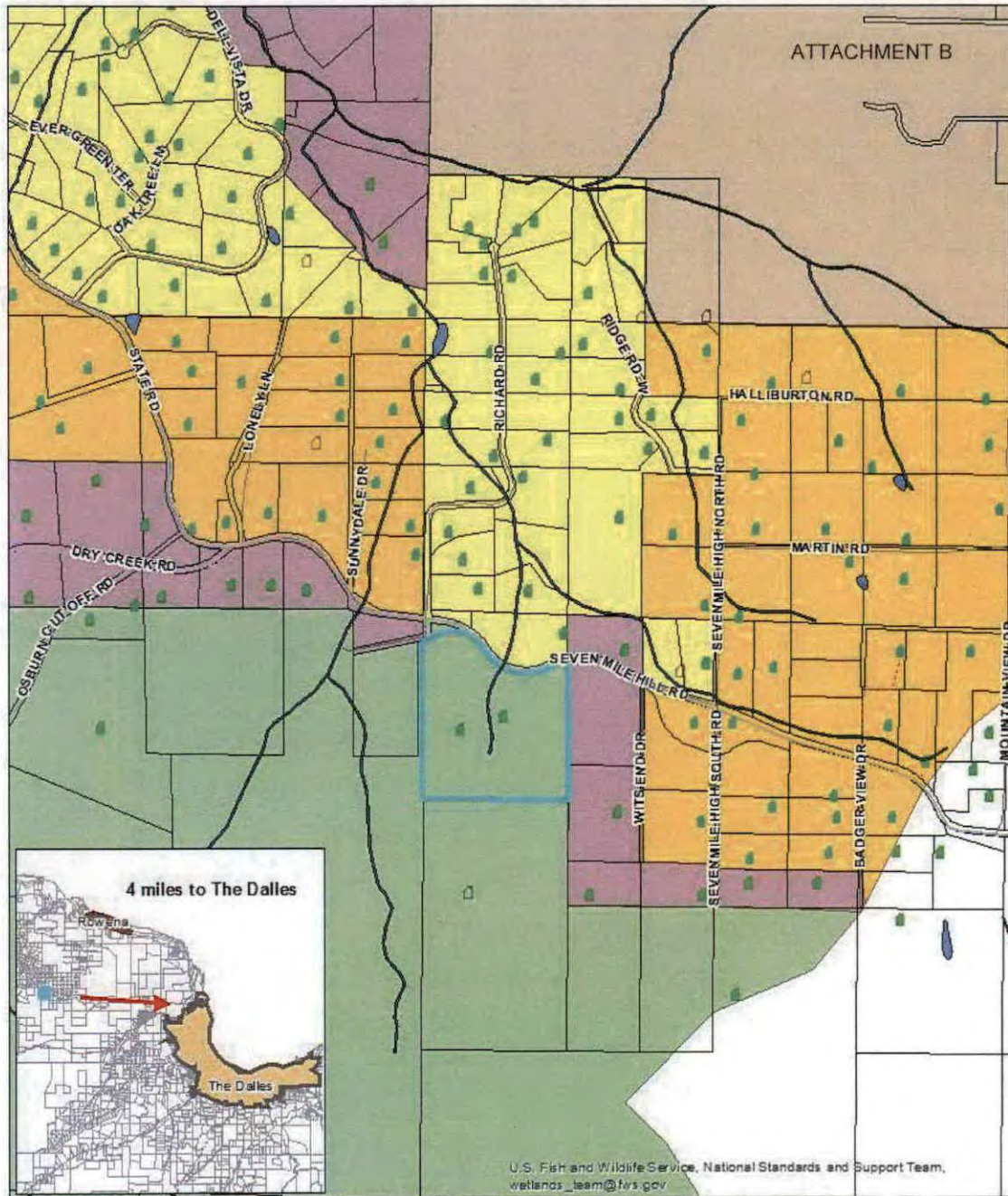
- Apprehensions
  - Conducting forestry operations are not currently impracticable (Goal 4).
  - More residences would result in the loss of more wildlife habitat (Goal 5).
  - The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
  - The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).
- Advantages
  - Three new dwellings will increase rural residential housing supply (Goal 10).
  - On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).



# Questions?

- Format?
- Procedure?
- Substance?

# Vicinity Map



- |            |           |                     |                   |
|------------|-----------|---------------------|-------------------|
| ● A-1(160) | ● R-R(10) | ● Riverine          | ● Wilson Property |
| ● F-2(80)  | ● R-R(5)  | ● Freshwater Pond   | ● Taxlots         |
| ● F-F(10)  |           | □ Unknown Addresses |                   |
|            |           | ● Addresses         |                   |



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**Approval/Denial Findings Checklist**

Packet Page Number	Agree with _____ Interpretation	Notes
1. PC 13 – PC 17	Approval Denial	
2. PC 17 – PC 18	Approval Denial	
3. PC 22 – PC 25	Approval Denial	
4. PC 25	Approval Denial	
5. PC 25	Approval Denial	
6. PC 28	Approval Denial	
7. PC 35	Approval Denial	
8. PC 38*	Approval Denial	
9. PC 38*	Approval Denial	
10. PC 39*	Approval Denial	
11. PC 41 – PC 42	Approval Denial	
12. PC 42	Approval Denial	
13. PC 42	Approval Denial	
14. PC 43	Approval Denial	
15. PC 46	Approval Denial	
16. PC 46 – PC 47	Approval Denial	
17. PC 47 – PC 48	Approval Denial	

\*Comprehensive Plan findings: Factors for consideration, not standards that must be strictly met. They must still show that they can be generally satisfied!

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section."*

*Planning Goal 2, part II, states:*

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;"*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an "exception" with minor variation—the goal states "Complies with standards for an exception" and the rule states "Complies with. . . the provisions of this division." OAR 660-004-0010(1) explains, "The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land," and includes "Goal 4 'Forest Lands.'"

Goal 4 provides that: "Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources."

Rule definitions of "resource land" and "nonresource land" support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both "physically developed" and "irrevocably committed" exceptions to Goal 4, "Forest Lands," which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base. These reasons are addressed below.

**2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a "physically developed" exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*



- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of

woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.



A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

**APPROVAL FINDING:** The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**DENIAL FINDING:** The clustering of the existing house on the western edge, with the 1000' driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640' driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would



be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which, as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a "committed" exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A 'committed exception' is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an 'exception area' is that area for which a 'committed exception' is taken;*

*(c) An 'applicable goal,' as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a 'committed exception' for this property, which is the 'exception area'. The proposed goal exception applies to land in the Forest zone (F-2) and the 'applicable goal' that currently applies to these lands is Goal 4: Forest Lands.

**APPROVAL FINDING:** An exception to remove this parcel from the forest zone and transfer it to a non-resource "Farm-Forest" (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**DENIAL FINDING:** The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal



#4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.

- b. OAR 660-004-0028(2): "Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

(a) *The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

(b) *The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnyside Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and west are resource zones while those to the north and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along its western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(o)."

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including; but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in OAR 660-004-0028(6)(c)(B). The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine "the relationship between the exception area and the lands adjacent to it" when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- "(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions"

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice," according to Webster's New World Dictionary (2nd College Ed., 1980). "Capable" means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (Unabridged Ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

#### **APPROVAL FINDING**

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing and planned development, with the potential for additional residential development in the future. This is caused by the proximity of residential neighbors on three sides, require additional protection to fire protection, funding and general control of the area, and prevent the use of site specific resource uses and vegetation that competes with commercial tree species. Further conflict with residential use because of the noise associated with commercial operations and the safety risks of logging near residential property.

The exception area is located in the Forest Zone, and the current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing and planned development, with the potential for additional residential development in the future. This is caused by the proximity of residential neighbors on three sides, require additional protection to fire protection, funding and general control of the area, and prevent the use of site specific resource uses and vegetation that competes with commercial tree species. Further conflict with residential use because of the noise associated with commercial operations and the safety risks of logging near residential property.



**DENIAL FINDING:** One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation (see discussion earlier).

Based on the current composition of the subject parcel as being predominantly open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber, as discussed in findings above for OAR 660-004-0025. The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres. On the contrary, the state of Oregon, and Wasco County, recognize the ability to have as little as 2 acres of woodlands to qualify to receive tax reductions for forestry uses. The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this parcel could practicably be used for forest uses per OAR 660-004-0028(3).

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."

**FINDING:** All applicable factors of section (6) are addressed below.

**APPROVAL FINDING:** The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

**DENIAL FINDING:** The applicant submitted extensive statements and exhibits explaining their position on why they feel that the facts support the conclusion that uses allowed by Goal 4 are impracticable. However, staff has found these statements and exhibits to be inconclusive in that attempt, with reasons given throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be to not be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:



engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

(f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

**APPROVAL FINDING:** The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

**DENIAL FINDING:** The current home and driveway are clustered against the eastern property line. There are abandoned (potentially historical) structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.

(g) *Other relevant factors;*



The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses, but expanding would conflict with potential resource uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group



**FINDING:** The following findings demonstrate how compliance **is not** achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

**Goal 1 – Citizen Involvement.** The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

**Goal 2 – Land Use Planning.** The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

**Goal 3 – Agricultural Lands.** Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

**Goal 4 – Forest Lands.** Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4.

**APPROVAL FINDING:** The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

**DENIAL FINDING:** Part 2 below outlines how this application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for “built” and/or “committed” exceptions. The proposal does not comply with Goal 4.

**Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources.** The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development



within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “*To maintain and improve the quality of the air, water and land resources of the state.*” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “*To protect people and property from natural hazards.*” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “*To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “*To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation.

**APPROVAL FINDING:** The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

**DENIAL FINDING:** The proposal promotes Goal 9 by allowing residential uses. However Goal 9 would also be promoted by encouraging forestry practices on this parcel, which the County considers to be the appropriate use of the subject property in view of its established zoning and the economic potential of timber and logging that exists, as outlined above in OAR 660 Division 4. The proposal is not consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “*To provide for the housing needs of citizens of the state.*” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: “Plans

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

FINDING: Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

~~REDACTED SECTION~~



changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

**DENIAL FINDING:** The TLSA study was extensive in its evaluation of the Sevenmile Hill area, and ultimately concluded not to rezone the subject property, while rezoning others. The soils data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time. The conversion of some properties south of the road to residential uses does not dismiss the need to hold the line somewhere between commercial forestry and single family dwellings. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

**APPROVAL FINDING:** This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WCLUDO.

**DENIAL FINDING:** An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.

5. *Proof of change in the inventories originally developed.*

**APPROVAL FINDING:** The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

**DENIAL FINDING:** This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established.



6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

**APPROVAL FINDING:** As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**DENIAL FINDING:** This application attempts to demonstrate that there is a public need for low-density rural residential uses, and for small scale farm and forest uses, in the County generally and in the Sevenmile Hill area specifically. The justification for the particular change is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. However, as discussed throughout the report, staff has determined that not enough information has been provided to support this change. That forestry/residential buffer is important to maintain and to establish this area as residential would erode it further in this area, which has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire. The Commercial Forestry uses established by Goal 4 on this property under its current zoning are also an established public need in this County. Due to the existing potential for this property to still be used in that fashion, it has not been demonstrated or fully justified by this application and its exhibits that there is a public need for the requested change from a resource to a non-resource zone.

#### I. Transportation Planning Rule Compliance

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*



**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. The original zoning was the product of a mistake; or*
- B. It is established that*
  - 1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found **to be to not be** in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be "Forest-Farm." The zone designation, "Forest-Farm," with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

- 2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*"The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses."*



**APPROVAL FINDING:** The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion 8.2.

**DENIAL FINDING:** The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used as part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses. The Green Sheets have a category for "Woodland suitability" where it addresses growth. For the two soil types on the subject property, both are listed at "4A", where 4 is the number of cubic meters/hectare/year, and A is "slight or no limitation". Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per acre per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for



development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. **The exhibits and record of this proceeding support a finding of compliance with this requirement.**

However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area is to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):



Board of County Commissioners  
March 16, 2022



COMPLAINT #921-18-000086-PLNG (WILSON) pg. 1045

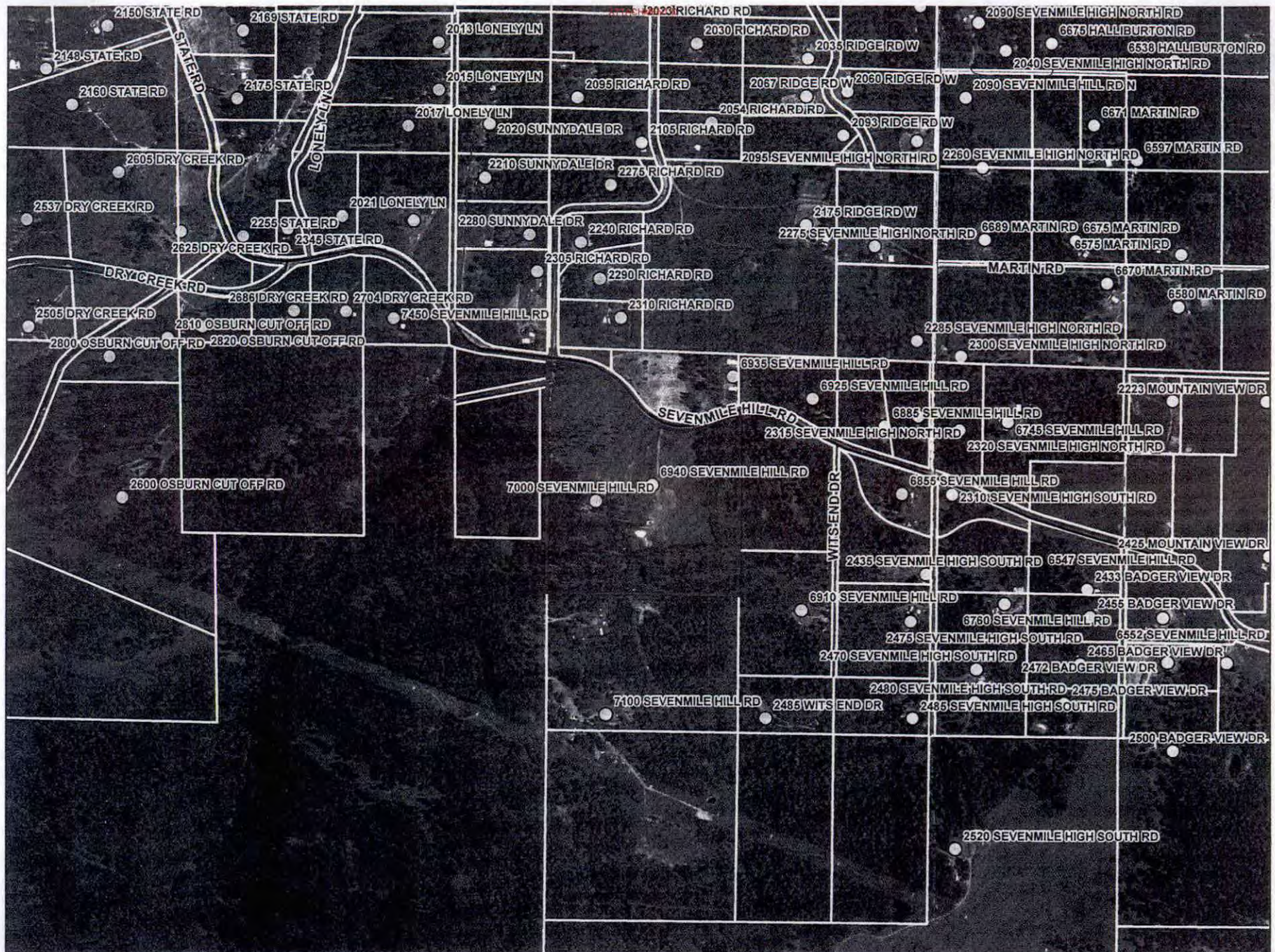
BOCC 1 3240

rec JS  
4/14/22

0 320 640 1,280 1,920 2,560 Feet

Map data is derived from the National Aeronautics and Space Administration (NASA) Landsat satellite imagery. The imagery is provided as a reference only and is not intended for use in any legal proceeding. The imagery is not a warranty of any kind and is not a representation of any kind. The imagery is provided as a reference only and is not intended for use in any legal proceeding. The imagery is not a warranty of any kind and is not a representation of any kind.





pg. 35  
4/2/19



rec. 4/2/19  
JS

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLSA study.



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

7000 / H / RECEIVED  
WASCO WATER WELL REPORT  
STATE OF OREGON MAY 28 1974  
003131 (Please type or print) STATE ENGINEER  
SALEM, OREGON

State Well No. 2N/12E-22  
State Permit No.

(1) OWNER:

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒  
6" Diam. from 0 ft. to 41 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

d: gal./min. with ft. drawdown after hrs.

Air  
Ball test 50 gal./min. with 100 ft. drawdown after 9 hrs.

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite - cement  
Well sealed from land surface to 40 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite Yellowstone  
Number of pounds of bentonite per 100 gallons  
of water 65 lbs./100 gals.  
Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.  
Did any strata contain unusable water? ☐ Yes ☒ No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed? ☐ Yes ☒ No Size of gravel:  
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Wasco Driller's well number  
NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.  
Static level 33 ft. below land surface. Date 5-14-74  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt. 1, Box 61-A, The Dalles, Oregon

[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

(USE ADDITIONAL SHEETS IF NECESSARY)

SP\*4566-119







STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

RECEIVED

APR 20 1987

WVASC  
003105

24/E-22cb

(1) OWNER:

Name Richard J. Murray  
Address 2175 Ridge Rd  
City The Dalles, State Oregon Zip 97058

Well Number:

WATER RESOURCES DEPT.  
SALEM, OREGON

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

BORE HOLE CONSTRUCTION:

Special Construction approval Yes No ☐ Depth of Completed Well 3/20 ft.  
Explosives used ☐ Type Amount

HOLE		SEAL		Amount	
Feet	To	Material	From	To	sacks or pounds
12	0	Bentonite	0	24	700#

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other Rodded

Backfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

m	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom No

Did any strata contain water not suitable for intended use? ☒ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Seven Mile Rd

(10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 240		Estimated Flow Rate	SWL
From	To		
230	270	5	
334	350	25 50	150

(12) WELL LOG: Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number 606  
Signed Date 4/17/87

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 4/17/87

WHITE COPIES - WATER RESOURCES DEPARTMENT

YELLOW COPY - CONSTRUCTOR

PINK COPY - CUSTOMER

9809C 10/86



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

ATTACHMENT E

(START CARD) # 21248

(1) OWNER:

Name James Hubbard  
Address 7100 Seven Mile Rd  
City The Dalles State Ore Zip 97058

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 308 ft.

Explosives used ☐ Yes ☒ No Type Amount

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	19	Bentonite	0	19	7
6	19	308				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☐ Other Rodded

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
35	100%	308	1 hr.

Temperature of water 58 Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N N or S, Range 12E E or W, WM.  
Section 22 SW 1/4 SW 1/4  
Tax Lot 901 Lot Block Subdivision  
Street Address of Well (or nearest address)  
7100 Seven Mile Rd

(10) STATIC WATER LEVEL:

187 ft. below land surface. Date 29 April  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 274

From	To	Estimated Flow Rate	SWL
274	295	35	187

(12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Soil	0	3	
Sandstone & boulders	3	10	
Basalt gray	10	188	
Rock brown	188	202	
Basalt gray	202	274	
Rock brown visicular WB	274	295	18
Basalt gray	295	308	

RECEIVED

MAY 28 1991

WATER RESOURCES DEPT.  
SALEM, OREGON

Date started 27 April Completed 29 April 1991

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number  
Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606  
Signed Richard J. Murray Date 27 May 1991

ORIGINAL & FIRST COPY - WATER RESOURCES DEPARTMENT

SECOND COPY - CONSTRUCTOR

THIRD COPY - CUSTOMER

9809C 3/88



**PLEASE WRITE LEGIBLY – NOTIFICATION LIST WILL BE GENERATED FROM THE ADDRESS/EMAIL GIVEN**

**HEARING DATE: 04/02/19**

NAME	ADDRESS	CITY, STATE	PHONE	EMAIL
Bice Summers	718 State St.	Flagstaff AZ	501 366 4264	Bill@phillips reyners.com
Shawn Dooly	3300 Vesper Rd.	Moscow		
Gill Banker	P.O. Box 572	Mesa	546-508-0260	



**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • www.co.wasco.or.us

*Pioneering pathways to prosperity.*

**PLANNING COMMISSION RECOMMENDATION  
to The Wasco County Board of Commissioners**

FILE # 921-18-000086-PLNG

**BOARD OF COMMISSIONERS HEARING DATE:** June 5, 2019, 10:15 AM

**NEWSPAPER PUBLISH DATE:** May 15, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**PLANNING COMMISSION  
RECOMMENDATION:**

Approval, with conditions

**APPLICANT/OWNER:**

David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY  
LOCATION:**

The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:**

F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:**

EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Planning Commission Recommendation and Board of Commissioners Options
- B. Maps
- C. Staff Report
- D. Exhibits



## ATTACHMENT A

### PLANNING COMMISSION RECOMMENDATION

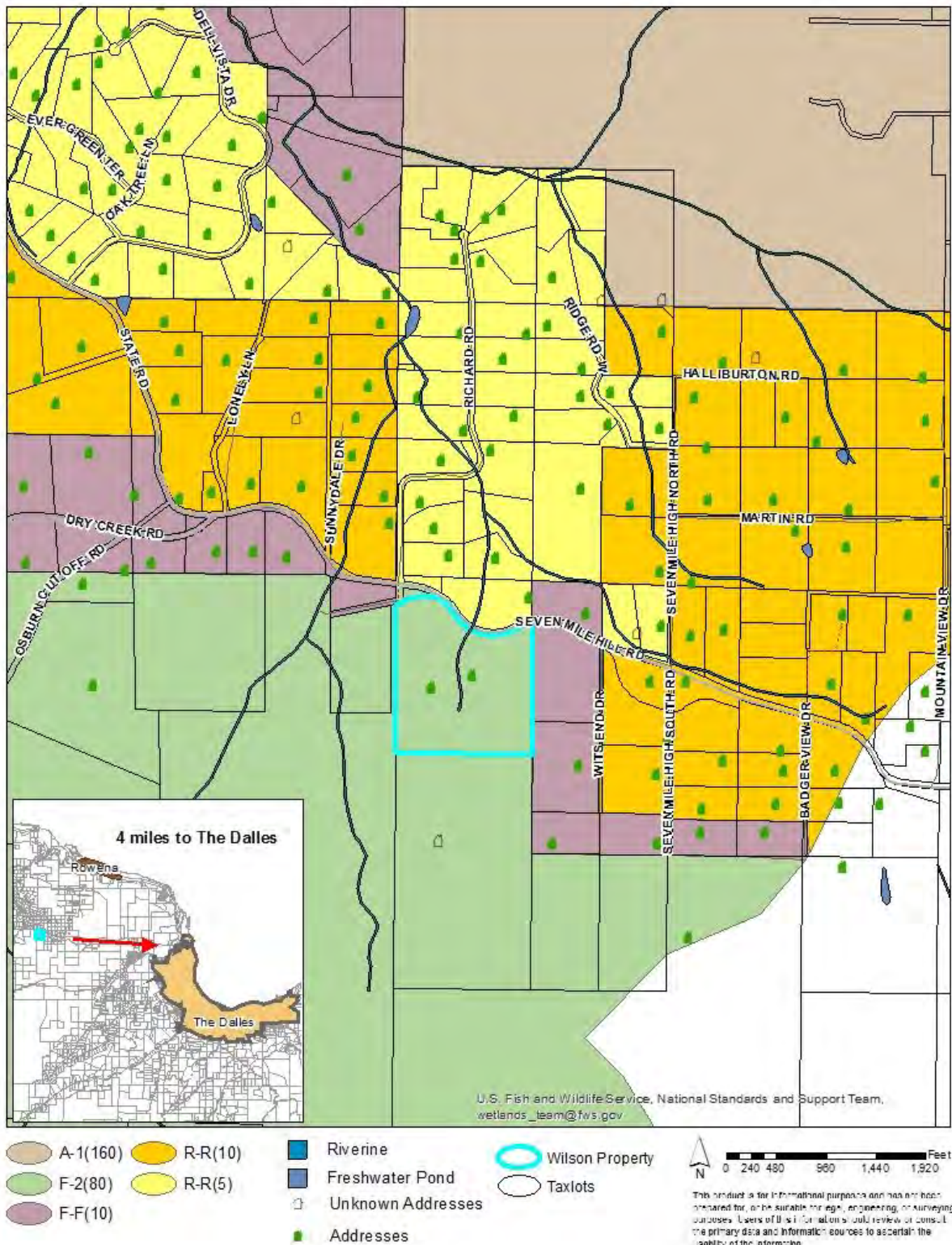
The full staff report with all proposed findings of fact and conclusions of law can be viewed online (at [http://www.co.wasco.or.us/departments/planning/active\\_landuse\\_applications.php](http://www.co.wasco.or.us/departments/planning/active_landuse_applications.php) - the actions table is sorted alphabetically by the name of the applicant/owner. The information will be available until the end of the appeal period) as **Attachment C** and will be available for public review at the Wasco County Planning Department for review at least 20 days prior to the June 5, 2019 hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **PLANNING COMMISSION RECOMMENDATION**

On April 2, 2019, the Planning Commission reviewed Staff's report, heard from the applicant, and members of the public, and decided to recommend **APPROVAL** of this request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.

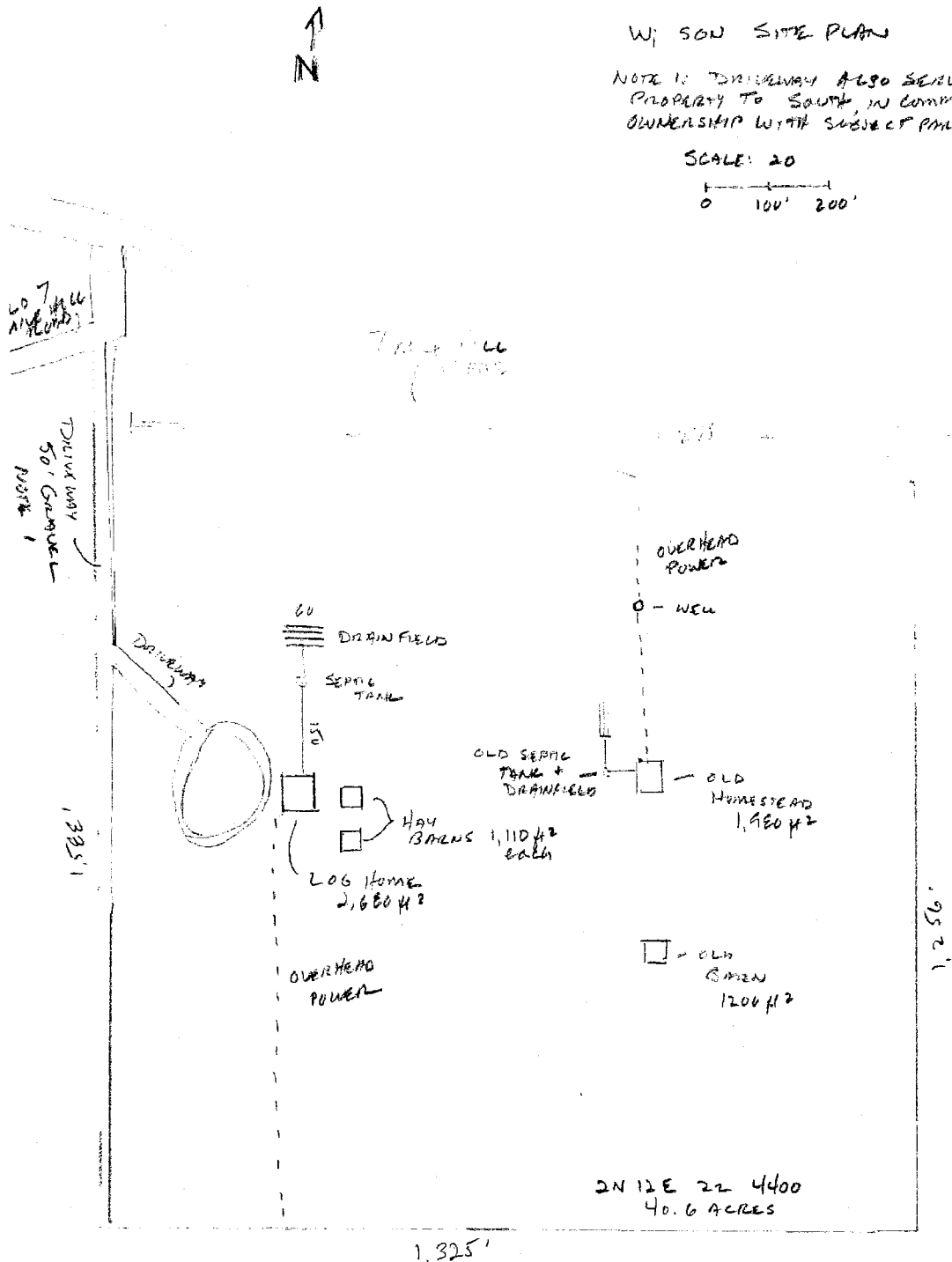
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan



## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Board of Commissioners

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Planning Commission Recommendation:** Approval, with conditions

**Board of Commissioners Hearing Date:** June 5, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

- PLALEG-13-08-0002 (Rezone)
- PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)
- CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)
- PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)
- PLAPAR-17-05-0002 (Partition and Agricultural Structure)
- PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)



**Property Owner:** The following property is referred to in this submittal as the “Subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

- A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile

Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to



low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*\* \* \**

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*\* \* \**

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*

(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The subject parcel has several features that lead it to be “Physically Developed.” A driveway runs along the western property line, accessing the single family dwelling and accessory structure on the western portion of the parcel, as well as providing access to the single family dwelling located on the parcel directly to the south (also owned by the applicant). In the center of a property, an old farm house stands (no longer used as a dwelling), with an additional driveway feature bisecting the property. In this area there are further accessory structures including a pump house and an old barn. The property is served by two wells. Two wells would be capable of serving four dwellings as each well is permitted to serve two dwellings each. The applicant submitted well records for these to demonstrate their capacity. To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development



This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability

- This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under “potential for habitat elements”, hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550’ in elevation, 100’ lower than the house at about 1650’ and 210’ below the high point to the southeast at 1760’. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant’s adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a “Dwelling in conjunction with agricultural use.” Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*“According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years...”*

The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000’ driveway, the old farmhouse in the center after a 400’ driveway and the old barn another 240’ further south, within 450’ of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. The property is also

served by two wells, and a pump house located in the north central portion of the parcel, approximately 190 feet south of the road. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**b. OAR 660-004-0028(2):** *“Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the "Transition Lands Study Area" (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.

The immediately adjacent lands on both sides of Seven Mile Hill Road are all zoned for and mostly used for residential purposes. This parcel of F-2 is the only such parcel of Forest land on all of Seven Mile Hill Road. All other parcels along Seven Mile Hill Road are already F-F (10), or are Rural Residential zoning, with 5 or 10 acre minimum parcel sizes. This demonstrates how irrevocably committed the area is to residential use.



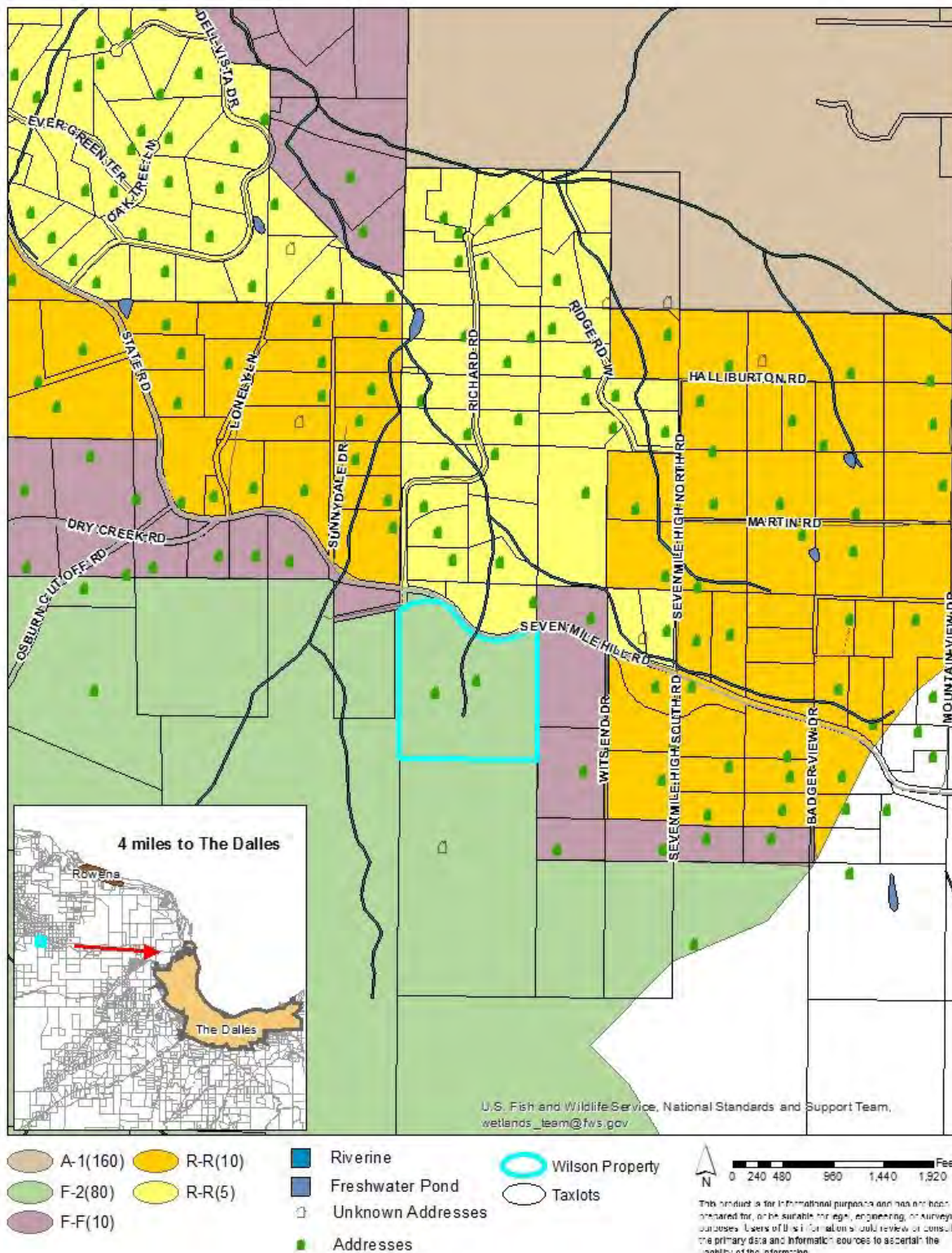


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and south west are resource zones while those to the north, north west, and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it, however, it is unique in its zoning. It is the only parcel on all of Seven Mile Hill Road that is zoned F-2 (80), Forest. All other parcels are either already the non-resource zone, F-F (10), or else are zoned Rural-Residential with five and 10 acre minimum lot sizes. This creates a unique situation where the subject parcel is enclosed on three of its sides by residentially zoned properties, most of which are used for residential purposes. If the subject parcel was used for a forestry operation it could be potentially disruptive to this residential community. This area is irrevocably committed to a residential use, and changing the zoning of the subject parcel to the same would enable this status quo to continue, limiting potential conflict with any future resource use at this location.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*



(b) *Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

(c) *Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to "conserve forest land for forest uses".

ORS 215.203(2)(a) states:

"[F]arm use" means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The "forest products" definition can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores." An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine *"the relationship between the exception area and the lands adjacent to it"* when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those "Uses Authorized in Forest Zones". An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

"(a) Uses related to and in support of forest operations;

(b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;

(c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral”

farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- d. OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below. The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

- e. OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*

*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads*

*and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land’s actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are



residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property’s existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

*(f) Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the “Exception Requirements for Land Physically Developed to Other Uses” as follows:*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

*(g) Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g.** *OAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h.** *OAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.*

**FINDING:** OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or

water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

OAR 660-004-0040 (5) and (6):

- (5) *The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) *A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) *A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

- (7) *After October 4, 2000, a local government’s requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division.”*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

- (8)(a) *The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule.”*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

- (b) *Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial

forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

- (c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

- (d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.

- (e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

- (A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

- (B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

- (C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

- (D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

- (E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*



**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco County LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners"

Association formed to maintain common open space and other common improvements.” Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

- (f) *Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) *In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule’s requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) *A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

- (A) *The parcel to be divided has two or more permanent habitable dwellings on it;*
- (B) *The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*
- (C) *Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*
- (D) *The partition would not create any vacant parcels on which a new dwelling could be established.*
- (E) *For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) *For rural residential areas designated after the effective date of this rule, the affected county shall either:*

(A) *Require that any new lot or parcel have an area of at least ten acres, or*

(B) *Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'*"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

*OAR 660-004-0118 Planning and Zoning for Exception Areas*

(2) *For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

(a) *That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

(b) *That meet the following requirements:*

(A) *The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

(B) *The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in

a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as “to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space.” This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.

The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):



"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use" are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### *A. Intent and Purpose*

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

*B. A Comprehensive Plan Amendment May Take the Following Forms:*

(\*\*\*)

*5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:*

*Comprehensive Plan Revision may be initiated by:*

(\*\*\*)

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

(\*\*\*)

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

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#### *H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance is achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-

forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is *“To maintain and improve the quality of the air, water and land resources of the state.”* The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is *“To protect people and property from natural hazards.”* Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is *“To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.”* Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is *“To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.”* The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation. The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

Goal 10 – Housing. Goal 10 is *“To provide for the housing needs of citizens of the state.”* The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in



existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TLSA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also

recognizes that the character of the neighborhood south of Sevenmile Hill Road has changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

*4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

*5. Proof of change in the inventories originally developed.*

The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

*6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**I. Transportation Planning Rule Compliance**

*1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed*

*to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*

- a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. Change standards implementing a functional classification system; or*
  - c. As measured at the end of the planning period identified in the adopted transportation system plan:*
    - (1) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
    - (2) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
    - (3) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
- 2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
- a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
- 3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips



(ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a “significant impact” under OAR 660-12-0060, the Transportation Planning Rule (TPR).

**J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

*(\*\*\*)*

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission’s recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties.”*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with the requirements in (1). This was submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing, meeting the requirements of (2). At that hearing, five Planning Commissioners were present for the vote, greater than the four needed to form a quorum, which meets the requirements of (3). They voted 4-1 to recommend approval of the proposal, meeting the requirements of (4). Notice of this recommendation was mailed out on May 9, and scheduled to be posted in The Dalles Chronicle on May 15. The Board of Commissioners hearing is scheduled for June 5, which is 21 days after May 15, within the 20-40 day requirement of newspaper notification noted in (2). It is also at least twenty (20) days after notice was mailed, as required in (5). Staff finds that Criteria (1)-

(5) were met and are being met for both the Planning Commission hearing and the Board of Commissioners hearing.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

***Section 9.010 – Application for Zone Change***

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. *By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

***Section 9.020 – Criteria for Decision***

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

- A. *The original zoning was the product of a mistake; or*

**FINDING:** As discussed above in the Comprehensive Plan Chapter 11 Section H.3., the application materials assert that it was a mistake, stating that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads, leaving the subject property as the sole F-2 zoned property along the length of Seven Mile Hill Road, with the rest being Forest-Farm or Rural-Residential. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change. This land was zoned for Forestry initially, but has not been used for that purpose. Staff finds that the subject parcel is physically developed with residential uses, and irrevocably committed to that use, indicating that the zoning of this land to be used for Forestry, as determined by the Comprehensive Plan, was a mistake.

- B. *It is established that*

1. *The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards

that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found to be in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*

The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote

clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – "TPR").  
"Significant" means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*



**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

Capacity for State Rd/7-Mile Hill Rd      1,500/day

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

*A. Special yards and spaces;*

*B. Fences and walls;*

*C. Special parking and/or loading provisions;*

*D. Street dedication and improvements or bonds in lieu of improvements;*

*E. Control of points of vehicular ingress and egress;*

*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**Section 9.080 - Action by County Governing Body**

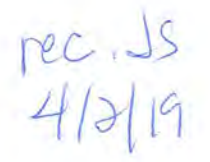
*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** The Planning Commission met on April 2, 2019 and recommended Approval. Due to a procedural oversight by staff, notification was not distributed to interested parties within ten (10) days of the hearing. However, this notification (which included a statement of the facts and reasons upon which it was based) was distributed to all interested parties, agencies, and those that signed in and spoke at the Planning Commission Hearing as required by mailing and/or email on May 9, 2019. A hearing that had been scheduled for May 15 was postponed to June 5 to meet the requirements of Section 9.080 to ensure the County Governing Body would not act for at least twenty (20) days from the date the Notice of Planning Commission Recommendation was mailed. The County Governing Body is the Board of Commissioners, who will meet to take action that they deem appropriate on this request on June 5, 2019, more than twenty (20) days after the Planning Commission Recommendation was mailed. Despite missing the ten day window, all individuals and agencies that needed to be notified were, and action was not taken by the Governing Body until sufficient time had passed. Staff finds that Sections 9.060, 9.070, and 9.080 were met.











rec. 4/2/19  
JS

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLISA study.

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WASCO

003131

STATE OF OREGON

(Please type or print)

(Do not write above this line)

RECEIVED

MAY 28 1974

STATE ENGINEER  
SALEM, OREGON

State Well No.

State Permit No.

2N/12E-22

(1) OWNER:

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dig ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒  
6" Diam. from 0 ft. to 41 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

d: gal./min. with ft. drawdown after hrs.

Air  
Ball test 50 gal./min. with 100 ft. drawdown after 9 hrs.

esian flow g.p.m.

emperature of water 50° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite - cement

Well sealed from land surface to 40 ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 4 sacks

Number of sacks of bentonite used in well seal 2 sacks

Brand name of bentonite Yellowstone

Number of pounds of bentonite per 100 gallons

of water 65 lbs./100 gals.

Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☐ Yes ☒ No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Wasco Driller's well number

NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.

Static level 33 ft. below land surface. Date 5-14-74

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt 1, Box 61-A, The Dalles, Oregon

[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

(USE ADDITIONAL SHEETS IF NECESSARY)

SP-45658-119



BOCC 1 - 3300



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

APR 20 1987

WVASC  
003105

24/E-22cb

(1) OWNER:

Name Richard J. Murray  
Address 2175 Ridge Rd  
City The Dalles, State Oregon Zip 97058

Well Number:

WATER RESOURCES DEPT  
SALEM, OREGON

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 3/20 ft.  
Explosives used Yes No Type Amount

HOLE			SEAL			Amount sacks or pounds
meter	From	To	Material	From	To	
12	0	24	Bentonite	0	24	700#

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other Rodded

Backfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

m	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing  
Artesian

Yield gal/min 50 Drawdown 100% Drill stem at 550 Time 1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom No

Did any strata contain water not suitable for intended use? ☒ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Seven Mile Rd

(10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 240

From	To	Estimated Flow Rate	SWL
230	270	5	
334	350	25 50	150

(12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number 606

Signed Date 4/17/87

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 606

Signed Richard J. Murray Date 4/17/87

WHITE COPIES - WATER RESOURCES DEPARTMENT

YELLOW COPY - CONSTRUCTOR

PINK COPY - CUSTOMER

9809C 10/86







# **WASCO COUNTY PLANNING** **COMMISSION AGENDA PACKET**

## **FOR**

Hearing Date: April 2, 2019  
Hearing Time: 3:00 pm  
Hearing Location: The Gorge Discovery Center  
Lower Level Classroom  
5000 Discovery Drive  
The Dalles, Oregon 97058

File #921-18-000086-PLNG - Application for a Comprehensive Plan  
Amendment







**PLANNING DEPARTMENT**

2705 East Second Street • The Dalles, OR 97058  
p: [541] 506-2560 • f: [541] 506-2561 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

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Date: March 26, 2019  
To: Wasco County Planning Commission  
From: Wasco County Planning Office  
Subject: Submittal for Meeting dated April 2, 2019  
Re: #921-18-000086-PLNG – Application for a Comprehensive Plan Amendment

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**SUMMARY OF INFORMATION**  
**Prepared for Planning Commission Hearing**

FILE # 921-18-000086-PLNG

**HEARING DATE:** April 2, 2019

**NEWSPAPER PUBLISH DATE:** March 13, 2019

**REQUESTS:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated "Forest" to "Forest Farm;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm

**STAFF RECOMMENDATION:**

1. The Planning Commission should accept and weigh public testimony;
2. The Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial.

**APPLICANT/OWNER:** David Wilson, 7100 Seven Mile Hill Road, The Dalles, OR 97058

**PROPERTY LOCATION:** The subject property is located along and south of Sevenmile Hill Road, southeast of it's intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.16

**ZONING:** F-2(80), Forest Zone

**ENVIRONMENTAL**

**PROTECTION DISTRICT:** EPD-8, Sensitive Wildlife Habitat Overlay Zone (Low Elevation Winter Range)

**ATTACHMENTS:**

- A. Staff Recommendation and Planning Commission Options
- B. Maps
- C. Staff Report
- D. Exhibits

## ATTACHMENT A

### STAFF RECOMMENDATION AND PLANNING COMMISSION OPTIONS

The full staff report with all proposed findings of fact and conclusions of law is enclosed as **Attachment C** and was available for public review at the Wasco County Planning Department for review one week prior to the April 2, 2019, hearing. The full staff report is made a part of the record. This summary does not supersede or alter any of the findings or conclusions in the staff report, but summarizes the results of Staff's review and recommendation.

#### **STAFF RECOMMENDATION**

As noted on the cover page of this document, Staff's recommendation is for the Planning Commission to accept and weigh public testimony, and that the Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial. The reasoning for this broad recommendation is that this is a complex proposal that could have both positive and negative impacts on the land base of Wasco County. In some cases the proposal potentially advances statewide planning goals and policies, and in others it may detract from them. The Planning Commission has a more broad level of discretionary authority to hear the proposal and weigh the positive and negative impacts for a final recommendation to the Board of County Commissioners. The following list briefly outlines staff's apprehensions, and areas of support.

Overall, staff has the following apprehensions regarding the proposal:

- Conducting forestry operations are not currently impracticable (Goal 4).
- More residences would result in the loss of more wildlife habitat (Goal 5).
- The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
- The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).

Additionally staff sees the following advantages:

- Three new dwellings will increase rural residential housing supply (Goal 10).
- On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible. Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.

#### **FORMAT**

This summary and staff report feature several locations where items are highlighted in **GREEN** or **YELLOW**. The green options represent potential Approval Findings, and the yellow options represent potential Denial Findings. The Planning Commission must select one or the other in each instance, or rewrite them to their preference. **It only takes one Criterion not being met to recommend denial of the request.** With the exception of the Comprehensive Plan, Section H. Findings which are factors for consideration, and not criteria which must be met, if the PC upholds the interpretation of ANY yellow Denial finding over a green Approval finding, the recommendation to the Board of Commissioners will be for denial.



## ATTACHMENT A

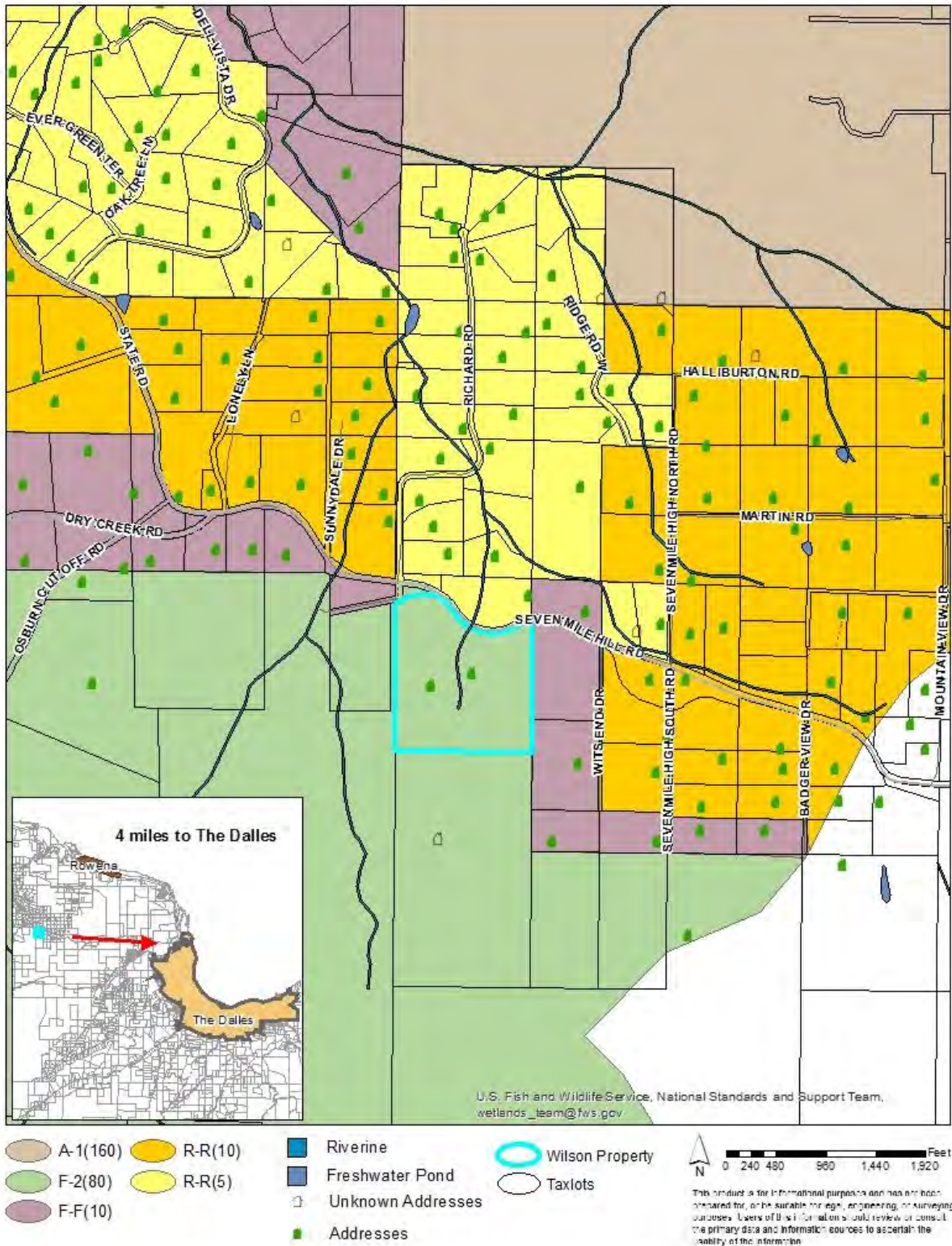
### STAFF RECOMMENDATION AND PLANNING COMMISSION OPTIONS

#### PLANNING COMMISSION OPTIONS

- A. Continuation: Based on testimony and evidence presented at the hearing, continue the hearing for more time to deliberate and/or consider the information provided. Additional testimony may provide specific reasons to support a recommendation of approval or denial.
- B. Continuation: Based on testimony and evidence presented at the hearing, request additional information of staff or the applicant, and keep the record open for additional information to be provided until the next hearing at a date and time certain.
- C. Recommend Approval: Based upon all of the findings of fact and conclusions of law set forth above, the Planning Commission can recommend approval of the exception and zone change with Approval Findings as laid out in the Staff Report with “Approval Finding” language, and recommend that the proposed exception area be rezoned to F-F(10) and that the corresponding plan, map and ordinance changes be made.
- D. Recommend Approval With Modification(s): Approve the request with amended findings of fact and/or new conclusions of law.
- E. Close the Public Hearing, and Continue Deliberation to Work Session: Acknowledge that all required evidence has been presented and heard. Continue deliberations with a scheduled work session to review and edit individual findings before making a final decision.
- F. Recommend Denial: Based upon all of the findings of fact and conclusions of law set forth above, the Planning Commission can recommend denial of the exception and zone change with Denial Findings as laid out in the Staff Report with “Denial Finding” language, and recommend that the Commission deny the request for a Zone Change, Goal Exception, and Comprehensive Plan Amendment.
- G. Recommend Denial With Modification(s): Deny the request with amended findings of fact and/or new conclusions of law.

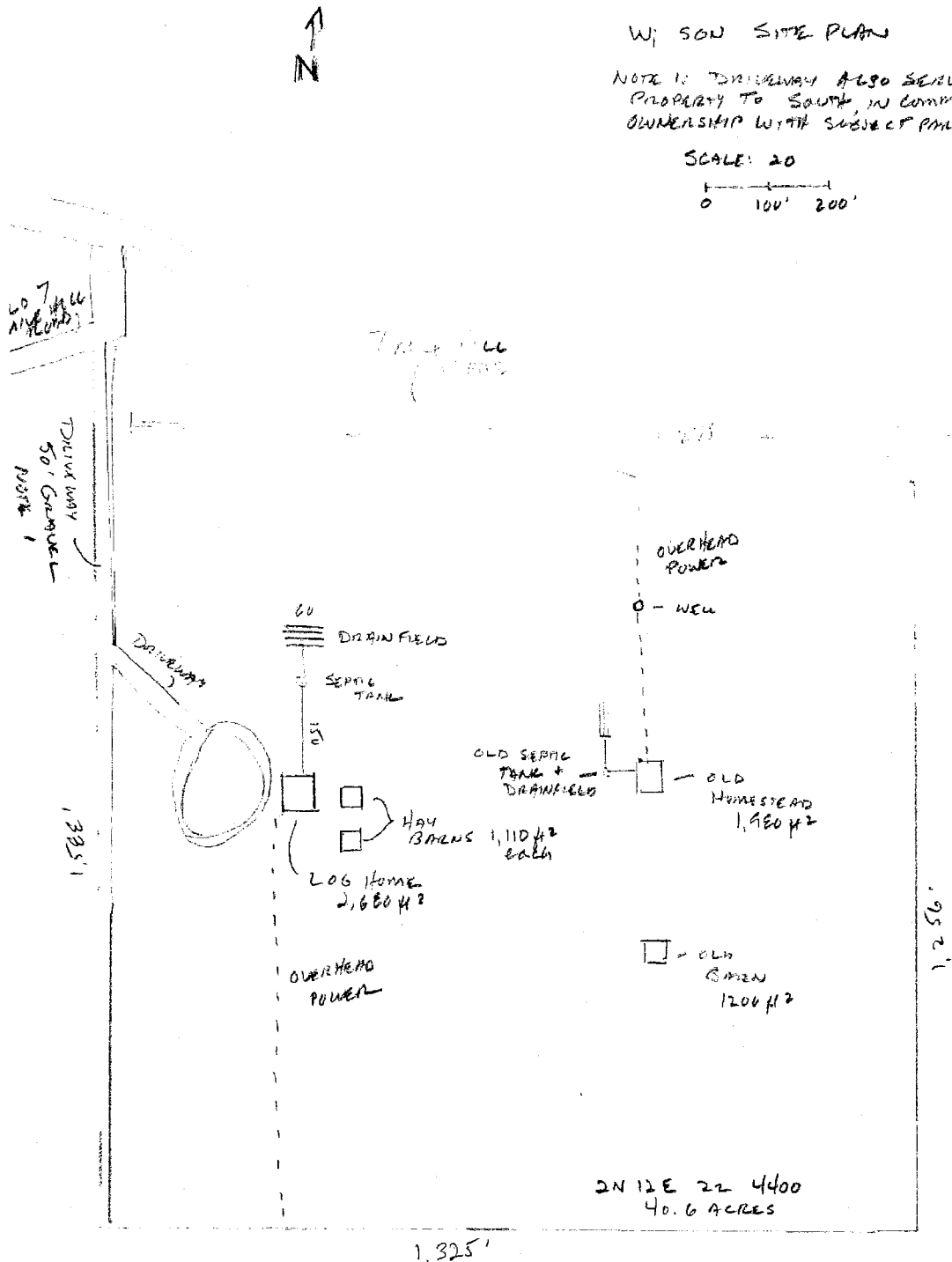
# ATTACHMENT B – MAPS

## Vicinity Map



# ATTACHMENT B - MAPS

## Site Plan



## ATTACHMENT C – STAFF REPORT

**File Number:** 921-18-000086-PLNG

**Requests:**

1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned F-2 (80), Forest, to F-F (10), Forest-Farm (remove from resource zone protections).

**Prepared By:** Will Smith, Senior Planner

**Prepared For:** Wasco County Planning Commission

**Procedure Type:** Quasi-Judicial Hearing

**Applicant/Owner:** David Wilson

**Staff Recommendation:**

1. The Planning Commission should accept and weigh public Testimony; and
2. The Planning Commission should use their judgment to make an objective recommendation for continuance, approval, or denial.

**Planning Commission Hearing Date:** April 2, 2019

**Location:** The subject property is located along and south of Sevenmile Hill Road, southeast of its intersection with Richard Road, approximately 4.3 miles northwest of The Dalles, Oregon; more specifically described as:

<u>Map/Tax Lot</u>	<u>Acct#</u>	<u>Acres</u>
2N 12E 22 4400	884	40.6

**Zoning:** F-2 (80), Forest Zone

**Comprehensive Plan Designation:** Forest

**Past Actions:**

PLALEG-13-08-0002 (Rezone)  
PLAPRE-14-06-0003 (Pre-Application Conference for PLAQJR-15-09-0002)  
CODENF-14-01-0001 (Nuisance Complaint Regarding Noise from Wood Chipper)  
PLAQJR-15-09-0002 (Comprehensive Plan Amendment, Zone Change, Goal Exception)  
PLAPAR-17-05-0002 (Partition and Agricultural Structure)  
PLAAPL-17-10-0001 (Appeal of Agriculture Structure Size Approval)



**Property Owners:** The following property is referred to in this submittal as the “subject property:”

TAX LOT NO.	ACREAGE (Approx.)	OWNER	EXISTING DEVELOPMENT
2N 12E 22 4400	40.6 Ac.	David Wilson	Residence

## **I. APPLICABLE STANDARDS**

### **A. State Law**

#### **Oregon Administrative Rules (OAR)**

OAR 660, Division 4 - Interpretation of Goal 2 Exception Process

OAR 660, Division 6 - Goal 4 Forest Lands

#### **Oregon Revised Statutes (ORS)**

ORS 197.732 - Goal Exceptions

### **B. Wasco County Comprehensive Plan**

Chapter 11 - Revisions Process

Section A. Intent and Purpose

Section B. Form of Comp Plan Amendment

Section C. Who May Apply for a Plan Revision

Section E. Quasi-Judicial Revisions

Section H. General Criteria

Section I. Transportation Planning Rule Compliance

Section J. Procedure for the Amendment process

### **C. Wasco County Land Use & Development Ordinance (LUDO)**

Chapter 9 - Ordinance Amendments

Section 9.010 - Application for Zone Change

Section 9.020 - Criteria for Decision

Section 9.030 - Transportation Planning Rule Compliance

Section 9.040 - Conditions Relative to the Approval of a Zone Change

Section 9.050 - Amendments to the Zoning Ordinance

Section 9.070 - Notice of Planning Commission Recommendation

Section 9.080 - Action by County Governing Body

## **II. BACKGROUND INFORMATION**

**A. Legal Parcel:** The subject parcel was legally created by Partition PLAPAR-17-05-0002 recorded with the Wasco County Clerk on September 8, 2017. The subject parcel is considered to be legal because it meets the LUDO Section 1.090 definition of a (Legal) Parcel as it is a parcel in an existing, duly recorded partition.

### **B. Public Facilities and Services**

1. Transportation: The subject property lies south of Sevenmile Hill Road southeast of its intersection with Richard Road, approximately ½ mile east of the intersection of Sevenmile

Hill/State/Dry Creek Road. Roads. Access to the subject property is from Sevenmile Hill Road.

The 2009 Wasco County Transportation System Plan (TSP) provides the following information for Average Daily Trips (ADT) and Volume/Capacity (V/C):

	Functional Class	ADT 2009	V/C ratio from TSP
State Rd	RC Rural Major Collector	480	0.01
Dry Creek	RK Rural Minor Collector	78	n/a
Osburn Cut-off	RL Rural Local	51	n/a

The Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7):

*Capacity for State Rd/7-Mile Hill Rd      1,500/day*

According to the latest version of the Institute of Transportation Engineers (ITE) Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing approximately 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the Oregon highway Plan (OHP) mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 2030 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that mobility standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

2. Water and Sewer: There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A Geologic Survey was published in 1996 as part of the TLSA study (see below under Land Use History) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities at the time. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Exhibit 4, the TLSA Study Area Ground Water Evaluation – Wasco County, Oregon, Jervey Geological Consulting ("Groundwater Study") at pages 12-13.) The predominant source of water in this area is from wells. The general conclusion of the 1996 groundwater study was that this area had capacity to support additional residential development. The study also recommended that groundwater levels be periodically monitored to assess the impact of ongoing rural development.

Water resources for residential use in this area do exist, but they are being closely monitored by the Oregon Water Resources Department, as recommended by the TLSA

study. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

There are no public sewer facilities available in the area. Each of the three potential single family dwellings would be required to handle its own sewage as required by law. At the development stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

3. Electricity: Wasco Electric Co-op power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence already located on the subject property.
4. Fire Protection and Prevention: The subject property is within the Mid-Columbia Fire and Rescue District boundaries. The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies. Any future development proposals will be required to comply with Wasco County LUDO Chapter 10 Fire Safety Standards.

### C. Land Use History:

#### *Transitional Lands Study Area (TLSA) Project*

In 1993, Wasco County began work on the Transition Lands Study Area Project (“TLSA”) in response to concerns about development in northern Wasco County, and particularly in the area surrounding the parcels in this current proposal, known as the Sevenmile Hill area. The concerns included “availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area.”

The first phase of the TLSA was a groundwater study. The initial study was published in December 1996 as the “TLSA Ground Water Evaluation, Wasco County, Oregon” by Jervey Geological Consulting (The Groundwater Study”). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the properties in this current proposal were rated “L/H,” meaning that they scored low for Resource Values and high for Development Values (with the exception of the northern part of parcel 2900, which was rated H/H, or having high scores for both Development Values and Resource Values).

The final Recommendation of the TLSA for the Sevenmile Hill area included the following:

- *Retain the existing R-R (5) and A-1 (80) EFU zoning.*
- *Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).*
- *Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area.*

No mention is made in this report of how F-2 land should be addressed. After the TLSA study, eight parcels of F-F (10) land in the Sevenmile Hill area north of the subject property were converted to R-R (10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). The County has approved single family dwellings that have subsequently been built on many properties along Seven Mile Hill Road near the proposed exception area.

### *Betzing Appeal*

The County's approval of dwellings south of Sevenmile Hill Road in recent years and the rezoning of portions of the Sevenmile Hill area (in the proximity of the Wilson property) were contentious in the late 1990s. Several appeals were filed by a Mr. Kenneth Thomas, one of which was for a property owned by Mr. Joseph Betzing. Mr. Thomas is a member of the Society of American Foresters, and owns and manages approximately 1100 acre tract of timberland south of the proposed exception area. The appeals were heard by the Oregon Land Use Board of Appeals (LUBA).

One of Mr. Thomas' central concerns was that rural residential development is generally incompatible with commercial forestry—that the approval of additional dwellings south of Sevenmile Hill Road would increase the fire risk for his commercial forest lands to the south and increase the chance that a forest fire in the commercial forest lands would spread to abutting residences and pose a risk to the community.

The LUBA record of hearing (1997-98), and findings leading to the eventual approval of a dwelling on a 5.1 acre parcel south of Sevenmile Hill Road and abutting the subject property (applicant Joseph Betzing), indicated that the area in which the subject property is located is subject to high wind gusts as well as stable high wind patterns. The area is characteristically dry and subject to drought, which leads to high mortality in forest stands. That record also indicated that the Oregon Department of Forestry (ODF) has identified the area as one of particularly high fire risk during the fire season, and has repeatedly identified residential and associated buildings as significant fire hazards. ODF also testified that "dwellings increase the risk of fire, restrict control tactics, complicate the protection priorities and require additional coordination that result in increased cost." (Betzing Record, page 230.)

### *Settlement Agreement and 2013 ZNC/CPA/EXC decision*

To try and address multiple LUBA cases and find solutions, a Settlement Agreement was entered into on January 5, 2000, between the County Planning Director, the appellant Kenneth Thomas, and applicant Joseph Betzing. The settlement was based on a mutual understanding that the area south of Sevenmile Hill Road included land that was already built (with existing residences), and committed (through existing plan and zone designations and development approvals) to



low-density rural residential uses. The logical boundary, separating commercial forestry uses from built and committed residential areas, was identified as the Bonneville Power Administration Transmission Line Easement also known as “Bonneville - The Dalles Line.” The BPA easement area is maintained clear of trees, and acts, because of its width and scarification, as a significant physical break between rural residential uses in the Sevenmile Hill Road area and commercial forestry uses to the south. It was thought that the powerline right-of-way/easement area would separate and therefore mitigate the potential fire impacts associated with low-density residential uses in the Sevenmile Hill area.

Relevant terms of the Settlement Agreement state:

*“The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify the zoning and comprehensive plan designation of the property marked in Exhibit A, from F-2 to FF-10.” Exhibit 5, p. 1.*

*To institute these recommended changes, the county’s comprehensive plan should be amended, to take an exception to Goal 4 and to recognize that the area has changed enough to require a new plan designation. The new designation should permit not just small-scale forest-farm uses, but also low-density rural residential use. In this circumstance, the proposed zoning designation is Forest-Farm, with a ten-acre minimum lot size. Residential use of the area in conjunction with forest or farm uses is allowed outright on parcels meeting the minimum lot size, and otherwise, only subject to a conditional use permit. To further promote the goal of protecting commercial forestry in the area, a Limited Use, Forest Protection Overlay Zone, will require clustering of any proposed dwellings toward the northern portion of the area adjacent to existing residential lots and close to existing road access, and establish additional fire prevention standards and conditions. These measures will improve the utility of the subject property to serve as a buffer between rural residential uses in the area and commercial forestry uses to the south.”*

To implement this change, and by resolution of the County Court, staff proposed a Comprehensive Plan Amendment, Goal Exception, Zone Change, and LUDO Amendment proposal in 2013 sought to apply F-F(10) zoning to all or a portion of eight parcels (totaling approximately 287 acres), including the subject parcel of this application, all of which were (and still are) zoned F-2. This action would have allowed potential development of a maximum of 22 rural residences in an area south of Sevenmile Hill Road (County Road 507) and Dry Creek Road (County Road 405), and north of the southern boundary of Bonneville Power Administration’s (BPA) Bonneville - The Dalles Line right-of-way/easement. That right-of-way/easement would have functioned as a physical divider between existing rural residential development and suggested new F-F (10) lands on the one hand, and the commercial forestry lands south of the easement on the other.

After a 4-3 Planning Commission vote to recommend approval to the Board of County Commissioners, the Board voted 2-0 to deny the proposal (PLALEG-13-08-0002). A review of the application materials, comments, reports, and the minutes of that meeting indicates that the major concerns were fire safety, and water supply.

### III. FINDINGS

#### A. State Laws – Oregon Administrative Rules and Oregon Revised Statutes

##### 1. Introduction

*In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.*

*Statewide Land Use Planning Goal 4, "Forest Lands" is:*

*"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."*

ORS 197.732(2) states, in relevant part:

*(2) A local government may adopt an exception to a goal if:*

- (a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]*
- (b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;*

*\* \* \**

- (4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (2) of this section have or have not been met.*
- (5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.*

*\* \* \**

- (8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:*
  - (a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;*

*(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and*

*(c) Complies with standards under subsection (1) of this section.”*

Planning Goal 2, part II, states:

*A local government may adopt an exception to a goal when:*

*(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]*

*(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”*

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

*OAR 660-004-0025 states:*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*

(2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



**Figure 1: Development**

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of



woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

**APPROVAL FINDING:** The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**DENIAL FINDING:** The clustering of the existing house on the western edge, with the 1000' driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640' driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would

be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which, as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a “committed” exception.*

**a. OAR 660-004-0028(1):**

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

*(a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

*(b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;*

*(c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a ‘committed exception’ for this property, which is the ‘exception area’. The proposed goal exception applies to land in the Forest zone (F-2) and the ‘applicable goal’ that currently applies to these lands is Goal 4: Forest Lands.

**APPROVAL FINDING:** An exception to remove this parcel from the forest zone and transfer it to a non-resource “Farm-Forest” (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**DENIAL FINDING:** The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal

#4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.

- b. OAR 660-004-0028(2): “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(a) The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

*(b) The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.



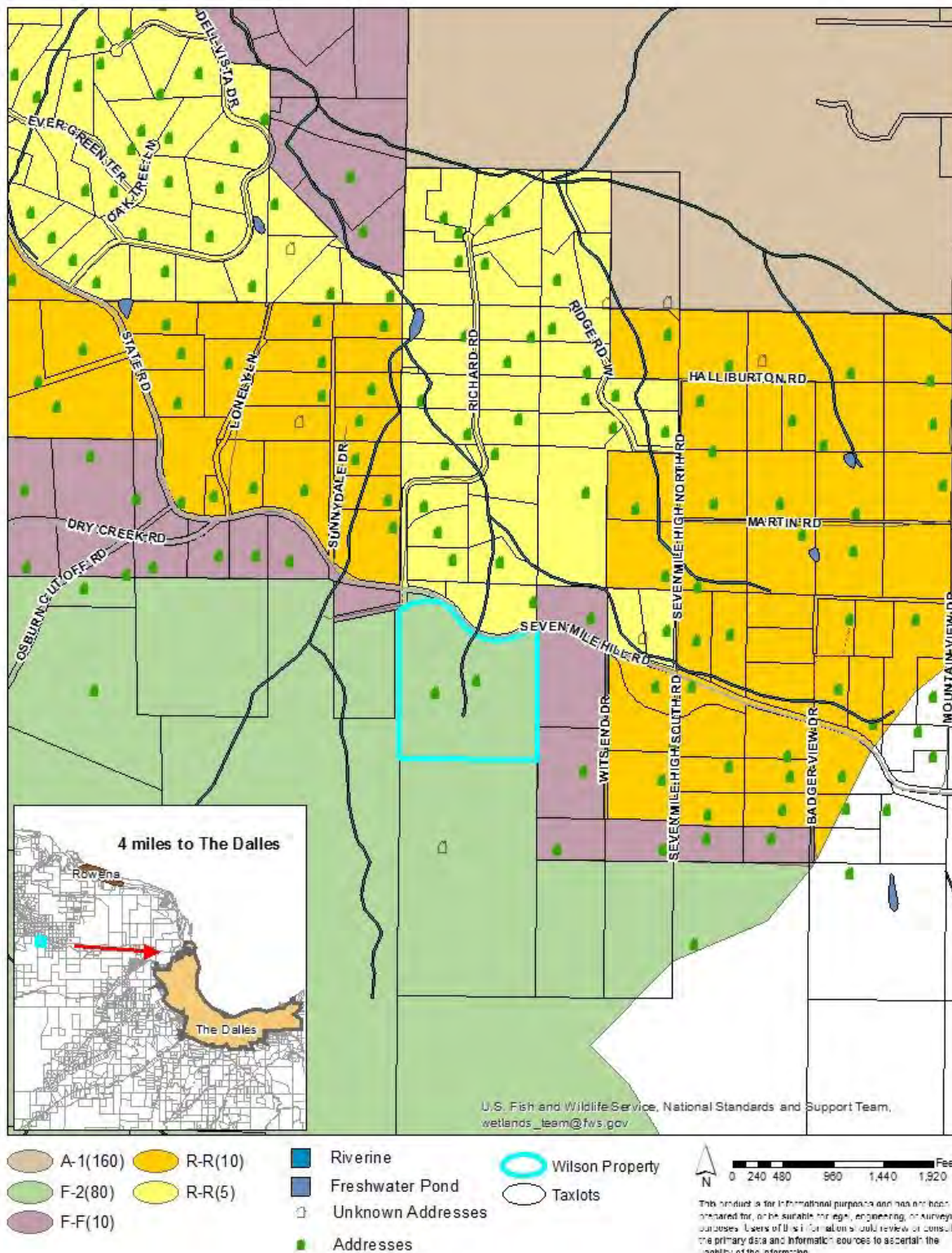


Figure 2: Wilson Vicinity Map

**East:** Directly to the east, north east, and south east of the proposed exception area are three parcels zoned F-F(10): T2N R12E, Section 22, Lots 4700, 4300, and 4200. Two of these lots abut the eastern boundary of the subject parcel, and the third is just across Sevenmile Hill Road to the north. Two of the three lots have residences.

The three abutting rural residential lots to the east are part of a small rural subdivision called Fairmont Orchard Tracts, filed August 5, 1911. The subdivision is located entirely in the SW quarter of Section 22, Township 2 North, Range 12 East. It was originally composed of nine lots, Lots 1-6 and Parcels A, B, & C. The numbered lots were generally to the south of Sevenmile Hill Road, oriented in a north-south rectangle, while the lettered parcels form a flagpole on the north side of Sevenmile Hill Road, running west to the western boundary of the section. The lot sizes ranged from 6.08 Acres to 13.22 acres on the original plat, making the average lot size 9.66 acres. Over time, three of the original lots have been partitioned into smaller lots, resulting in 12 lots, the smallest being 0.75 acres. The average size is now 6.85 acres.

There are three zoning designations covering the area east of the exception area, F-F (10), R-R (10), and R-R (5). After 0.6 mile, the National Scenic Area boundary begins, with zoning designations of predominantly (GMA) A-1 (160). In 1999, Wasco County revised the zoning of the lots 0.1 mile east of the subject parcel, changing them from F-F (10) to R-R(10). (County Ordinance 99-111, amending Ordinance 97-102) According to goals established in the TLSA project, the change in zoning was part of a process seeking to allow the expansion of rural residential uses in this 'transition' area between the more developed areas to the north and the large scale forestry/agricultural uses to the south. These zone changes were objected to and appealed, partly on the basis that they were likely to diminish the buffer between commercial forestry and rural residential uses in the area and increase conflicts between those uses. (LUBA appeal No. 99-178)

**North:** Immediately north, but still on the south side of the road and zoned F-2 (80), is a vacant 0.7 acre triangular parcel owned by the County that covers the piece of land between the old Seven Mile Hill Road and the current Seven Mile Hill Road. Across the road to the north are two lots that were also part of the Fairmont Orchard Tracts subdivision discussed above. These lots are 0.7 acre (vacant, owned by Wasco County) and 7.9 acres (single family dwelling with associated accessory structures). Both of these lots are in R-R (5) zoning.

The Fly-By Night subdivision lies north of the Fairmont Orchard Tracts subdivision. Three parcels were reconfigured in a partition plat in 2017. All lots due north of the subject property for 0.8 mile are zoned R-R (5). After that the land becomes A-1 (160) exclusive farm zone for another 0.8 mile until it reaches the National Scenic Area boundary.

Property to the northeast is discussed above. To the northwest lies the Sunnydale Orchards Subdivision. All lots in this subdivision north of Seven Mile Hill Road are in R-R (10) zoning, and those south of and along the road are F-F (10). The majority of this subdivision is developed with single family dwellings and associated accessory buildings. North of Sunnydale Orchards there are other subdivisions with both F-F (10) and R-R (5) zoning.

All of the area north of the proposed exception area is built and committed to low and medium density rural residential uses in these two platted subdivisions: Sunnydale Orchards and Flyby Night.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less

than ten acres each. The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions.

The area to the north is the most heavily developed area surrounding the proposed exception area. As can be seen in the map above in Figure 2, virtually all lots to the north of the exception area have been improved with a residence or a manufactured home, with few exceptions.

**West:** There are two properties immediately adjacent to the proposed exception area to the west. The northern parcel is 16.3 acres, with the north 1/3 zoned F-F (10) and the southern 2/3 zoned F-2 (80). This property is not developed. The adjacent property to the southwest of the subject parcel is 439 acres, and is in commercial forestry, owned by Ken Thomas. F-2 (80) zoned land stretches almost a mile due west of the subject parcel, across Osborn Cut-Off Road, before it reaches the Fletcher Tract subdivision with F-F (10) zoning. The majority of that area with F-2 (80) zoning is undeveloped, with the exception of three single family dwellings along Osborn Cut-Off Road.

Fletcher Tract was recorded on June 6, 1908 and contains a total of 32 parcels, almost all roughly 5 acres each. The lots are oriented in two long north-south columns of 16 lots each, with a north-south roadway between the two columns. The roadway north of Dry Creek Road was vacated in 1977, but a private road still exists. The portion of this platted road south of Dry Creek Road has never been developed (according to aerial photographs), although there are some private access roads leading to the developed parcels. For the purposes of this report, information was collected on 11 lots in the subdivision. Most of the lots have remained separate 5-acre parcels, but a few have been combined under single ownership into larger lots (Tax lots 1000, 2200, 700, 2600, 2700). The 15.29-acre lot (Lot 1000) is the largest parcel in the Fletcher Tract.

The current zoning for the entire Fletcher Tract is F-F (10). Beyond the subdivision to the west and south are large parcels zoned F-2 (80). According to Planning Department records, the Fletcher Tract has been zoned F-F (10) since the implementation of zoning in the county.

Several of the lots in the Fletcher Tract are in common ownership forming larger tracts, more in keeping with smaller, 10-15 acre woodland lots. When looking at them as individual lots, the majority have no improvements. However, in the area south of Dry Creek Road, five of the lots in the 'eastern column' are in common ownership (Tax Lots 900, 1000 and 1100, covering subdivision Lots 9-13), with a residence on one of those lots. Similarly, three of the lots in the 'western column' are in common ownership (Tax Lots 2100, 2200 and 2300, covering subdivision Lots 20-23), with a residence on two of them. Considering this pattern of use, the majority of the land area is dedicated to non-resource, residential uses. Additionally, because the establishment of the lots predates zoning in the area, each 5-acre parcel could conceivably be developed with a rural residence.

**South:** The area directly adjacent to the exception area to the south is one 69 acre parcel, also owned by the applicant and bisected by a BPA power transmission line running southeast to northwest. There is a single family dwelling and several accessory structures on this parcel, which is zoned F-2 (80). No commercial forestry occurs there. Continuing further south, land is zoned F-2 (80) for approximately 5 miles (crossing Chenoweth Creek Road after 1.5 miles) until it runs into the F-F (10) zoned areas surrounding Wells Road southwest of The Dalles. That region is undeveloped, with the exception of two parcels along Chenoweth Creek Road, and is primarily being managed for forestry or large scale agricultural (mostly grazing) uses.

*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and west are resource zones while those to the north and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along its western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*



**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The “forest products” definition can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.” An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in *OAR 660-004-0028(6)(c)(B)*. The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine “*the relationship between the exception area and the lands adjacent to it*” when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those “Uses Authorized in Forest Zones”. An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- “(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about it's location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

#### APPROVAL FINDING

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

DENIAL FINDING: One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation (see discussion earlier).

Based on the current composition of the subject parcel as being predominantly open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber, as discussed in findings above for OAR 660-004-0025. The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres. On the contrary, the state of Oregon, and Wasco County, recognize the ability to have as little as 2 acres of woodlands to qualify to receive tax reductions for forestry uses. The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this parcel could practicably be used for forest uses per OAR 660-004-0028(3).

- d. *OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below.

APPROVAL FINDING: The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

DENIAL FINDING: The applicant submitted extensive statements and exhibits explaining their position on why they feel that the facts support the conclusion that uses allowed by Goal 4 are impracticable. However, staff has found these statements and exhibits to be inconclusive in that attempt, with reasons given throughout this report.

- e. *OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found **to be to not be** irrevocably committed are discussed throughout this report.

- f. *OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*

*(a) Existing adjacent uses;*

**FINDING:** The existing adjacent uses are discussed and considered in great detail in sections 2.3.3 and 2.3.4, above. Existing adjacent uses to the north and east are residential, and zoned as such. (see Map above, Figure 2) The land immediately to the south is zoned for forest, but used as residential. The remainder of all land south and south west of the subject parcel is zoned for, and used as, commercial forestry.

*(b) Existing public facilities and services (water and sewer lines, etc.);*

**FINDING:** There are no public water or sewer facilities on either the adjacent land or the exception area. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities. See prior findings under Chapter 11, Section H regarding statewide planning goals.

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

**FINDING:** As discussed in great detail above and in the attached exhibits, some of the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the exception area were not successful because of the cold and dry weather at this location and elevation. Most of the existing lots (many of which were created by subdivision later in the 1970s as discussed above) have non-resource residences located on them now, as does the subject parcel in the proposed exception area.

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate*



*ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

**FINDING:** The subject parcel is 40.6 acres, owned by David and Jolene Wilson. David Wilson also owns the land to the south, a 69.3 acre parcel, bisected by the BPA powerline, with one residence and associated accessory buildings. Neither parcel is currently engaged in forestry activities. The parcel to the south is engaged in Farm Use, with a Planning Commission approved agricultural structure and Farm Management Plan. That parcel is not included in this proposal for a rezone, goal exception and comprehensive plan amendment. Contiguous total acreage is 109.48 acres. Per criterion B, both parcels in contiguous ownership shall be considered together in relation to the land's actual use – in this case the southern parcel is an active farm.

In relation to most forestry operations, a 40.6 acre parcel is a small parcel. According to Criterion B, the nature of its small size is not enough to constitute irrevocable commitment. However, also according to Criterion B, small parcels are more likely to be irrevocably committed if they are developed and clustered around a road designed to serve them. In the case of the subject parcel, there is one large residence in use near the eastern boundary, as well as older structures formerly used as a residence and a barn in the center. Finally Criterion B encourages consideration of whether a property stands alone among larger farm or forest operations, or is buffered from them. For the subject parcel, there is no buffer to the south or southwest as the property to the southwest is in commercial forestry and the one to the south, owned contiguously by the applicant, David Wilson, has farm uses on it. The next parcel south of that is 336 acres used predominantly for grazing. The parcel to the east (southeast adjacent to the subject parcel) is 439 acres of land used for forestry. All nearby lands to the north and west are residential. The subject parcel does not stand alone amongst larger operations, but nor is it buffered from them.

*(d) Neighborhood and regional characteristics;*

**FINDING:** Based on the descriptions already provided in this submittal, the “neighborhood characteristics” can best be described as commercial timberland to the south, and rural residential development within the area and on every other side. The “regional characteristics” include location, six miles west of The Dalles and 0.2 mile from the closest boundary of the Columbia River Gorge National Scenic Area.

*(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;*

**FINDING:** There are no natural impediments separating the proposed exception area from resource land. There is man-made feature separating the proposed exception area from existing commercial timberlands to the south—the BPA Bonneville-The Dalles power line right-of-way/easement—which forms a 150-foot wide cleared area between the residence on the subject property and commercial forest areas to the south. This power line is located on the adjacent property approximately 1/3 mile south of the subject property's existing residence (1/5 mile south of the southern property line) and runs slightly northwest to southeast. As described above, the 69 acre parcel owned by the applicant to the immediate south of the subject property has an existing residence (which lies north of and adjacent to the power line) and is in residential use. The power line bisects that property. The 440 acre adjacent property to the southwest of the subject property is owned by Ken Thomas, a private landowner who

engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

(f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in Figure 1 above. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

**APPROVAL FINDING:** The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

**DENIAL FINDING:** The current home and driveway are clustered against the eastern property line. There are abandoned (potentially historical) structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.

(g) *Other relevant factors;*

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

- g. ORAR 660-004-0028(7): The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.*

**FINDING:** The submittal complies with this requirement, and includes various maps of the proposed exception area and adjoining lands submitted with the application as Exhibit 8. Tables, charts, and summaries are also included within the submittal and as exhibits to this narrative, along with maps and other materials.

- h. ORAR 660-004-0040: Application of Goal 14 Urbanization to Rural Residential Areas, states: The purpose of this rule is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.*

*Subsections -0040(1) through (4) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in ORAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in ORAR 660-004-0040.*

**FINDING:** ORAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning that would be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

ORAR 660-004-0040 (5) and (6):

- (5) The rural residential areas described in Subsection (2)(f) of this rule are “rural lands”. Division and development of such lands are subject to Goal 14, which prohibits urban use of rural lands.*
- (6)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres, except as is required by section(8) of this rule*
- (6)(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone’s minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a*

*local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.*

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed F-F (10) zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

OAR 660-004-0040 (7) and (8):

*(7) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."*

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

*(8)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."*

**FINDING:** The proposed F-F (10) zone will prevent the creation of any new lot or parcel in the area smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

*(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area.*

**FINDING:** The minimum lot size for the area would be ten acres in the F-F (10) zone. For a PUD, a permitted use in the F-F (10) zone and in which dwellings could be clustered away from commercial forestry uses, the minimum property size is 2.5 acres, and the overall density of the PUD cannot exceed a ratio of one dwelling for every ten acres in the PUD.

*(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.*

**FINDING:** The minimum lot size of the proposed F-F (10) zone would be ten acres, and that minimum lot size would apply in the proposed exception area.

*(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.*

**FINDING:** The County's land use regulations do not specify a minimum lot size smaller than two acres for the proposed F-F (10) zone.



*(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (A) through (H) are met:*

**FINDING:** The F-F (10) code permits planned unit development (PUD). In the event that a zone change to that designation is approved by the County then PUDs may be authorized if (A) through (H) are met.

*(A) The number of new single family dwellings units to be clustered or developed as a PUD does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional dwellings which does not exceed 10.

*(B) The number of new lots or parcels to be created does not exceed 10.*

**FINDING:** The proposed F-F (10) zone on the 40.6 acre subject parcel would result in a maximum of three (3) additional parcels which does not exceed 10.

*(C) None of the new lots or parcels will be smaller than two acres.*

**FINDING:** The proposed F-F (10) zone specifies that no new lots can be smaller than 10 acres.

*(D) The development is not to be served by a new community sewer system.*

**FINDING:** There are no community sewer systems in the area, nor has one been requested. A community sewer system would not be approved for a PUD in this region. Development in this region is served by septic systems, approved by the North Central Public Health District.

*(E) The development is not to be served by any new extension of a sewer system from within an urban growth boundary or from within an unincorporated community.*

**FINDING:** The subject parcel is approximately four miles linearly and 1800' in elevation away from the nearest Urban Growth Boundary for the City of The Dalles. The unincorporated community of Rowena is 2.7 miles away and also much lower in elevation. No new extensions of any sewer systems, existing or future, will be extended to the Seven Mile Hill area.

*(F) The overall density of the development will not exceed one single family dwelling for each unit of acreage specified in the local government's land use regulations on October 4, 2000 as the minimum lot size for the area.*

**FINDING:** The 40.6 acre subject parcel contains one lawful single family dwelling. If the zone were to change to F-F (10), a total of four (4) (for a maximum of three (3) new) single family dwellings could be placed on this land, in accordance with County regulations for minimum parcel size in that zone as it existed on October 4, 2000.

*(G) Any group or cluster of two or more dwelling units will not force a significant change in accepted farm or forest practices on nearby lands devoted to farm or forest use and will not significantly increase the cost of accepted farm or forest practices there; and*

**FINDING:** For purposes of this finding, the area in consideration includes the surrounding rural residential areas to the west, north, and east, the commercial forestlands to the southeast, and the contiguous farmland to the south of the proposed exception area. The farm to the south is owned by the applicant. The forest land to the southeast has three options for access: it touches Osburn Cut-off Road 0.8 mile south of its intersection with State Road, as well as Seven Mile Road 650 feet east of the subject parcel. Additionally, it owns a strip of land immediately adjacent to the subject parcel's dwelling driveway access. Because there are two other locations for access, forestry uses may not need to utilize that driveway associated with the existing residence on the subject parcel to access their lands. In the event of forestry operations on the western boundary line of the forest property however, that access would be the shortest and easiest topographically. The addition of residences needing to use that driveway to access their homes could interfere with forestry use access to their land and increase the cost of hauling logs by forcing the owner to create a longer, steeper road from one of the other two access ways. The existing access serves the home on the subject parcel and another on the farm to the south. In the event of a zone change and additional residences on the subject parcel it is likely that either zero or a maximum of one additional dwelling would be sited using that access way, with the other two potential new dwellings being located at the site of the existing historic farmhouse, or along the eastern property line. Zero or one new residence, where two are served currently, would not significantly increase the overall impact of residences on adjacent farm and forest lands beyond what already exists along that access way.

*(H) For any open space or common area provided as a part of the cluster or planned unit development under this subsection, the owner shall submit proof of nonrevocable deed restrictions recorded in the deed records. The deed restrictions shall preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.*

**FINDING:** The Planned Unit Development section of the Wasco Count LUDO requires dedicated open space covering at least 60% of any PUD as well as "Articles of Incorporation of the Homeowners' Association formed to maintain common open space and other common improvements." Section 18.100 of the LUDO details Open Space requirements, including requirements to deed restrictions as laid out in Criterion H such that a conservation easement or other deed restriction be established to preclude all future rights to construct a dwelling on the lot, parcel, or tract designated as open space or common area for as long as the lot, parcel, or tract remains outside an urban growth boundary.

*(f) Except as provided in subsection (e) of this section or section (10) of this rule, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle.*

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed potential residential area, except in the event of temporary use permits.

- (g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(23) and (30) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.*

**FINDING:** The County is not proposing a new mobile home park or manufactured dwelling park as part of this proposal, in conformance with this section.

- (h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:*

- (A) The parcel to be divided has two or more permanent habitable dwellings on it;*
- (B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;*
- (C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;*
- (D) The partition would not create any vacant parcels on which a new dwelling could be established.*
- (E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).*

**FINDING:** Because the county is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

- (i) For rural residential areas designated after the effective date of this rule, the affected county shall either:*

- (A) Require that any new lot or parcel have an area of at least ten acres, or*
- (B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"*

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one single family dwelling for every ten acres. Clustering of dwellings may occur in the

event of a PUD or particular land divisions. The purpose of allowing potential clustering of dwellings in the area is to encourage development of dwellings toward the northern end of the area, near existing roads and development, and away from forest resource lands and wildlife habitat areas to the south. This approach is consistent with OAR 660-004-0118 as discussed below.

OAR 660-004-0118 Planning and Zoning for Exception Areas

*(2) For "physically developed" and "irrevocably committed" exceptions to goals, residential plan and zone designations shall authorize a single numeric minimum lot size and all plan and zone designations shall limit uses, density, and public facilities and services to those:*

*(a) That are the same as the existing land uses on the exception site;*

**FINDING:** The proposed zoning is F-F (10) which has a single numeric minimum lot size of ten (10) acres.

*(b) That meet the following requirements:*

*(A) The rural uses, density, and public facilities and services will maintain the land as "Rural Land" as defined by the goals and are consistent with all other applicable Goal requirements; and*

**FINDING:** The proposed zoning is F-F (10) which is a non-resource, Forest-Farm zone. The purpose of this zone is described in Section 3.221 of the Waco County LUDO as: "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." "Rural Land" is defined by OAR 660-004-0040(2)(f) "lands that are not within an urban growth boundary, that are planned and zoned primarily for residential uses." Land within the F-F (10) zone is consistent with this definition of Rural Land as defined by the goals.

*(B) The rural uses, density, and public facilities and services will not commit adjacent or nearby resource land to nonresource use as defined in OAR 660-004-0028; and*

**FINDING:** OAR 660-004-0028 criteria for the subject parcel are addressed above. The subject parcel lies along Seven Mile Hill Road, which is a significant transportation corridor in the area. Access to adjacent and nearby resource lands does not depend on the subject property. The use of the subject property in a non-resource capacity will not commit adjacent or nearby resource land to non-resource uses as the potential addition of three dwellings will not impede access or resource use of adjacent or nearby properties.

*(C) The rural uses, density, and public facilities and services are compatible with adjacent or nearby resource uses;*

**FINDING:** The proposed zone for the subject property is Forest-Farm, F-F (10). The purpose of this zone is listed in Section 3.221 of the Wasco County LUDO as "to permit low-density residential development in suitable locations while reducing potential conflicts with agriculture uses, forestry uses and open space." This zone was designed as a non-resource buffer zone between rural residential zones and resource zones such as Forest or Agriculture zones.



The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West	400	16.3	F-2 (80)	Vacant
North West			F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses, but expanding would conflict with potential resource uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

“I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done.”

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, “Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average”. The Oregon Water Resources Department is “not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn’t available within the capacity of the resources.” He stated that those uses that are exempt from water rights, such as “single or group

domestic use, irrigation of no more than ½ acre lawn/ noncommercial garden, stock use” are still being allowed but that new rules are in place requiring more stringent well construction.

*(c) For which the uses, density, and public facilities and services are consistent with OAR 660-022-0030, "Planning and Zoning of Unincorporated Communities", if applicable, or*

**FINDING:** The proposal occurs in the Seven Mile Hill area of Wasco County. There are no incorporated or unincorporated communities in the area. This criterion is not applicable.

*(d) That are industrial development uses, and accessory uses subordinate to the industrial development, in buildings of any size and type, provided the exception area was planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 and 197.714*

**FINDING:** The proposed change to Forest-Farm F-F (10) zone does not involve an industrial zone, or a proposal for any industrial development. On January 1, 2004 the zoning of the property was not industrial – it was an F-2 Forest zone. As no industrial use is proposed, nor any accessory uses to industrial development, this criterion does not apply.

## **B. Wasco County Comprehensive Plan**

### *Chapter 11 Revisions Process*

#### **A. Intent and Purpose**

*The Comprehensive Plan for Wasco County including all urbanizable areas is the primary document which guides and controls land use within Wasco County excluding incorporated areas. The plan is intended to reflect the community's current thoughts on land use planning and to be responsive to the needs and desires of citizens. In order to achieve this, the plan must respond to changing community attitudes and needs and to unforeseen circumstances which may affect the use of land in the future. It is, therefore, the intent of this section to permit the amendments of the Comprehensive Plan on a periodic basis and to describe the procedure for the amendment process.*

**FINDING:** Chapter 11 of the Comprehensive Plan describes the revisions process for the plan. The intent and purpose makes it clear that it was intended to be altered periodically as the Community and the County sees fit. This application is consistent with Criterion A.

#### **B. A Comprehensive Plan Amendment May Take the Following Forms:**

*(\*\*\*)*

##### **5. A combination plan change/zone amendment. (Legislative or Quasi-Judicial)**

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The

existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." This application also includes a goal exception to Goal 4 since removing land from the F-2 zone removes land from a designated Resource Zone and places it in a Non-Resource Zone. This application is consistent with Criterion 5.

*C. Who May Apply For a Plan Revision:  
Comprehensive Plan Revision may be initiated by:*

*(\*\*\*)*

*3. Property owner or his authorized representative. (Quasi-Judicial)*

**FINDING:** This Quasi-Judicial application was submitted by David Wilson, the property owner of the subject parcel. This application complies with Criterion 3.

*(\*\*\*)*

*E. Quasi-Judicial Revisions*

*Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations. Each plan change or revision will first be heard by the Planning Commission on a first-come, first-serve basis. Such hearing shall be conducted in accordance with the Wasco County Planning Commission "Rules and Regulations".*

**FINDING:** This application is narrow in scope, focusing on one property. It will be heard by the Planning Commission first for a recommendation, then the Board of County Commissioners for a decision, in accordance with the Wasco County Planning Commission "Rules and Regulations". Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615, on February 26, 2019. This application is consistent with Criterion E.

*(\*\*\*)*

*H. General Criteria*

*The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:*

**FINDING:** These are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission and Board of Commissioners need only consider these criteria and determine whether they are generally satisfied.

- 1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.*
- 2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.*

**FINDING:** The following findings demonstrate how compliance **is is not** achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the “*opportunity for citizens to be involved in all phases of the planning process.*” Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is “*to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.*” The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4.

**APPROVAL FINDING:** The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

**DENIAL FINDING:** Part 2 below outlines how this application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for “built” and/or “committed” exceptions. The proposal does not comply with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development



within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is *“To maintain and improve the quality of the air, water and land resources of the state.”* The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is *“To protect people and property from natural hazards.”* Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is *“To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.”* Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is *“To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.”* The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation.

**APPROVAL FINDING:** The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

**DENIAL FINDING:** The proposal promotes Goal 9 by allowing residential uses. However Goal 9 would also be promoted by encouraging forestry practices on this parcel, which the County considers to be the appropriate use of the subject property in view of its established zoning and the economic potential of timber and logging that exists, as outlined above in OAR 660 Division 4. The proposal is not consistent with Goal 9.

Goal 10 – Housing. Goal 10 is *“To provide for the housing needs of citizens of the state.”* The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: *“Plans*

*providing for housing needs should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.”* As noted in several locations of this report, impacts of the proposed exception area have been evaluated by this report for impacts to the air, land and water resources of the planning area. Consistent with Goal 10, the proposal will increase housing opportunities in an area where such uses may be appropriate.

Goal 11 – Public Facilities and Services. Goal 11 is *“To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.”* In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as community scale water and sewer services are not considered necessary or appropriate. The subject location is serviced by public roads that are regularly maintained and adequate to serve the exception area. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department, the Oregon Department of Forestry, and the Wasco County Sheriff’s Office. Neither water nor sewer services are provided to the area, but both are available on the subject properties through individual wells and septic tank systems. Electric (Wasco Electric Co-op) and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres for a maximum potential of three additional residences) would be comparable to other nearby development. The proposal complies with Goal 11.

Goal 12 – Transportation. Goal 12 is *“To provide and encourage a safe, convenient and economic transportation system.”* Recent estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.07 at Seven Mile Hill Road and Chenoweth Creek Road according to the 2009 TSP. 2030 projections place V/C ratios at 0.21. Under the proposed exception area standards, it is estimated that a maximum of three new residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which would not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. Given this information, the proposal will have little impact on the transportation system serving the exception area because there will be a tiny increase in traffic generated by development that might occur as a result of the plan amendment and zone change.

In connection with Goal 12, the county is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is therefore in conformance with Goal 12 and the Goal 12 rule.

Goal 13 – Energy Conservation. Goal 13 is *“To conserve energy.”* In this case, Goal 13 is promoted through standards that require clustering of dwellings toward established roads. The potential for three additional dwellings in this area would result in an increase in energy use, but this goal is for conservation of energy, not elimination of its use. Use of the property for forestry purposes would also result in the expenditure of energy in growing, harvesting, and transporting the product. In neither case would the energy expenditure be significantly greater than uses allowed under current zoning. The proposal conforms with Goal 13.

Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TSLA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**APPROVAL FINDING:** To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also recognizes that the character of the neighborhood south of Sevenmile Hill Road has

changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

DENIAL FINDING: The TLSA study was extensive in its evaluation of the Sevenmile Hill area, and ultimately concluded not to rezone the subject property, while rezoning others. The soils data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time. The conversion of some properties south of the road to residential uses does not dismiss the need to hold the line somewhere between commercial forestry and single family dwellings. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

APPROVAL FINDING: This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

DENIAL FINDING: An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.

5. *Proof of change in the inventories originally developed.*

APPROVAL FINDING: The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

DENIAL FINDING: This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established.



6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

**APPROVAL FINDING:** As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**DENIAL FINDING:** This application attempts to demonstrate that there is a public need for low-density rural residential uses, and for small scale farm and forest uses, in the County generally and in the Sevenmile Hill area specifically. The justification for the particular change is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. However, as discussed throughout the report, staff has determined that not enough information has been provided to support this change. That forestry/residential buffer is important to maintain and to establish this area as residential would erode it further in this area, which has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire. The Commercial Forestry uses established by Goal 4 on this property under its current zoning are also an established public need in this County. Due to the existing potential for this property to still be used in that fashion, it has not been demonstrated or fully justified by this application and its exhibits that there is a public need for the requested change from a resource to a non-resource zone.

## **I. Transportation Planning Rule Compliance**

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*

- c. *As measured at the end of the planning period identified in the adopted transportation system plan:*
  - (1) *Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - (2) *Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - (3) *Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*
2. *Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*
  - a. *Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.*
  - b. *Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.*
  - c. *Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.*
  - d. *Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.*
3. *Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance."*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

#### **J. Procedures for the Amendment Process.**

1. *A petition must be filed with the Planning Offices on forms prescribed by the Commission.*

(\*\*\*)

3. *Notification of Hearing:*

- (1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.*
- (2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.*
- (3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.*
- (4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.*
- (5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."*

**FINDING:** Notice of the Planning Commission Hearing on April 2, 2019 complied with these requirements. They were submitted to The Dalles Chronicle for publication on March 13, 2019, which was between 20 and 40 days prior to the hearing. Criteria 3-5 and all other applicable statutory and local procedures will be followed in consideration of the proposal.

**C. Wasco County Land Use and Development Ordinance (LUDO)**

**Chapter 9 – Zone Change and Ordinance Amendment Zoning Ordinance - Chapter 9:**

**Section 9.010 – Application for Zone Change**

*Application for a zone change may be initiated as follows:*

*(\*\*\*)*

- C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the to establish the criteria for the change (quasi-judicial only);*

**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

*A. The original zoning was the product of a mistake; or*

*B. It is established that*

*1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found **to be to not be** in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be “Forest-Farm.” The zone designation, “Forest-Farm,” with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan’s “Definitions—Existing Land Use Map” identifies the subject property as: “Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year.” Page 232 of the plan lists “Purpose Definitions of Map Classifications on the Comprehensive Plan Map.” The existing plan classification, “Forest,” states: “Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield.” In this section, the Forest-Farm zone purpose is stated as “To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”*



**APPROVAL FINDING:** The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

**DENIAL FINDING:** The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used as part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses. The Green Sheets have a category for "Woodland suitability" where it addresses growth. For the two soil types on the subject property, both are listed at "4A", where 4 is the number of cubic meters/hectare/year, and A is "slight or no limitation". Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per acre per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for

development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. The exhibits and record of this proceeding support a finding of compliance with this requirement.

However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area is to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). “Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use Code 210). The zone change could potentially add three dwellings to the area's traffic load, producing about 29 new ADT at maximum build-out. The 2009 TSP predicted an ADT of 600 by 2030 with a Volume/Capacity (V/C) ratio of 0.03 for State Road (at Sevenmile Hill Road). Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the County used the OHP mobility standard of 0.70 as a comparison figure. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of three dwellings would not cause the V/C ratio to rise above 0.70. The TSP predicted that it would only hit 0.03 by 203 at 600 ADT, so even if it was 629 ADT at that time, that would not approach 0.70. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

*B. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new dwellings. The expected maximum increase in impact on the adjacent road, Seven Mile hill, would not meet the requirements stated in Criterion A. to qualify as "Significantly affecting" that transportation facility. Staff finds that Criterion B. is not applicable.

*C. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a zone change application pursuant to Section 4.140 Traffic Impact Analysis (TIA))*

**FINDING:** The proposal is to change the zoning for one 40.6 acre parcel from F-2 (80) to F-F (10), potentially resulting in a maximum of three new dwellings. At an average of 9.57 Average Daily Trips (ADT) per dwelling for a potential total of 29 new ADT, the impact from this proposal would not result in any change of functional class or allow land uses inconsistent with the current functional class of Seven Mile Hill/State Road. Staff finds that a separate Traffic Impact Analysis is not required because there would not be a "significant impact" under OAR 660-12-0060, the Transportation Planning Rule (TPR).

*Section 9.040 - Conditions Relative to the Approval of a Zone Change Reasonable conditions may be imposed, pursuant to Section 2.110(D) as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance. Such conditions may include, but are not limited to, the following:*

- A. Special yards and spaces;*
- B. Fences and walls;*
- C. Special parking and/or loading provisions;*
- D. Street dedication and improvements or bonds in lieu of improvements;*
- E. Control of points of vehicular ingress and egress;*

*F. Special provisions for signs;*

*G. Lighting, landscaping and maintenance of grounds;*

*H. Control of noise, vibration, odors, or other similar nuisances.*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change for one 40.6 acre parcel from F-2 to F-F (10) zoning. The result of an approval would be a property that could be divided into four ten acre parcels, and the possible addition of a maximum of three additional dwellings. No structures are associated with this request. Since dwellings in the F-F (10) zone are Conditional Use Permits, any future requests involving a partition and additional structures will be examined to ensure these conditions are met. For the current application staff finds that no additional conditions are required to ensure compatibility with surrounding uses.

*Section 9.050 - Amendments to the Zoning Ordinance*

*Amendments to this Ordinance may be initiated as follows:*

*A. By resolution of the County Governing Body referring a proposed amendment to the Planning Commission for its consideration, report and recommendations;*

*B. By a majority vote of the Planning Commission confirmed by the Wasco County Governing Body;*

*C. By request of the Director of Planning or the District Attorney to conform the Ordinance to changes in the State Law;*

**FINDING:** The application is for a Comprehensive Plan Amendment, Goal Exception and Zone Change. It is not an application for an amendment to the Zoning Ordinance. Staff finds that Section 9.050 is not applicable.

*Section 9.060 - Recommendation on Zone Change or Amendment to the Land Use and Development Ordinance*

*After hearing, the Approving Authority shall recommend that the proposed zone change or amendment to the Zoning Ordinance be granted or denied. The Director of Planning or his assistants shall reduce to writing the Commission's recommendations together with a brief statement of the facts and reasons upon which such recommendation is based.*

**FINDING:** Staff is aware of this Criterion and intends to comply.

*Section 9.070 - Notice of Planning Commission Recommendation*

*Within ten (10) days of the final Planning Commission hearing, the Director of Planning or his assistants shall give notice thereof to any persons who signed in and testified at the hearing and to such other persons as may have requested the same in writing.*

**FINDING:** Staff is aware of this Criterion and intends to comply.

*Section 9.080 - Action by County Governing Body*



*Upon receipt of the Commission report, the County Governing Body shall take such action as may appear appropriate to that body, or as it feels the public interest requires, provided that in no event shall the County Governing Body act until at least twenty (20) days after the Notice of Planning Commission Recommendation has been mailed.*

**FINDING:** This Criterion will be met.

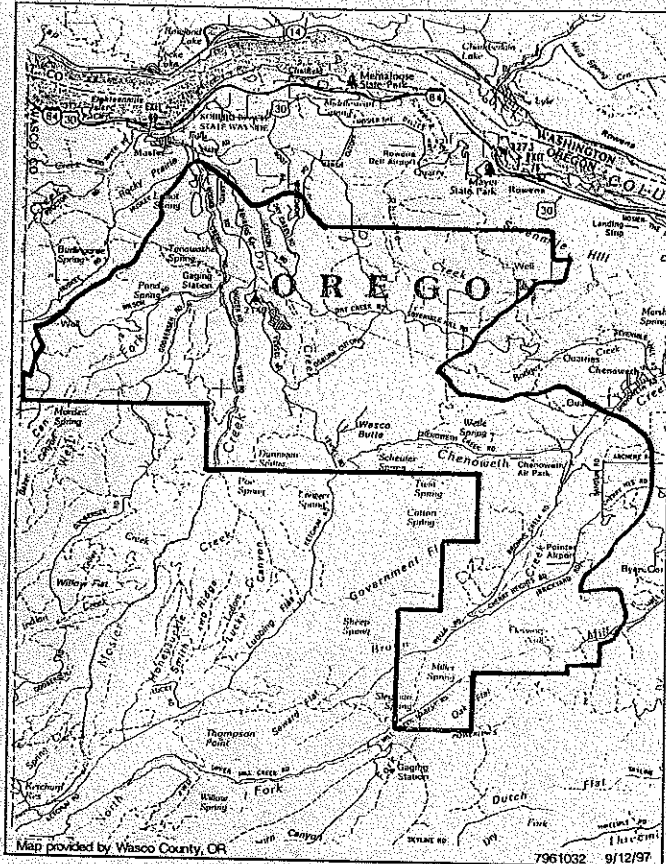
**EXHIBIT 1**

**Transition Lands Study Area**

**(Full Report)**

2044

# Wasco County Transition Lands Study Area (TLSA)



Prepared for  
Wasco County

Prepared by



**SRI/SHAPIRO/AGCO, Inc.**

**In cooperation with  
Northwest Economic Associates**

**September 12, 1997**

# **Wasco County Transition Lands Study Area (TLSA)**

**Prepared for**

**Wasco County**  
2705 East 2<sup>nd</sup> Street  
The Dalles, Oregon 97058

**Prepared by**

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**In cooperation with**

Suzanne Rock  
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**September 12, 1997**



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- Appendix 1. Background Materials and Standards Related to Action Items Identified in Section 2.0 (Policy Recommendations and Action Items)
- Appendix 2. Record of Community Involvement
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- Appendix 4. Groundwater Evaluation Reports and Background Materials
- Appendix 5. Ordinances, Regulations, and Technical Background Related to Implementation
- Appendix 6. Background Information Related to Opportunities and Constraints Analysis and Production of Resource and Development Capability Composites

## **Acknowledgements**

The TLSA Project involved a Steering Committee (SC) and Technical Advisory Committee (TAC) who guided the planning process and were integral to selection of alternatives. Members included the following:

### **Steering Committee**

- Sandee Burbank (Planning Commission representative)
- Sheila Dooley (Citizens Advisory Group representative)
- Bruce Lumper (Bill Creek resident)
- Jim Wilcox (Board of Realtors)
- Jennifer Ringlbauer (Seven Mile Hill resident)
- Matthew Koerner (Mosier City Council)
- Wayne Huskey (Timber owner/Husky Ridge/South Mosier)
- Ron Nelson (Cherry Heights resident)
- Bill Reeves (Agricultural representative/Mosier Rural Fire District).

### **Technical Advisory Committee**

- Dusty Eddy, District Conservationist, Soil Conservation Service
- Ron Graves, Manager, Soil and Water Conservation District
- Jim Bishop, County Executive Director, Agricultural Stabilization and Conservation Service
- Lynn Long, Extension Agent, Wasco County Extension Office
- Jim Torland, Oregon Department of Fish and Wildlife
- Keith Kohl, Oregon Department of Fish and Wildlife
- Larry Hoffman, Unit Forester, Oregon Department of Forestry
- Ken Polehn, President, Wasco County Farm Bureau
- Larry Toll, Wasco County Watermaster
- Jodi Calica, General Manager, Natural Resources Department, Confederated Tribes of the Warm Springs
- Dan Boldt, Director, Wasco County Public Works Department
- Gay and Mac Jervey, Geological Consulting.

Key County staff from the Planning and Economic Development Office involved in the TLSA Project included:

- Karen Mirande, Associate Planner
- Dotty DeVaney, Associate Planner
- Kim Jacobsen, Former Director.

In addition, Gay Jervey, a TAC participant, volunteered her time to prepare extensive groundwater analysis for the TLSA Project. This analysis was integral to completion of the study and Wasco County is extremely grateful for her generosity and dedication.



## **1.0 LOCATION AND PURPOSE**

### **1.1 Location**

#### ***Which County lands are involved in the study area?***

The Wasco County Transition Lands Study Area (TLSA) Project encompasses approximately 24,000 acres of land located in unincorporated Wasco County, Oregon, between the cities of The Dalles and Mosier, and south of the Columbia River Gorge National Scenic Area (Figure 1). The study area includes all or part of the following sections:

Township 1 North, Range 12 East, Sections 1, 2, 10 through 15, and 22 through 24;  
Township 1 North, Range 13 East, Sections 6, 7, and 19;  
Township 2 North, Range 11 East, Sections 12 through 14, and 22 through 27;  
Township 2 North, Range 12 East, Sections 7, 8, 13 through 23, and 25 through 36; and  
Township 2 North, Range 13 East, Section 31.

The study area was divided into two broad areas: 13,500 acres (about 56% of the Study Area) currently zoned Forest or Exclusive Farm Use (EFU) orchard, and 10,500 acres (about 44% of the Study Area) currently in mixed zoning for residential and resource use (Figure 2). The 10,500-acre area includes two distinct parts: the Seven Mile Hill Area in the north-central part of the Study Area, and the Mill Creek/Cherry Heights Area in the southeastern part of the Study Area. The primary focus of the Steering Committee was on looking at development issues for the 10,500-acre mixed residential and resource use portion of the study area.

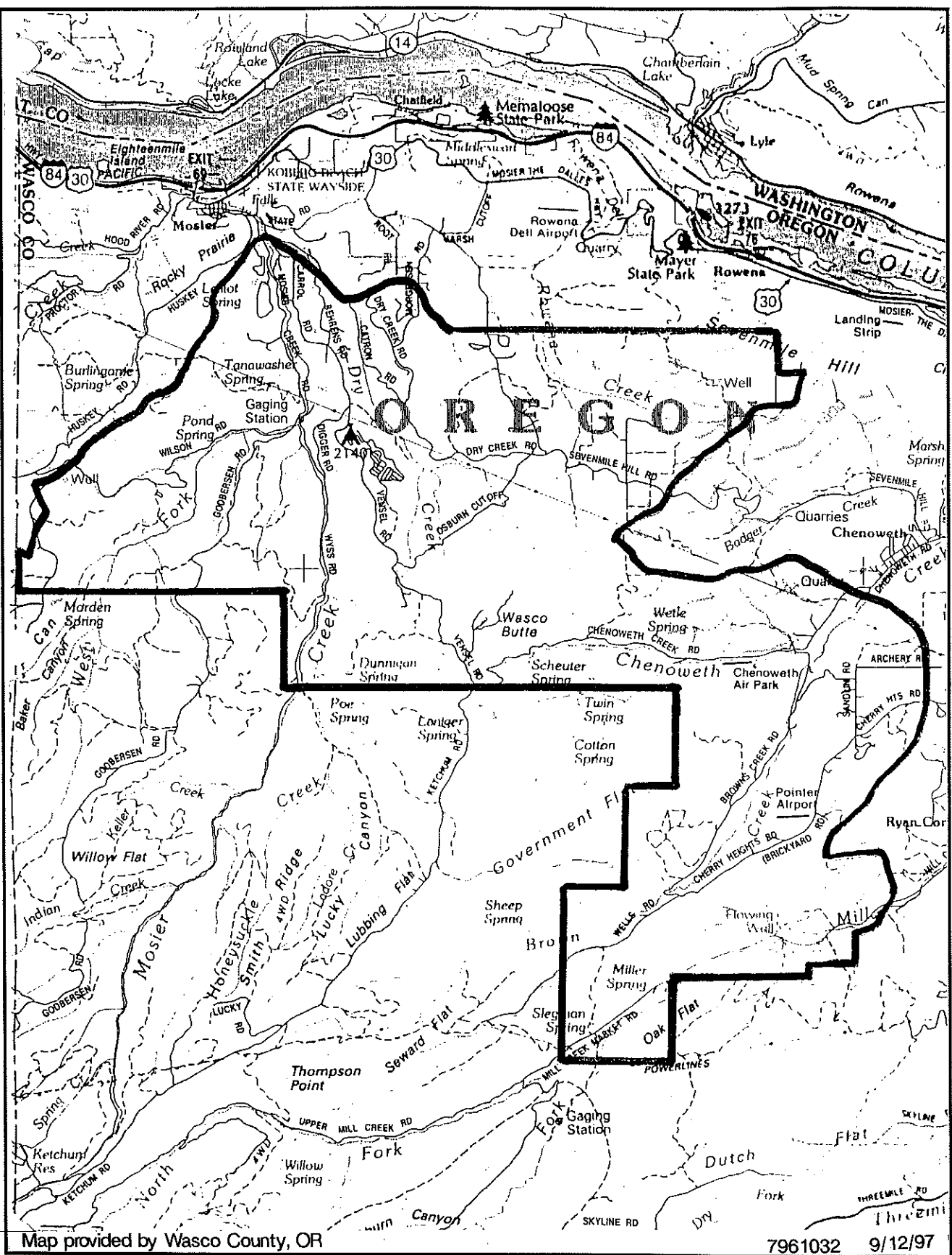
### **1.2 Purpose**

#### ***What is the purpose of the process and this document?***

This document discusses analysis methods and results of the TLSA Project. The TLSA Project was initiated in 1993 in response to concerns of the Wasco County planning commission, elected officials, and members of the community about development in northern Wasco County, particularly in the Seven Mile Hill Area. Concerns stemmed, in part, from availability of groundwater to serve domestic needs, fire hazard, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

In 1993, the Wasco County Budget Committee appropriated funds to conduct a water study of Study Area lands (referred to as "Phase 1" in this document). In 1996, additional funds were appropriated to continue the Study Area project (referred to as "Phase 2" in this document). The following purposes guided the Phase 2 analysis process:

- Study the appropriateness of current zoning within the study area in response to recurring concerns with development patterns and potential resource conflicts.
- Establish a factual database incorporating information gained from local experts and the public at large during the course of public meetings and workshops.
- Establish best land use practices within the study area using the best available information.



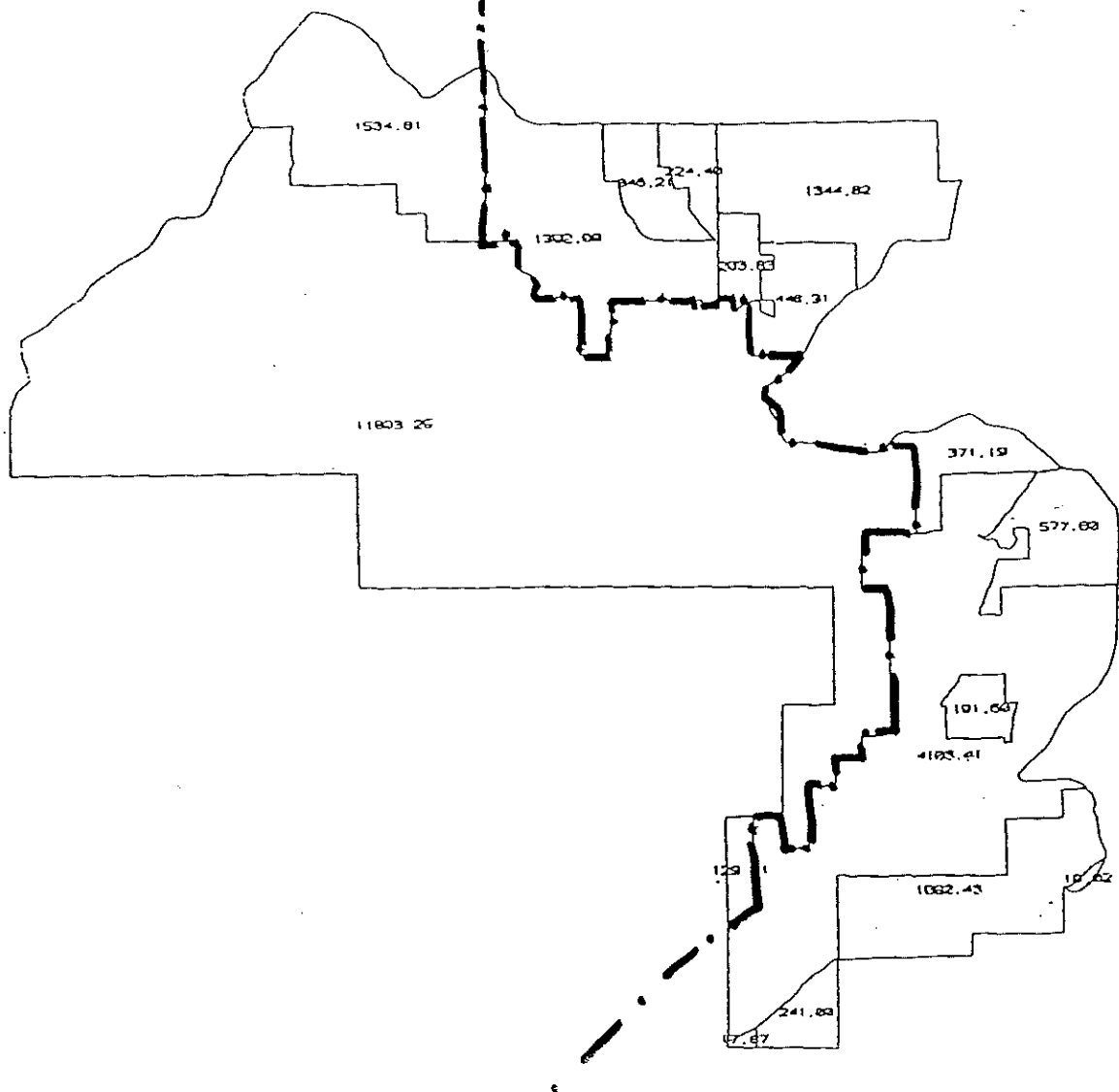
Location of the Wasco County Transition Lands Study Area, Oregon.

FIGURE  
1

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F.Z. & ORCHARD RESOURCE  
56% 13,500 AC.

MIXED RESID. & RESOURCE  
44% 9,500 AC.



Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area.  
Acreage Summary

FIGURE  
2



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- Build a citizen-based monitoring program allowing local residents to track impacts of land use decisions on such factors as groundwater availability, wildlife, and infrastructure, and provide updated information in a bi-annual review process.

Outcomes of the project were to be consistent with the Oregon Revised Statutes and Statewide Planning Goals, satisfy State Periodic Review requirements, and address integration recommendations on potential implementation of House Bill 3661 (forest template test or lot-of-record provisions in the forest zone).

The product of this planning effort is this Land Use Alternatives Study, which builds on information gathered throughout the TLSA Project and makes policy recommendations for integrating future development with resource protection within the Study Area.

## 2.0 POLICY RECOMMENDATIONS AND ACTION ITEMS

*What plan does the Steering Committee recommend?*

*What should be done to implement the recommendation?*

The nine key policy recommendations are as follows:

1. Proceed with caution -- change should be introduced gradually while monitoring programs are established to develop a better understanding of resource carrying capacities.
2. Preserve the rural lifestyle and quality of life in the 10,500-acre portion of the study area currently in mixed residential and resource zones and uses.
3. Protect the resource values in the 13,500-acre portion of the study area zoned A-1, in orchard use, and zoned F-2, in forest production.
4. Educate existing and future residents of the study area about the demands, risks, and responsibilities that are part of rural living.
5. Protect the existing number of development options provided under existing zoning -- no down zoning is recommended.
6. Limit or control the increase in potential numbers of home sites in the study area - no, or very little, immediate up zoning is recommended. (Currently, 301 out of the total of 799 allowed by zoning have been developed.)
7. Focus growth into the Browns Creek/Cherry Heights corridor -- a combination of regulatory up zoning and incentive based tools (transfer of development rights) would be used.
8. A local land trust should be created or an existing qualified entity should seek to identify, purchase, and protect significant open spaces and oak woodlands within the study area.



9. Review the effectiveness of the plan -- a bi-annual audit of the program should be held for consideration of new information including, but not limited to: infrastructure development, growth and build-out rates, impacts on resources such as water and wildlife, successes or failures of siting standards, and progress of private local preservation efforts.

Recommended action items include:

- Planning staff will draft required ordinance and comprehensive plan amendments to implement the recommended land use plan (Figure 3), new R-R(10) zoning, and siting standards addressing roads, fire, scenic, and habitat issues (see TLSA Development Standards in Appendix 1). These ordinance amendments are not proposed to include implementation of the HB 3661 forest template test or lot-of-record provisions in the Forest zone.
- Educational materials will be prepared and made available to the public. These materials will be modeled closely after those used in Larimer County, Colorado in its "Code of the West: The Realities of Rural Living" (see copy of code in Appendix 1). Wasco County will add simplified discussions of septic system maintenance, well maintenance and monitoring, conservation of backyard wildlife and oak woodland values, and water conservation measures.
- A local water monitoring program will be developed and implemented (see Local Water Monitoring Program in Appendix 1).
- Audubon Society will coordinate an Oak Woodland Research Committee that will focus on the identification and monitoring of impacts on oak woodland habitat in the study area and the providing of educational materials.
- Interest in the creation of a local land trust will be gauged. If sufficient interest exists, an organization will be formed to seek permanent protection of valuable open areas and oak woodlands in the Study Area (see Land Trust Proposal in Appendix 1).

### 3.0 PUBLIC PROCESS AND GOALS

#### *What did the Steering Committee want to accomplish?*

The policy statements and recommended land use plan were developed in response to a set of common goals established by the TLSA Steering Committee (SC) based on input from the Technical Advisory Committee (TAC).

Because the study was initiated in response to concerns about development and resource protection expressed by members of the community, obtaining their input and addressing their concerns was considered essential for success of the planning effort. Input was sought from public officials and private citizens, many of whom live in the Study Area. The Steering Committee and Technical Advisory Committee were reconvened to continue their work on Phase 2 of the TLSA Project. Meetings of the Steering Committee and Technical Advisory Committee were held, usually monthly, throughout the project. Background information from Phase 1 of the study, including mapped data and hydrogeologic reports, were used extensively in Phase 2 as a basis for analysis.

One task of the Steering Committee was to establish goals for the TLSA Project, which would guide the planning process and its outcomes. Goals, as established by the Steering Committee, are included in the following sections.

### **3.1 Resource-related Goals**

#### **3.1.1 Forest**

1. Protect commercial/industrial forest land in large tracts.
2. Protect and maintain opportunities for wood lot production on smaller parcels.
3. Provide for recreational opportunities where [this] does not pose a threat to accepted forest practices.
4. Buffer commercial/industrial forest land from conflicts with residential use.
5. Protect private property rights of the commercial/industrial forester.

#### **3.1.2 Agriculture**

1. Leave all commercial farm land under the protection of the recently revised agricultural ordinances.
2. Protect and maintain opportunities for small scale farming on moderately sized parcels (right to farm).
3. Buffer commercial farmland from conflicts with residential use.
4. Protect the rights of small scale farmers to accepted farming practices.

#### **3.1.3 Wildlife**

1. Avoid increasing conflicts between potential development and big game where possible.
2. Maintain diversity of wildlife, and provide means for animals to get from one place to another.

### **3.2 Development-related Goals**

#### **3.2.1 Water**

1. Use the best available observations and information about water in the study area as one of many factors considered, rather than the primary driving or limiting factor, in adjusting residential densities.
2. Identify areas suitable for development that support an increase, but do not exceed appropriate density, of wells.
3. Develop a long-term plan for assessing the behavior of domestic wells (using a representative sample) in each aquifer unit.

#### **3.2.2 Fire**

1. Ensure adequate protection of forest resources.
  - Maintain limits to uses posing potential fire risk in or near commercial forest land.
  - Apply strict fire standards and require development to be in a fire district, as required by state statute in the Forest Zone, to enable domestic fires to be contained.

2. Ensure adequate protection of existing and potential residential development.
  - Apply fire standards in accordance with Oregon Department of Forestry recommendations.
  - Consider setbacks from ridge tops based on recommendations of Mid-Columbia Fire and Rescue and Mosier Rural Fire Protection District.
  - Focus residential development within fire districts.
  - Consider increasing densities where fire response times are shortest.
3. Ensure adequate protection of agricultural resources.
  - Review agricultural fire standards and consider making recommendation to Agriculture Resource Group (ARG) if changes are warranted.

### **3.2.3 Access/Roads**

1. Ensure "safe and sane" access to residential areas.
2. Identify main routes with additional carrying capacity and use them to greatest extent possible to provide access to new development.
3. Do not increase densities or development potential without providing means of ensuring that adequate access is both constructed and maintained.
4. Identify new public and private road development needed to access potential new development areas.

### **3.2.4 Housing**

1. Provide rural residential housing opportunities outside the National Scenic Area (NSA) and Resource Zones - Evaluate suitability of land and carrying capacity relative to current zoning.
  - Consider rezone of F-F (10) to R-R (10) where dwellings can be permitted subject to standards rather than conditionally.
  - Evaluate portions of F-F (10) zone for ability to accommodate increased density.
  - Explore feasibility of limited rezone of non-productive F-2 lands.
2. Maintain rural character.
3. Retain open space values.
4. Protect scenic views/scenic quality.

## **4.0 INVENTORY PROCESS**

### ***What facts were considered by the Steering Committee in making their recommendation?***

Data was collected and evaluated with the project goals in mind. Alternative land use plans were developed and evaluated for compliance with the project goals.

From the outset of the TLSA Project's Phase 2, three factors were clear:

- Substantial information about the physical environment of the Study Area existed as an outcome of the first phase of study. Information included several study area maps in hard-copy and AutoCAD format, and the report entitled Hydrogeologic Investigation of the TLSA, prepared for Wasco County by Northwest Geological Services, Inc. in 1994 (see Appendix 4). This information needed to be organized,

evaluated, and in some cases, refined or supplemented so that it could be used in Phase 2 of the TLISA study.

- Additional factors relating to the suitability of the study area lands for development or resource uses needed to be addressed.
- The outcome of the project would need to rely on this information to establish best land use practices for the Study Area through a public planning process.

#### **4.1 Analysis Approach**

The overall analysis approach was designed to address the two primary concerns that prompted the study: development opportunity and resource protection. Substantial time in the early months of the study was dedicated to determining which factors constitute development opportunity or suitability, and which factors contribute to a need for resource protection. The outcome of this discussion was the development of a set of inventory maps that could be combined in various ways to build composite maps, which were used to develop land use alternatives for the Study Area. The inventory maps provided base data that were used in developing weighted suitability composite maps. The suitability composite maps addressed development values and resource values. The resulting maps included a weighted analysis of factors contributing to development suitability and resource suitability. The two composite maps--resource composite and development composite--were combined into a suitability analysis map to determine areas with high development value (high development suitability/low resource suitability) and high resource value (high resource suitability/low development suitability).

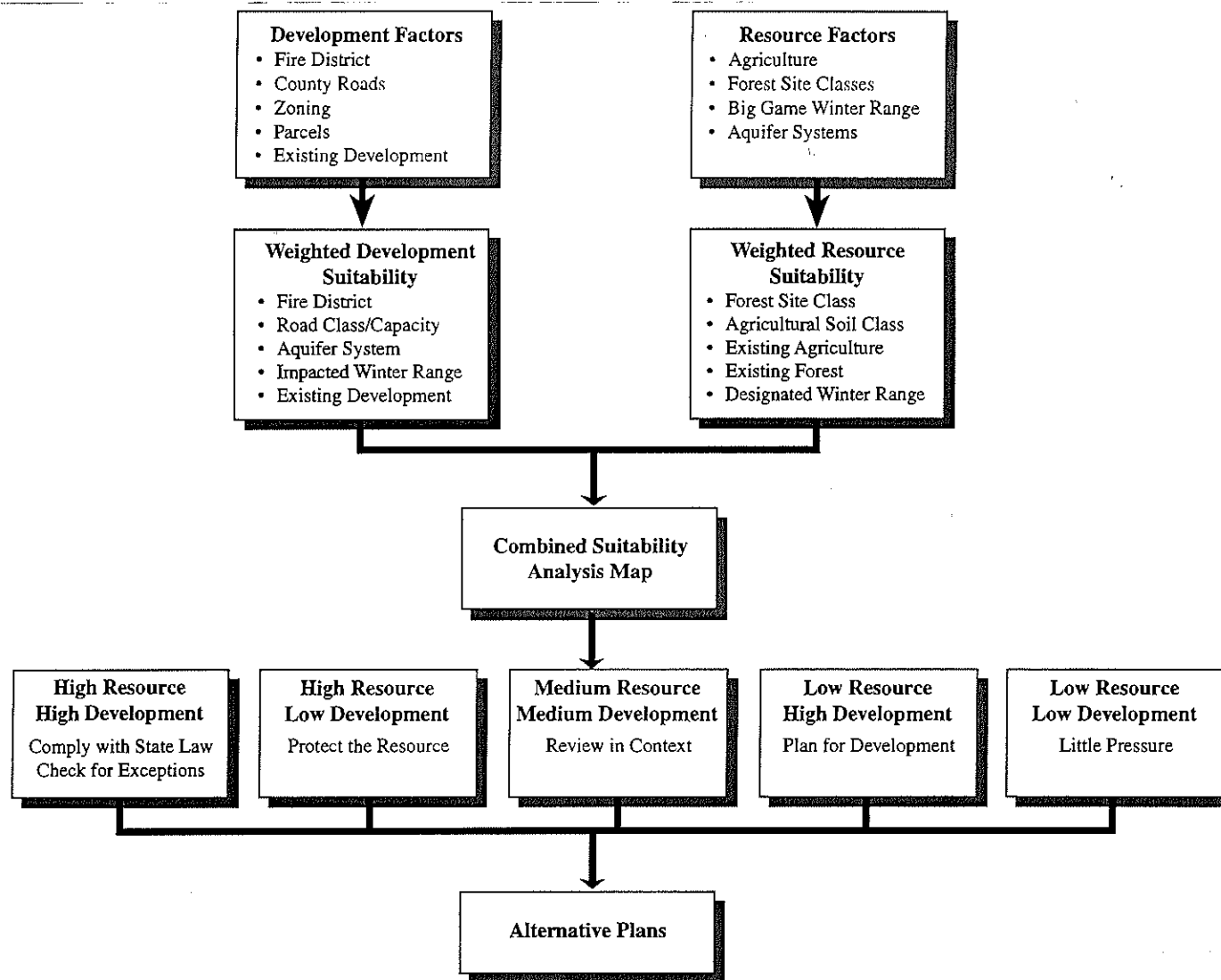
The flow diagrams (Figures 4 and 5a-d) provide conceptual depictions of the process, which is discussed in more detail in the following sections.

#### **4.2 Inventory Maps**

Inventory maps were developed, including the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Parcels
- Developed Parcels
- Parcels by Size
- Potential Development (based on current zoning)
- Agriculture:       Historically Cropped Lands  
                          Existing Agriculture (Land in Production)  
                          Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Well Locations
- Aquifer Systems





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Wasco County Transition Lands Study Area  
 Simplified Flow Diagram

FIGURE  
 4

# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 1: Agricultural Suitability

## 2: Forest Suitability

SOURCE MAPS

Zoning
Existing Ag (Field&Perennial)
Ag Soil Classes
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Existing registered field and perennial crops

High Value (Class 1&2, Prime&Unique), Other Productive (Class 3-6, not Prime&Unique), and Unsuitable (Class 7-8)

Parcel boundaries/ownership

Zoning
Forest Site Classes
Soils
Parcels

Zones (A-1(80), A-1(20), F-2(80), F-F(10), R-R(5), RMH-2))

Forest Site Classes 4, 5, 6, and 7

Soil classes

Parcel boundaries/Ownership/Centerpoints

ANALYSIS  
MAPS

Agricultural Suitability Weighted Values
---

Soil Class:  
High Value (Class 1-2) = 2 pt.  
Class 3 - 6 = 2 pt.  
Existing Agriculture = 1 pt.

Forest Suitability Weighted Values
---------------------------------------

Forest Site Class (Predominantly):  
Class 6 = 1 pt.  
Class 5 = 2 pt.  
Class 4 = 3 pt.  
Existing Forest Use  
≥ 80 ac. in F-2 (80) zone = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Forest and Agriculture Resource Weighted Composition
Combined Land Use Values Based on Resource Composite and Development Composite Map Values (Matrix)

CONTINUED ON FIGURE 5b

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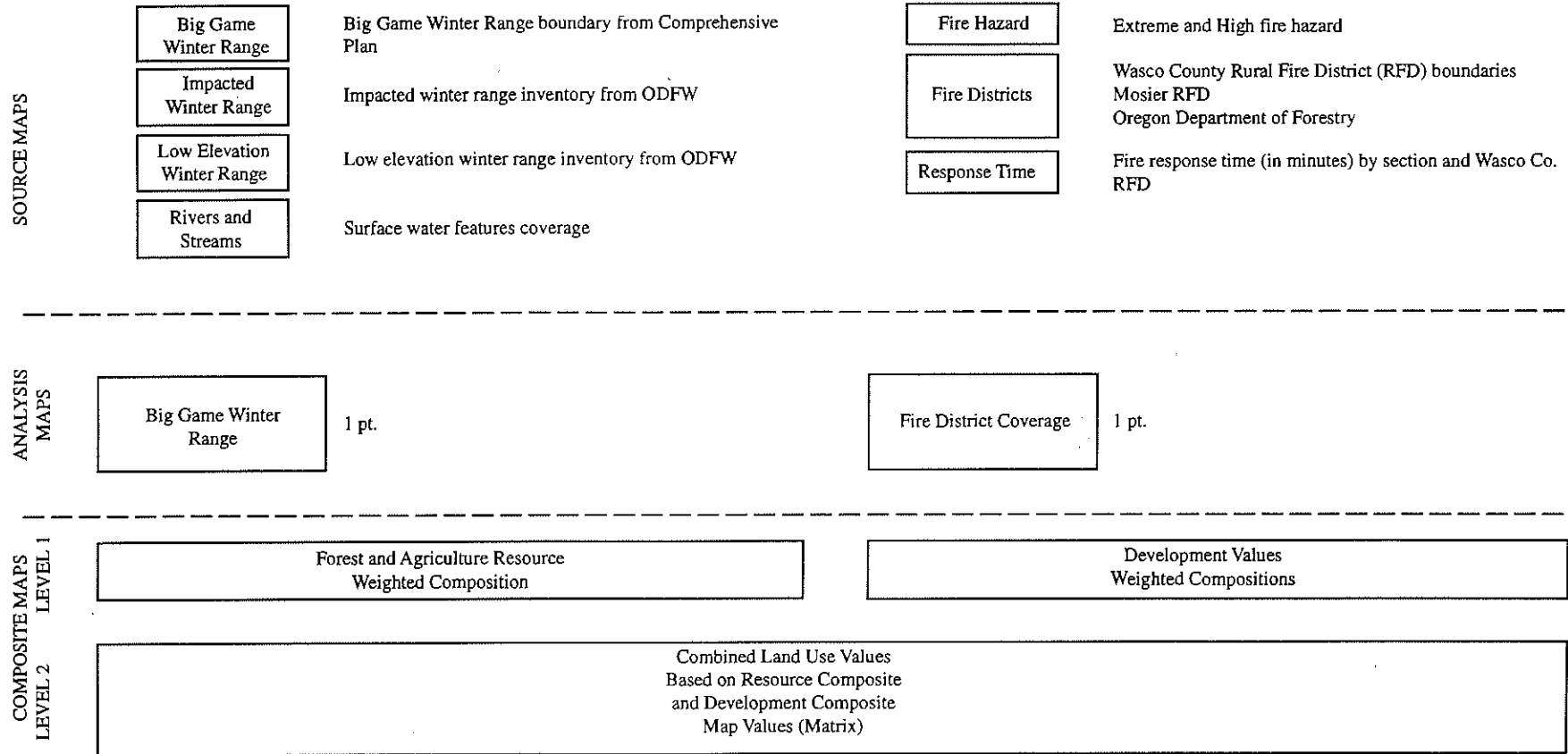
Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5a

## Wasco County TLSA Project: Opportunities and Constraints Analysis

### 3: Big Game Winter Range Availability

### 4: Fire Districts/Response Time



CONTINUED ON FIGURE 5c

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Wasco County Transition Lands Study Area  
 Revised "Recipe" Diagram

FIGURE  
 5b



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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 5: Access Suitability

## 6: Water Capability

SOURCE MAPS

County Roads

Roads in TLSA

Road Capacity

Remaining Capacity on County Roads Using Wasco  
County Road Classifications:  
Class I < 25 Average Daily Traffic (ADT) - 18' Gravel  
Class II ADT (25 - 250) - 22' Paved, 26' Roadway  
Class III ADT (250 - 1,500) - 24' Paved, 30' Roadway

Zoning

Zoning

Developed  
Parcels

Existing Developed (house)

Aquifer Units

ANALYSIS  
MAPS

Access Suitability  
Weighted Values

Class III Roads with Significant Capacity Remaining  
(up to 75%) = 2 pt.  
Class I Roads with Significant Capacity Remaining  
(up to 75%) = 1 pt.

Water Capability  
Weighted Values

"Green" Aquifer† = 2 pt.  
"Yellow" Aquifer†† = 1 pt.

COMPOSITE MAPS  
LEVEL 1  
LEVEL 2

Development Values  
Weighted Compositions

Combined Land Use Values  
Based on Resource Composite  
and Development Composite  
Map Values (Matrix)

CONTINUED ON FIGURE 5d

† Green Aquifer - An aquifer system that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepening, or deep static water level.

†† Yellow Aquifer - An aquifer system that, based on hydrographs and well records, has unexplained anomalies including deep aquifer, major and minor deepening, shallow soils.

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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5C

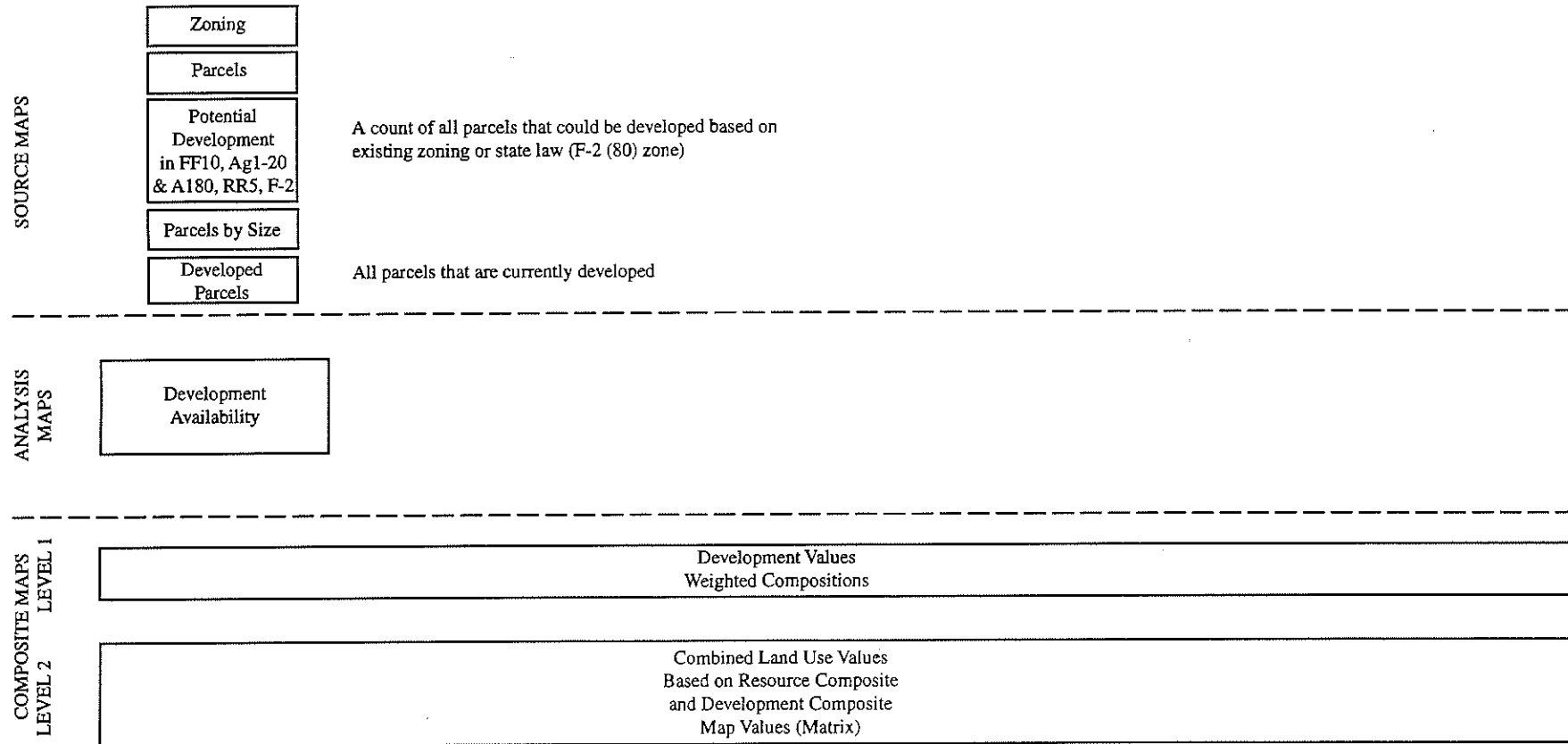


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# Wasco County TLSA Project: Opportunities and Constraints Analysis

## 7: Development Availability



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Wasco County Transition Lands Study Area  
Revised "Recipe" Diagram

FIGURE  
5d

### **4.3 Analysis Maps**

Analysis maps were derived by combining the inventory data into two categories: "development suitability" and "resource suitability." Components, by category, are listed below by category.

Development suitability included the following:

- Fire Districts and Response Time
- County Road Capacity
- Zoning
- Developed Parcels by Size
- Potential Build out by Zone
- Aquifer Systems

Forest and Agriculture resource suitability included the following:

- Agriculture: Existing Agriculture (Land in Production)  
Agricultural Soil Classes
- Forest Site Classes
- Big Game Winter Range
- Aquifer Systems

The presence of pine oak woodland habitat also was discussed at length as a resource suitability consideration. Definitive mapping of pine oak woodland habitat areas was not available for inclusion in the composite maps but will be developed for future consideration. Pine oak habitat values were addressed by the Steering Committee through public education and siting standards.

#### **4.3.1 Suitability Composite Maps**

The next step in the analysis was to determine how important each component was to determining the lands' suitability for development (Development Suitability Composite) and the lands' value as resource land (Forest and Agriculture Resource Suitability Composite). The weighting and combination of the components are discussed below.

#### **4.3.2 Development Suitability Composite**

Components of development suitability included:

- Located within the fire district;
- Accessible by a Class III or Class I road with 75% capacity remaining;
- Located within recognized impacted Big Game Winter Range; and
- Located within either a "green" or "yellow" aquifer system, which are aquifer systems having identified units within them generally supporting densities greater than or equal to existing zoning.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for development. The weighted values given to each factor and the composite totals are shown in Figures 6 and 7; the highest possible value was 7 points.

#### **4.3.3 Forest and Agricultural Resource Suitability Composite**

Components of forest and agricultural resource suitability included:

- Located within forest site class 4-6, or located within agricultural soil class 1-2 or 3-6;
- Identified as existing agriculture or existing forest; and
- Located within designated Big Game Winter Range.

Points were assigned to each of these factors and the respective points were added to identify which parcels within the Study Area were most suitable for forest and agricultural resources. The weighted values given to each factor and the composite totals are shown in Figure 8; the highest possible value was 6 points.

#### **4.3.4 Potential Development**

A set of maps was also produced to identify development potential (how many houses could be built) within the existing zoning districts in the Study Area. These maps included:

- Potential Development AG-1 (20) and (80) Zones
- Potential Development F-F (10) Zone
- Potential Development R-R (5) Zone
- Potential Development F-2 (80) Zone

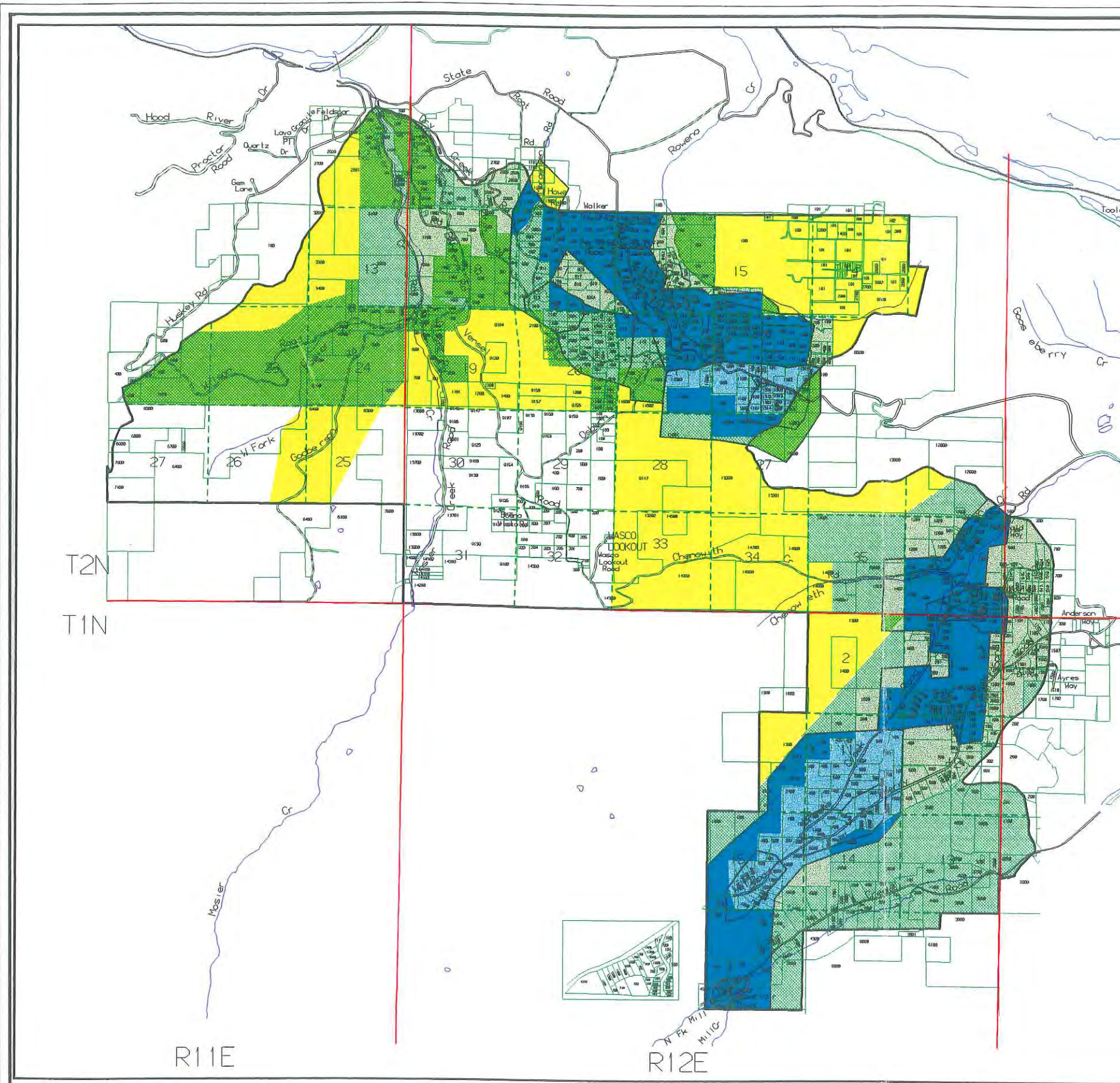
These maps indicated the total number of parcels per section that would be available for development based on the existing zoning classification. Based on this information, it was possible to identify total potential development that would be possible within the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area (Figure 9). Although this information was not used to produce the combined weighted compositions map described in Section 4.4 below, it provided a frame of reference for evaluating impacts of zone changes while exploring Policy Alternatives.

#### **4.4 Combined Suitability Composite**

The next step in analysis was to combine the Development Suitability map with the Forest and Agricultural Resource Suitability map to identify which parts of the Study Area were most appropriate for development and which were most appropriate for resources use/protection. This was accomplished by developing a matrix of development versus natural resources values, as shown in Figure 10. The matrix identifies the conflicts between the suitability maps. For example, if an area had a resource value of 5 and a development value of 2, it was classified H-L (High-Low) within the matrix. Based on the matrix and the map combining the Development Suitability and Resource Suitability maps in Figure 11, lands within the Study Area were categorized as follows:

- Low development value/Low resource value (L-L)--No conflict; these lands will experience little pressure either for development or resource use/protection.

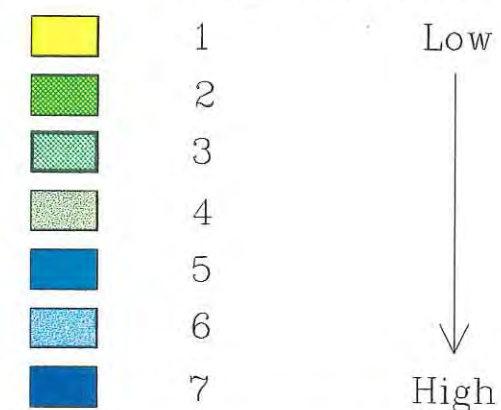




# DEVELOPMENT VALUES WEIGHTED COMPOSITIONS (including aquifer systems) Transition Lands Study Area

## Legend

### Weighted Totals



### Resource Values

#### Fire District

In District = 1 point

#### Roads

Class III With 75% Capacity Remaining

2 points

Class I With 75% Capacity Remaining

1 point

#### Water

Green Aquifer System = 2 points

Yellow Aquifer System = 1 point

#### Recognized Impacted Winter Range

Impacted Winter Range = 1 point



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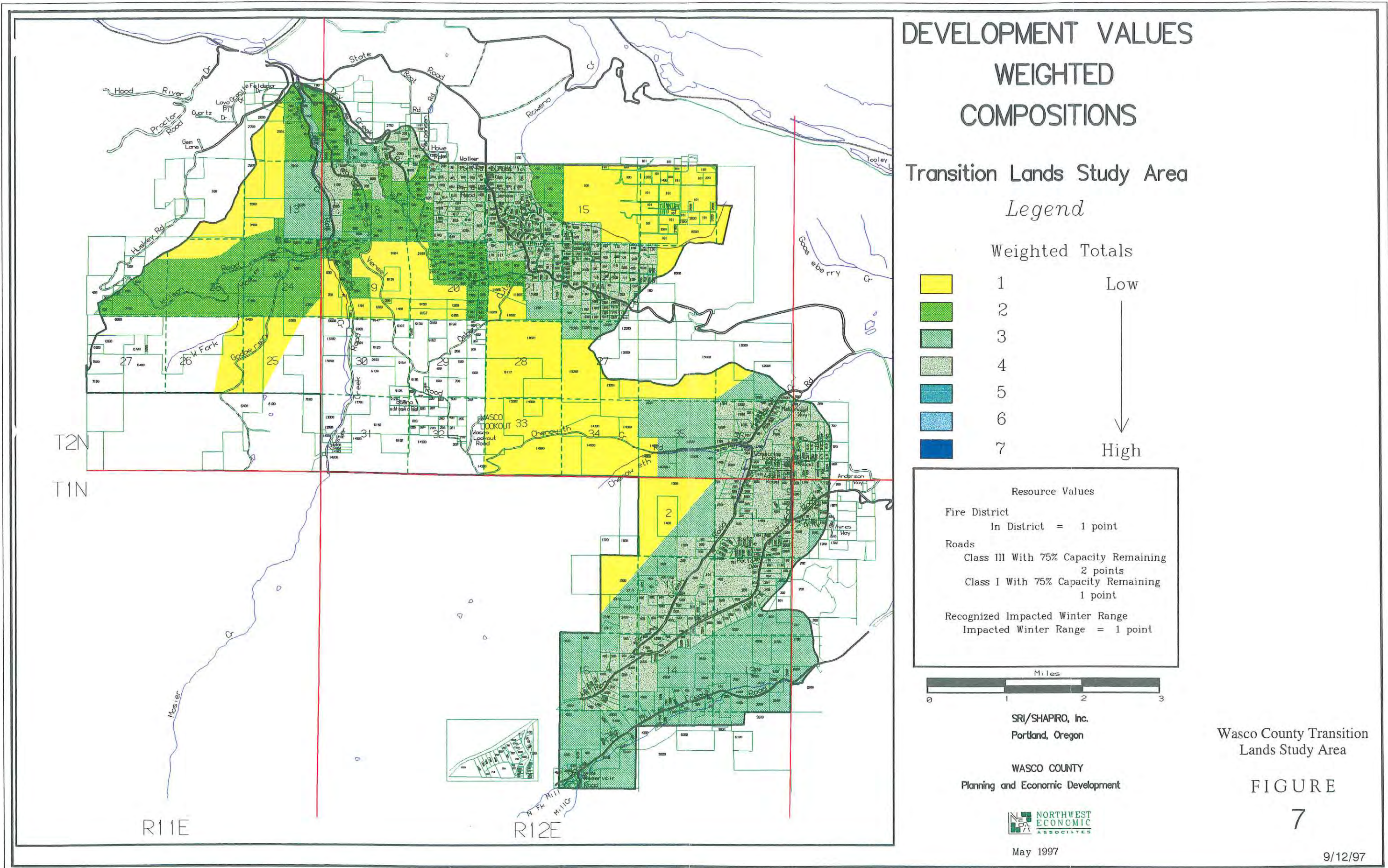
May 1997

Wasco County Transition  
Lands Study Area

FIGURE  
6

9/12/97



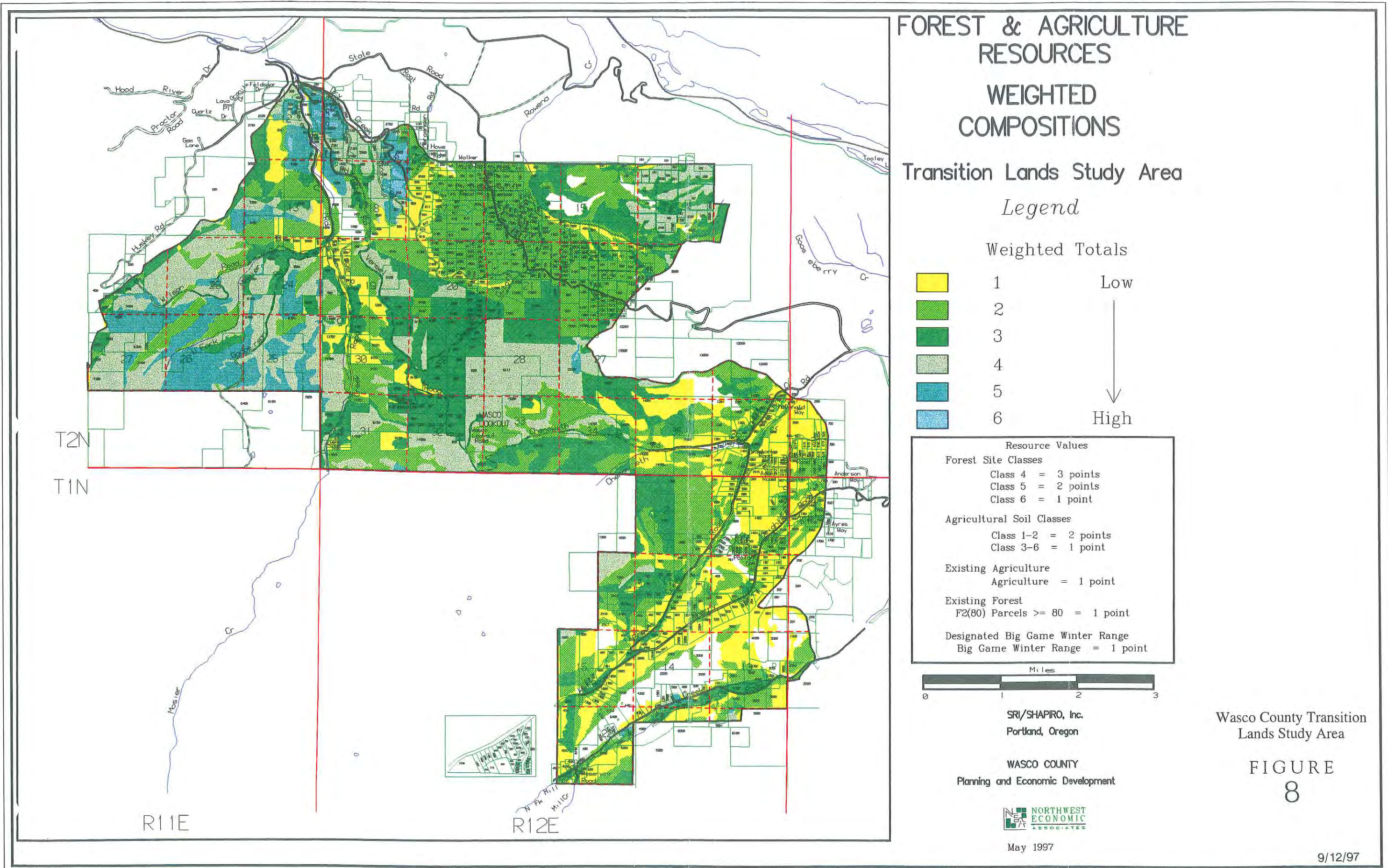


Map from Northwest Economic Associates, 1997

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INCORPORATED







# EXISTING DEVELOPMENT AND POTENTIAL DEVELOPMENT SUMMARY

	7 Mile Hill	Mill Creek - Cherry Heights	Totals
Existing Development	114	187	301
Potential Development	185	313	498
Cluster Provison Bonus Density Increase (Add to potential)			
Potential Increase at 25% Bonus	1	50	
Potential Increase at 50% Bonus	11	102	

Development is defined as dwellings.

Potential development numbers are based on what would be allowed under the current zoning in the FF-10, RR-5, and Agricultural Zones only. Numbers do not take into account unbuildable lots based on topography.

## Potential development by zones

7 Mile Hill		Mill Creek-Cherry Heights	
FF-10	= 125	FF-10	= 256
RR-5	= 52	RR-5	= 50
Ag	= 8	Ag	= 7

## Example of how to figure a cluster bonus.

a 40 acre parcel in the FF-10 would get 4 houses( 1 per each 10 acres). With a cluster provision, the same parcel would get 1 extra dwelling at 25% bonus (4 dwellings x .25); or 2 extra dwellings ( 4 dwellings x .50).

Source - Potential Development Maps produced for TLSA  
April 7, 1997

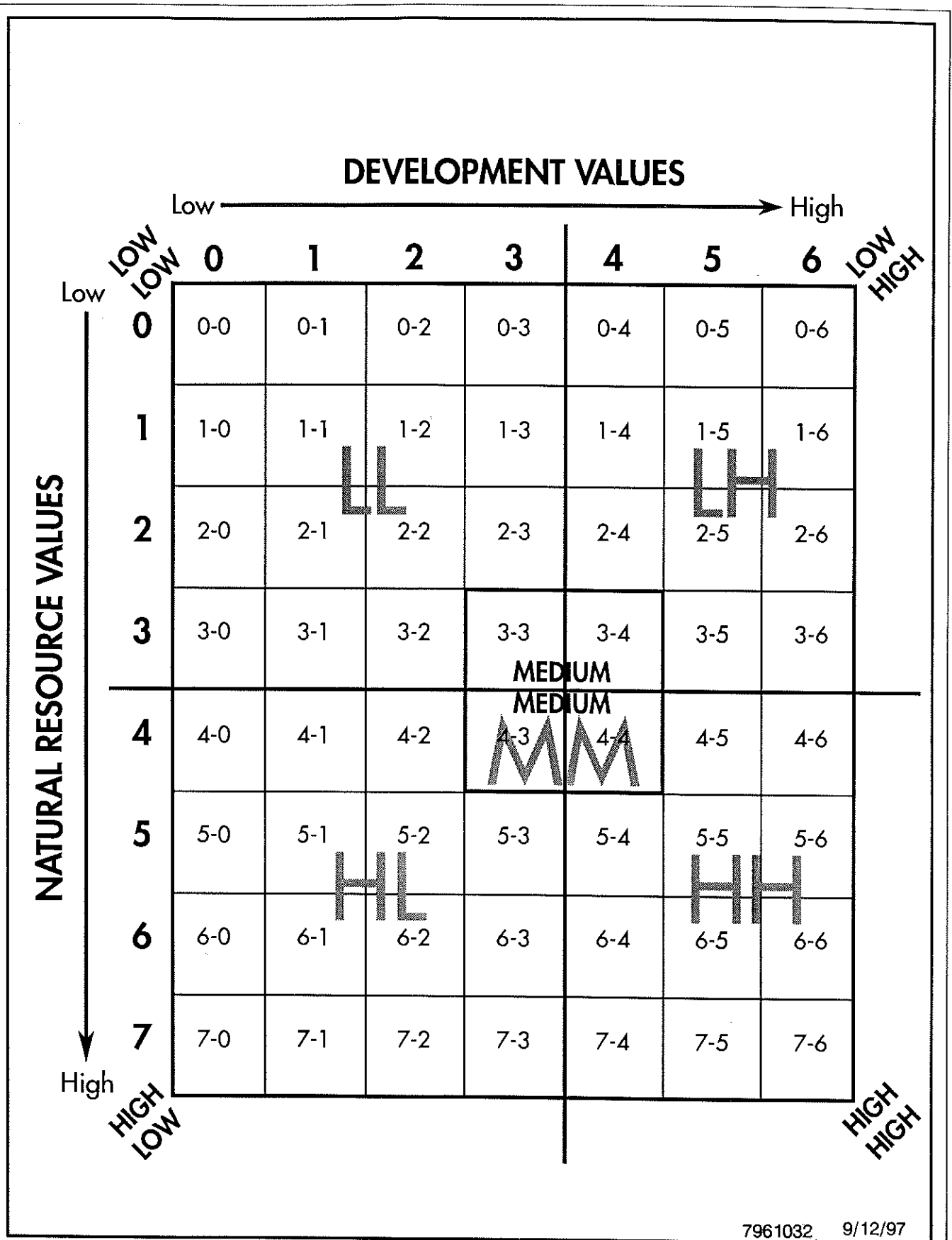
Tables from Wasco County, OR, 1997

7961032 9/12/97

Wasco County Transition Lands Study Area  
Summary of Existing Development and Potential  
Development

FIGURE  
9

 SRI/SHAPIRO/AGCO  
INCORPORATED



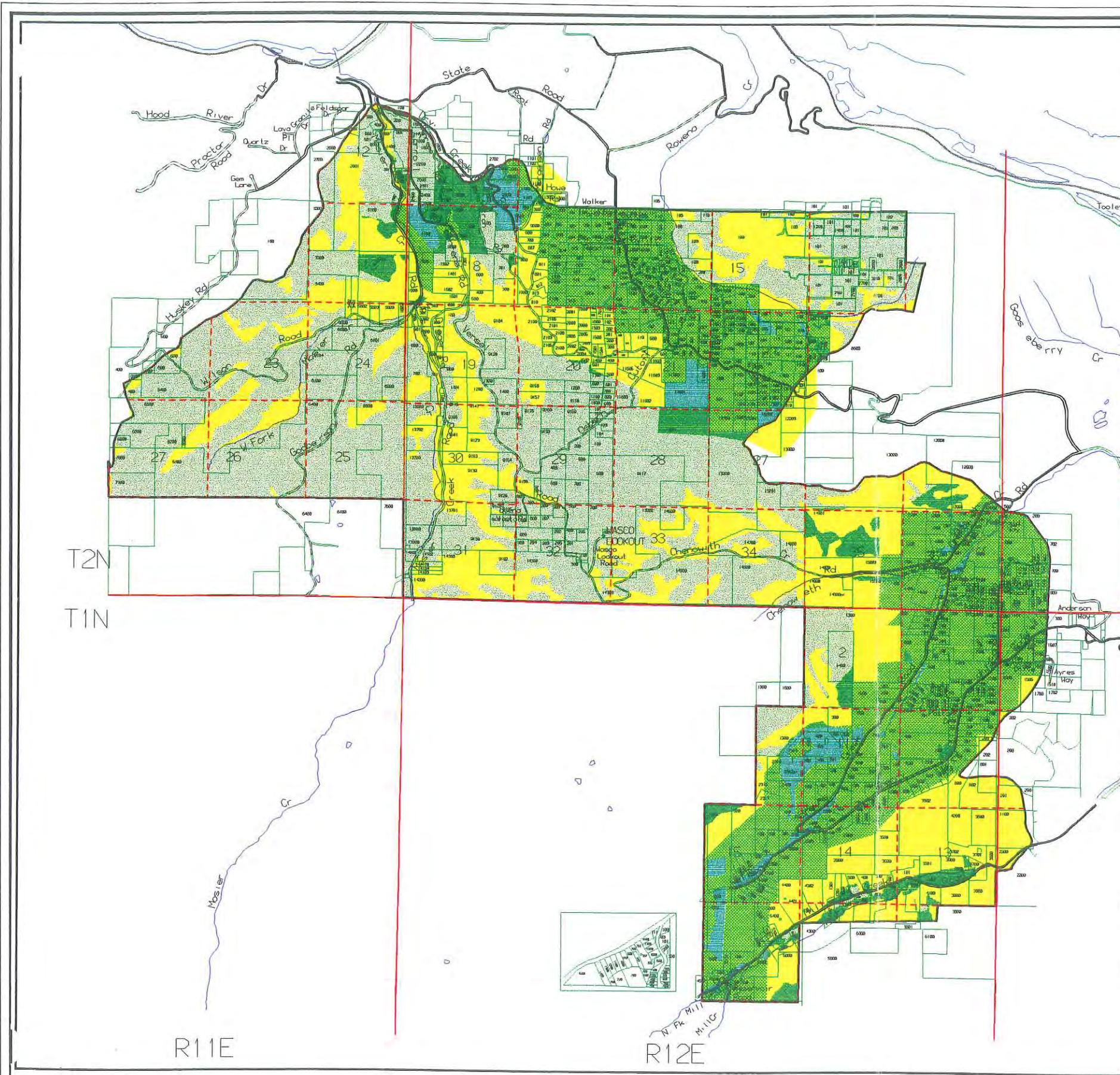
Wasco County Transition Lands Study Area  
Development versus Resource Values Matrix

FIGURE  
10



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# COMBINED LAND USE VALUES (based on resource composite & development composite map values)

## Transition Lands Study Area

### Value Comparison

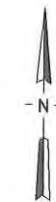
Forest & Agriculture Values      Development Values

L/L	0-1-2	0-1-2-3
L/H	0-1-2	4-5-6-7
H/L	3-4-5-6-7	0-1-2-3
H/H	3-4-5-6-7	4-5-6-7

F&A-Dev Medium Ranges

M/M 3-3, 3-4, 4-3, 4-4

0 1 2 3 4 5 6 7  
Low High



Miles  
0 1 2 3

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June 1997

Wasco County Transition  
Lands Study Area

FIGURE  
11

9/12/97



- High resource value/Low development value (H-L)--plans for these lands should protect the resource.
- Low resource value/High development value (L-H)--plans for these lands could accommodate development.
- Medium resource value/Medium development value (M-M)--Potential conflict; lands in this category must be reviewed in context to determine which factor (development or resource use/protection) is more important to plan for.
- High resource value/High development value (H-H)--plans for these lands must also be reviewed in context. Land uses must be based on review of applicable statutes, which usually will favor the resource, but there may be exceptions.

## 5.0 PRELIMINARY DEVELOPMENT ALTERNATIVES

### *What was the full range of alternatives considered?*

Three preliminary alternatives were developed based on the development and resource value analysis. These include: Alternative 1--Minimum Development, Alternative 2--Moderate Development, and Alternative 3--Maximum Development (Figures 12, 13, and 14). The alternatives reflect the range of development that could occur in the Study Area, from essentially "status quo" to substantial increases in allowed density. The alternatives are described below, accompanied by a discussion of the positive and negative aspects of each.

As noted earlier in this report (see Section 2.0), two areas were identified as most suitable for development based on the Development Suitability Maps: the Seven Mile Hill Area, in the northeastern part of the Study Area, and the Mill Creek/Cherry Heights Area, in the southeastern part of the Study Area. The preliminary alternatives focus on these areas.

### 5.1 Alternative 1--Minimum Development

This alternative represents the "status quo," allowing very little increase in development density above what was already allowed by current zoning. A key factor recognized by the Steering Committee was that the potential exists for approximately 500 additional homes to be built under the current zoning, in addition to the existing approximately 300 homes. Water Monitoring Areas were designated as areas which could experience increased densities in the future if adequate water is available (Figure 12).

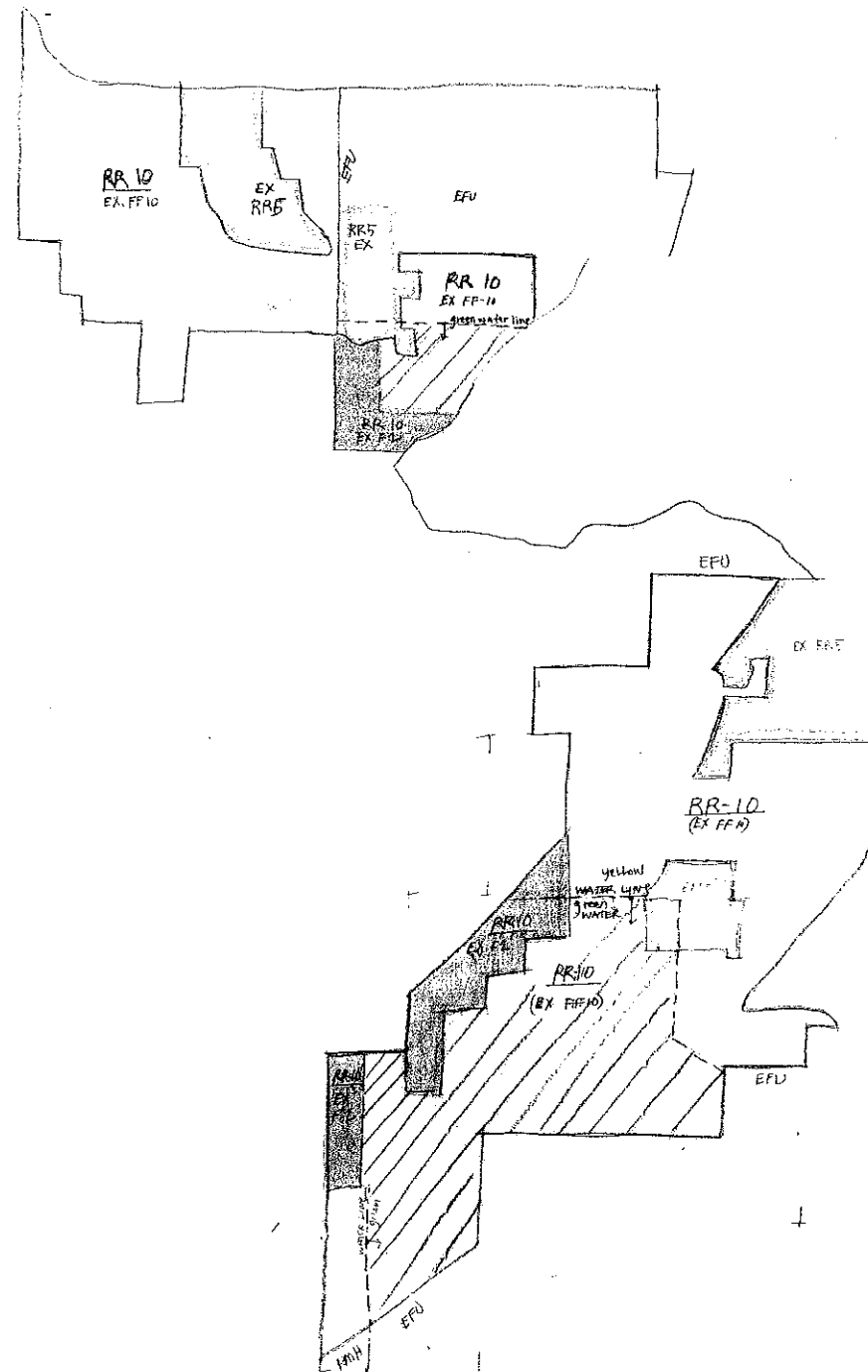
#### 5.1.1 Seven Mile Hill Area




In the Seven Mile Hill Area, Alternative 1 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential, and the vast majority of the F-2(80) zoning.
- Rezone the remainder of the area from F-F (10) Forest-Farm and a small amount of F-2 (80) Forest to R-R (10) Rural Residential, a new zone created as a result of this study.
- Rezone one area of F-2(80), approximately 80-100 acres located in the southeast corner of the Seven Mile Hill Area, to R-R(10).

# ALTERNATIVE FOR MINIMUM DEVELOPMENT

(Same zoning w/ minor changes)



-  ALL EXISTING FF10 TO RR-10
-  WATER MONITORING AREAS FOR POTENTIAL INCREASE IN DENSITY (areas where current density spacing is working, other areas will be monitored, but not being counted for density increases)
-  PROPOSED MINOR INCLUSIONS OF RESOURCE LAND TO RR-10 (RES)

## MINIMUM DEVELOPMENT

### PROS:

- Rezone only very limited resource zoned lands with low resource values, retaining areas of higher resource value.
- Retain existing ten acre minimum.
- No increase in potential impacts on BGWR.
- Allows further testing and monitoring of aquifer systems prior to any increase in density - "we'll never be able to promise water but may understand the odds better."
- Doesn't increase potential service needs (roads and fire protection).
- Retains familiar 10 acre land use pattern.

### CONS:

- Without development standards and education for rural occupants, still impacts fire protection, rural character and "other" wildlife habitat as ten acre densities developed.
- No increase in potential \$'s for rural fire protection.
- Monitoring still important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option for rural dwellers - each rural residence "consumes" a minimum of ten acres.

Map from Wasco County, OR, 1997

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Wasco County Transition Lands Study Area  
Alternative 1 - Minimum Development

FIGURE  
12

# ALTERNATIVE FOR MODERATE DEVELOPMENT

## Legend

 IDENTIFIED AREAS FOR FUTURE INCREASED DENSITY w/ FUTURE WATER MONITORING DATA SUPPORT

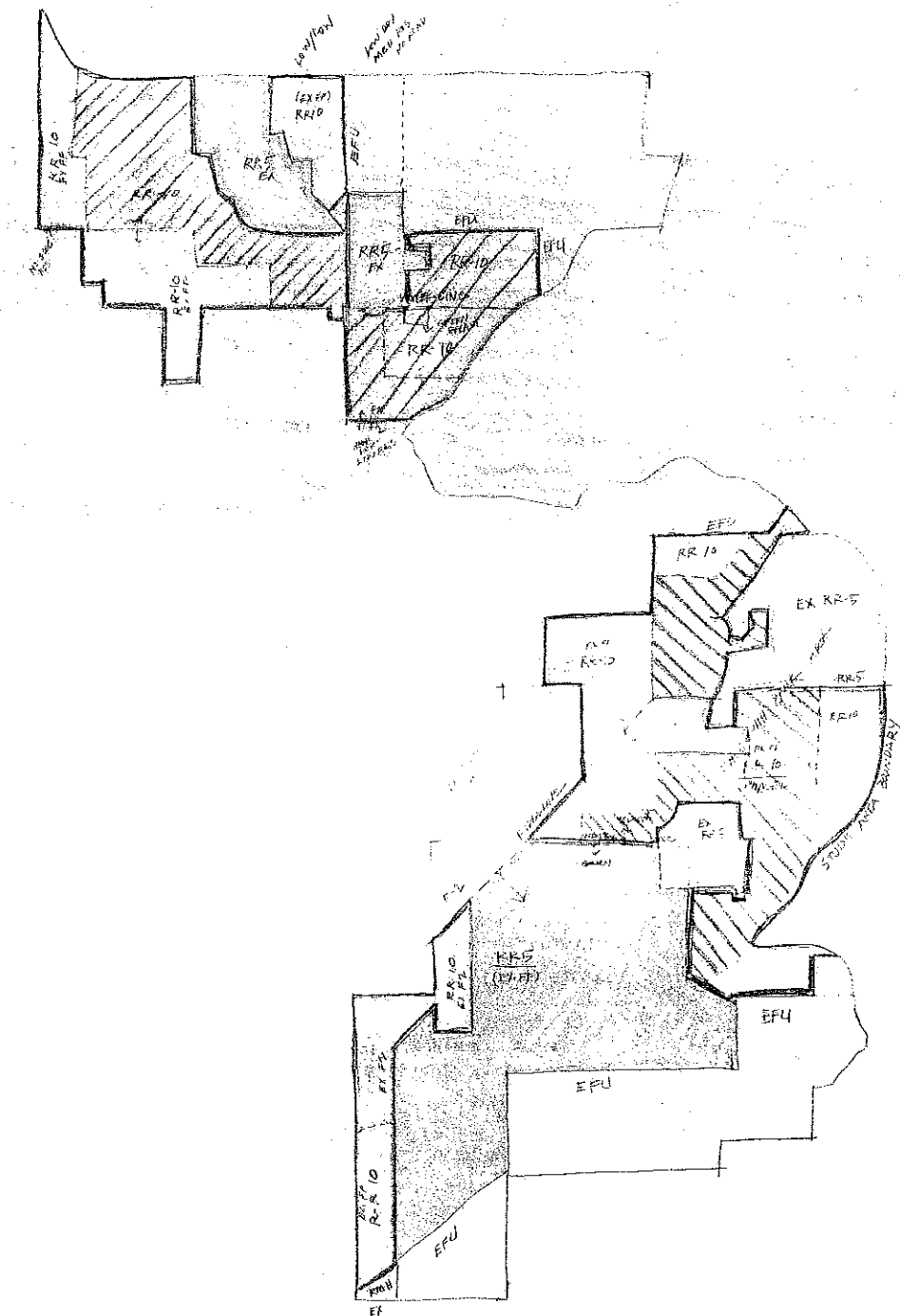
### MODERATE DEVELOPMENT

#### PROS:

- Accommodates limited increased densities in areas of low or lower resource value.
- Directs limited density increases to areas with low or lower resource value.
- Accommodates limited increased densities in impacted areas of BGWR.
- Increases densities where aquifer systems are behaving more predictably.
- Identifies areas for additional increased densities once more is known about water.
- Focuses limited density increases in serviceable areas.
- Provides for a limited increase in fire district revenues.
- Accommodates increased densities accessed by a single road system at first- allowing the Road Department to assess impacts.
- Allows opportunity to assess effectiveness of development standards, for maintaining fire / road access and preserving rural character, and educational programs increasing awareness of water, wildlife and right to farm issues prior to further increase in densities.
- Provides limited accommodations for rural housing.

#### CONS:

- Limited impacts on other wildlife habitat.
- No guarantees as to water availability at higher densities.
- Limited increases in risk of fire loss in less accessible areas.
- Limited increase in traffic on roads with no automatic increase in Rd. Department revenue.
- Impacts on rural character in limited areas.



Map from Wasco County, OR, 1997

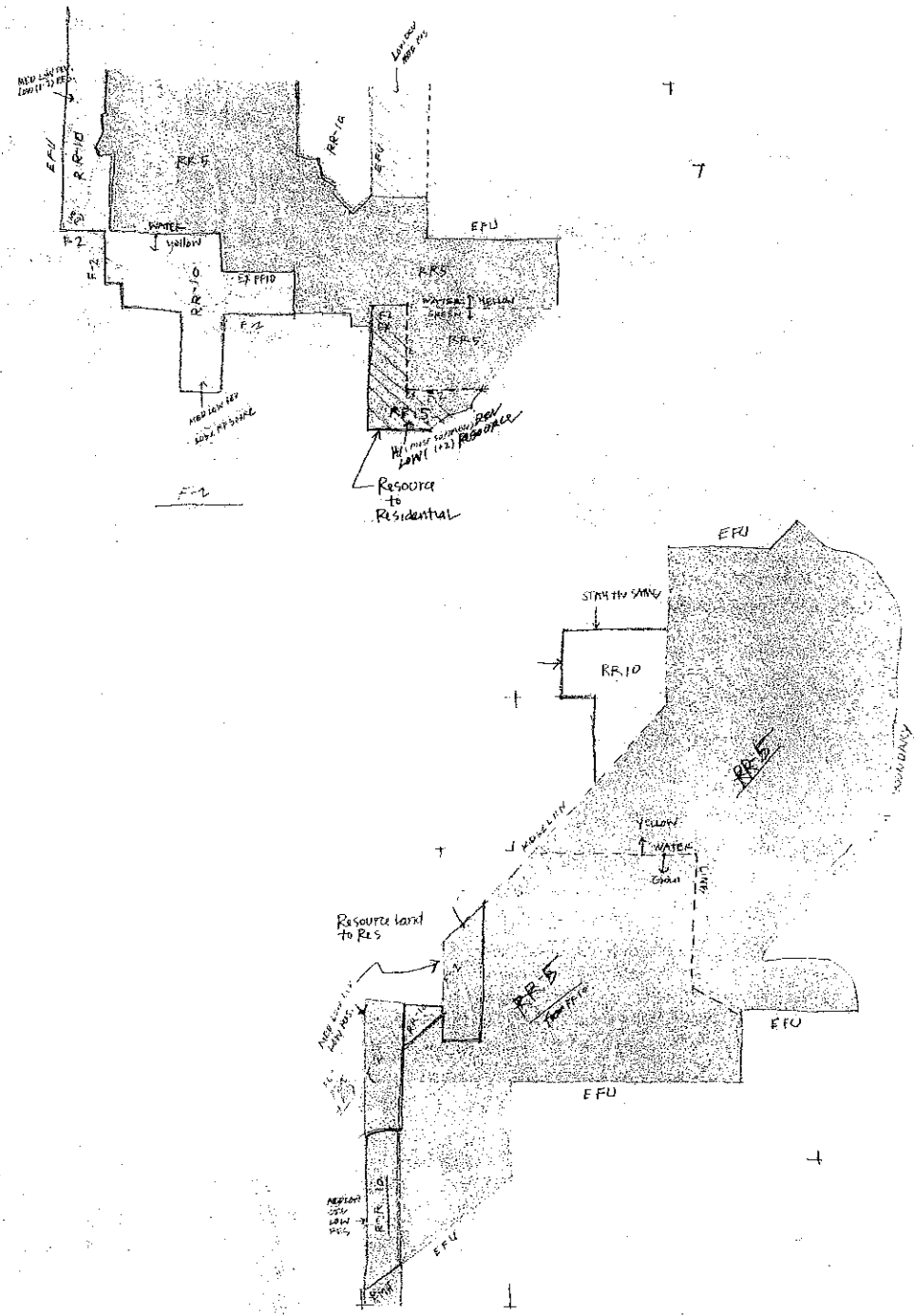
Wasco County Transition Lands Study Area  
Alternative 2 - Moderate Development

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FIGURE  
13



# ALTERNATIVE FOR MAXIMUM DEVELOPMENT



PROS

## MAXIMUM DEVELOPMENT

- PROS:**
- Maximizes development in areas of low or lower resource value - taking pressure off higher value lands.
  - Maximizes development in impacted areas of big game winter range (BGWR)- taking pressure off areas with remaining habitat values.
  - Not limited by possible ground water shortages - water can be purchased or hauled if needed.
  - Allows all serviceable (roads and fire district) land to be developed fully- taking pressure off areas with substandard services.
  - Allows broad increase in densities with in fire districts- increasing revenues within the same service area.
  - Maximum accommodations for rural housing- could consider cluster density bonuses at even higher than five acres.
  - Broad comprehensive density increases provide for more consistent development pattern rather than infill after ten acre lot pattern has continued to develop.

- CONS:**
- Impacts other wildlife habitat- quantifiable data not available.
  - Possible over extension of ground water supplies and increased densities in areas where aquifer system behavior is not well understood.
  - Hauling water to domestic dwellings is not the usual and customary practice in this area - can't form water districts or co-ops outside UGB.
  - Without adequate Road standards increases risks of fire loss in less accessible areas (increased structure values and more lives affected).
  - Without LIDs (limited improvement districts) or Development Fees, no increased revenues for Road Department to provide for additional development and maintenance as traffic increased.
  - Impacts on rural character.
  - Provides no trial run for development standards and education programs.

Map from Wasco County, OR, 1997

Wasco County Transition Lands Study Area  
Alternative 3- Maximum Development

7961032 9/12/97

FIGURE  
14

- Create and coordinate a water monitoring program tied to specific Water Monitoring Areas.

Creation and application of the R-R (10) zone would simplify the approval of homes by eliminating the conditional review process. Residential use would be permitted subject to standards for approval (see Appendix 1 for a summary of this new zone).

Water Monitoring Areas are areas that could be rezoned in the future to allow increased development, provided water monitoring indicates water availability would be able to accommodate increased density (water monitoring information is included in Appendix 6 of this report). Water Monitoring Areas were determined based on aquifer systems within the Study Area determined to be "green" or "yellow." A "green" aquifer system is one that, based on hydrographs and well records, shows no particular anomalies such as water level decline, deepenings, or deep static water level. A "yellow" aquifer system is one that, based on hydrographs and well records, has unexplained or negative anomalies including deeper than average aquifers, major and minor deepenings of wells, decreases in static water levels and/or has shallow soils.

### **5.1.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 1 would:

- Retain the existing R-R (5) Rural Residential zoning.
- Rezone the remainder of the area zoned F-F (10) to the new R-R (10) zone.
- Rezone two small segments zoned F-F(80) located along the western boundary of this area to R-R (10).
- Create and coordinate a water monitoring program aimed at Water Monitoring Areas identified over approximately one-half of the Mill Creek/Cherry Heights area.

### **5.1.3 Pros and Cons of Alternative 1--Minimum Development**

Pros include the following:

- Only a very limited area of resource-zoned (F-2 (80)) lands with low resource values would be rezoned to R-R (10), thus retaining areas of higher resource value in their existing zoning.
- The existing 10-acre minimum would be retained in rezoned areas.
- There would be no increase in potential impacts on the Big Game Winter Range (BGWR).
- Further testing and monitoring of aquifer systems would be undertaken before any increase in density is allowed. This will result in a better understanding, through monitoring and evaluation, of the aquifer systems and how they are affected by development.
- Potential service needs (i.e., for roads and fire protection) would not increase.
- The existing, and familiar, 10-acre land use pattern would be retained.

Cons include the following:

- Without development standards and public education about the impacts of increased density, impacts on fire protection services and wildlife habitat, and changes in the rural character of the area, would result.
- There would be no increase in potential revenue for rural fire protection services.
- Likely less incentive to monitor aquifers, however, monitoring of aquifers still would be important to provide understanding of water issues to rural dwellers.
- Fails to provide a smaller lot option; each rural residence would continue to "consume" a minimum of 10 acres of land.

## **5.2 Alternative 2--Moderate Development**

Alternative 2 would allow more development than with Alternative 1, with other areas in both the Seven Mile Hill Area and Mill Creek/Cherry Heights Area identified for a future increase in density if there is water monitoring data to support it. A much larger part of the Mill Creek/Cherry Heights Area (about half) would be rezoned to R-R (5) (Figure 13). This would allow more development than with Alternative 1.

### **5.2.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 2 would:

- Retain the existing A-1 (80) EFU and R-R (5) Rural Residential zoning.
- Rezone the remainder of the area, which currently is zoned for F-F (10) and F-2 (80), to R-R (10).
- Create a much larger water monitoring area than Alternative 1, which means it could be rezoned in the future to allow increased development, provided water monitoring indicates water availability.

### **5.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 2 would:

- Retain the existing R-R (5) zoning.
- Rezone existing F-F (10) in the northern part of the area to R-R (10), and designate about half a Water Monitoring Area.
- Rezone a small area of existing F-2 (80) in the southern part of this area to R-R (5).
- Rezone existing F-2 (80) and F-F (10) along the western boundary to R-R (10).

### **5.2.3 Pros and Cons of Alternative 2--Moderate Development**

Pros include the following:

- Limits increased densities.
- Directs increased densities to areas of low or lower resource value, areas where the Big Game Winter Range (BGWR) already is impacted, and/or areas where aquifer systems are behaving more predictably ("green areas").
- Areas are identified where density could increase once more is known about water availability (Water Monitoring Areas).

- Density increases are focused in serviceable areas.
- A limited opportunity for an increase in fire district revenues is provided.
- Increased densities are first directed to areas accessed by an existing road system with adequate capacity for increased traffic, allowing the Road Department to assess impacts of increased development on roads.
- The opportunity is provided to assess the effectiveness of development standards, for maintaining fire/road access and preserving rural character, and educational programs to increase awareness of water, wildlife, and right-to-farm issues, before increases in density occur.
- Limited accommodations for rural housing are provided.

Cons include the following:

- Limited impacts on other wildlife habitat would result.
- There is no guarantee that water will be available to accommodate higher densities.
- A limited increase in risk of fire loss would result in accessible areas.
- Traffic on roads would increase to a limited extent without an automatic increase in Road Department revenue to offset increased service demand.
- Rural character would be affected in certain areas to a limited extent.

### **5.3 Alternative 3--Maximum Development**

This alternative would rezone most of the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area to R-R (5), thus allowing the most development of the three alternatives (Figure 14). This alternative does not consider water to be a limiting factor to development.

#### **5.3.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, Alternative 3 would:

- Retain the existing A-1 (80) EFU and R-R (5) zoning.
- Rezone areas with medium-low development value and low resource value from F-F (10) to R-R(10).
- Rezone the remainder of the existing F-F (10) to R-R(5) without regard to water considerations.

#### **5.3.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, Alternative 3 would:

- Retain the existing R-R (5) zoning.
- Rezone most areas in the northern half from F-F (10) to R-R (5); the exception would be a small area along the western boundary that has a medium-low development value and a low resource value, which would be rezoned to R-R (10).
- Rezone the southern half of the area to R-R (5), with a small part along the western boundary rezoned to R-R (10).



### 5.3.3 Pros and Cons of Alternative 3--Maximum Development

Pros include the following:

- Development is maximized in areas of low or lower resource value, thus taking development pressure off lands with higher resource value.
- Similarly, development is maximized in areas of impacted Big Game Winter Range, taking pressure off areas with remaining habitat values.
- Development would not be limited by possible groundwater shortages; water could be purchased or hauled if needed.
- All serviceable (roads and fire district) lands can be fully developed, which takes pressure off areas with substandard services.
- A broad increase in densities is allowed on lands within the fire districts, resulting in increased revenues within the same service area.
- There is maximum accommodation of rural housing; cluster density bonuses could be considered at greater than 5-acre minimum lot size.
- Broad comprehensive density increases proposed with this alternative provide for a more consistent development pattern, rather than resulting in infill after the 10-acre pattern has continued to develop.

Cons include the following:

- Although quantifiable data is not available, this alternative is expected to result in impacts on wildlife habitat.
- It is possible that over-extension of groundwater supplies will occur as a result of increased densities in areas where the behavior of aquifer systems is not well understood.
- Hauling of water for domestic use is not the usual and customary practice in the Study Area, and formation of water districts or co-ops outside the urban growth boundary (UGB) is not allowed; therefore, water availability could become a problem.
- Without adequate road standards, there would be increased risk of fire loss in less accessible areas, and likely increased structure damage and more lives affected as a result of increased density.
- Without local improvement districts (LIDs) or development fees, there would not be increased revenue for the Road Department to provide for additional development and maintenance as traffic increases.
- Impacts on rural character would result.
- A "trial run" for development standards and educational programs is not provided.

## 6.0 ALTERNATIVE PLANS

*What was the preferred preliminary alternative?*

*What options were considered for implementing the preferred alternative?*

Based on analysis and comparison of the Preliminary Development Alternatives (Section 5.1) and consideration of information derived from analysis of the Potential Development maps (as described in Section 4.3.3 of this report), the Steering Committee selected Alternative 1 – Minimum Development as their preferred alternative. The Steering Committee agreed to look at some options for development within the context of the

Minimum Development Alternative. Three Preferred Policy Alternatives were developed. The Preferred Policy Alternatives focus on the same mixed residential and resource use areas of the Study Area as the Preliminary Development Alternatives: the Seven Mile Hill Area and the Mill Creek/Cherry Heights Area. These alternatives were refinements of the Minimum Development Alternative, and were guided and developed from the policy statements. They explored three different approaches to developing the Minimum Development Alternative, as follows:

- (1) Maintain the existing number of homes that can be developed by current zoning, but provide flexibility of lot size through transfer of development rights.
- (2) Identify specific areas for immediate upzone (increased density), but significantly limit these areas.
- (3) Identify specific areas for an upzone in the future, as warranted.

The Preferred Alternative plans combine features of each of the Preliminary Development Alternatives. Each approach aims to:

- Proceed with caution;
- Focus growth in the Mill Creek/Cherry Heights area; and
- Retain rural character and quality of life.

The plans also include a new concept--transfer of development rights (TDR)--to allow a transfer of a development (house) to another location. The alternative concepts are explained in detail in the following sections.

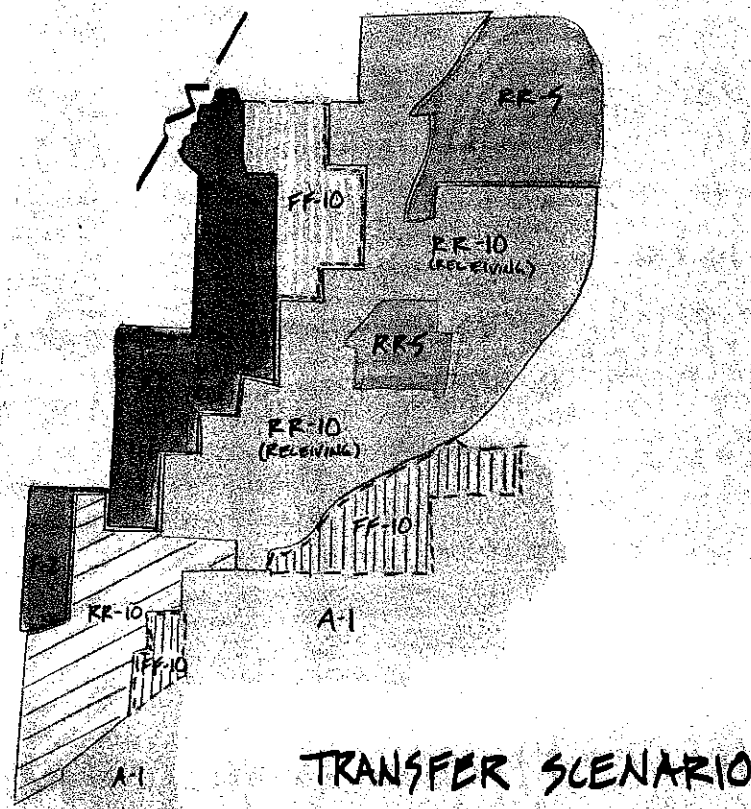
## **6.1 Transfer of Development Rights (TDR) Alternative**

The Transfer of Development Rights Alternative transfers development rights from areas with high resource values and/or lower development values to areas with high development potential. This approach could result in higher protection for resource lands while allowing some flexibility for development (Figures 15 and 16). Areas most suitable for development will be allowed to build out at higher densities than allowed under current zoning. They would be allowed to increase their density by purchasing a development right (unbuilt homesite) from another property owner and agreeing to develop the "transferred" homesite within the receiving area where development suitability is highest. The key is that increased densities allow for infill development where best suited, and make possible the utilization of development rights from areas that are less suitable for development, which may include areas of steep slopes, ridgelines, aquifer anomalies, significant wildlife habitat, and/or locations compromising scenic views.

### **6.1.1 Seven Mile Hill Area**

In the Seven Mile Hill Area, the TDR Alternative would:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). None of the rezoned R-R (10) areas would be able to receive development rights under the TDR concept.



Map from Wasco County, OR, 1997

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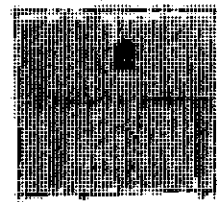
Wasco County Transition Lands Study Area  
Transfer of Development Rights (TDR) Alternative

FIGURE  
15

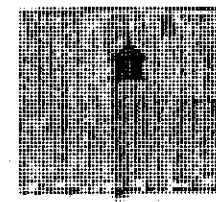


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VALUE WITH  
DEVELOPMENT  
RIGHT ON 10 AC



VALUE WITHOUT  
DEVELOPMENT  
RIGHT



5AL. WITH HOUSE (160,000<sup>00</sup>)  
5AL. HOME SITE ( 45,000<sup>00</sup>)  
205,000<sup>00</sup>

10AL WITH HOUSE (160 000<sup>00</sup>)

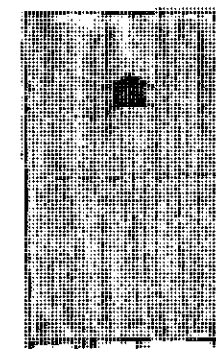
DEVELOPMENT RIGHT  
VALUE TO BUYER

\$ 45,000<sup>00</sup>

VALUE WITH  
DEVEL. RT. ON 20 AC.



VALUE WITHOUT  
DEVEL. RT.



10AL WITH HOUSE (160 000<sup>00</sup>)  
10AL HOME SITE ( 50,000<sup>00</sup>)  
210,000<sup>00</sup>

BROWN'S CREEK  
CHERRY HT'S

20AL WITH HOUSE (160,000<sup>00</sup>)

(160,000<sup>00</sup>)  
( 70,000<sup>00</sup>)  
( 230,000<sup>00</sup>)

MOSEY  
7 MILE  
HILL

(170,000<sup>00</sup>)

DEVELOPMENT RIGHT  
VALUE TO SELLER

\$ 50,000<sup>00</sup> ( BROWN'S CREEK  
CHERRY HT'S )

\$ 60,000<sup>00</sup> ( MOSEY  
7 MILE HILL )

Figure from Wasco County, OR, 1997

7961032 9/12/97

Wasco County Transition Lands Study Area  
Example of Transfer of Development Rights

FIGURE  
16



### 6.1.2 Mill Creek/Cherry Heights Area

In the Mill Creek/Cherry Heights Area, the TDR Alternative would:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10) with TDR receiving status.

### 6.1.3 Intent and Impacts of the TDR Alternative

#### *What is the intent of the TDR Alternative?*

- The overall density (number of new homes) would not increase, but would allow lot size flexibility.
- Development would occur at a slower pace, which allows time to explore ways to fund the cost of providing service to developing areas.
- Increased densities would occur in the most accessible areas, as driven by the market.
- An incentive is generated for private purchase of development rights.
- Those who pay (for transfer of development rights) are those who stand to benefit from increased development.
- Rural character would be maintained.
- Development would proceed with caution and allow time for water monitoring data to be compiled.

#### *What are the impacts of the TDR Alternative?*

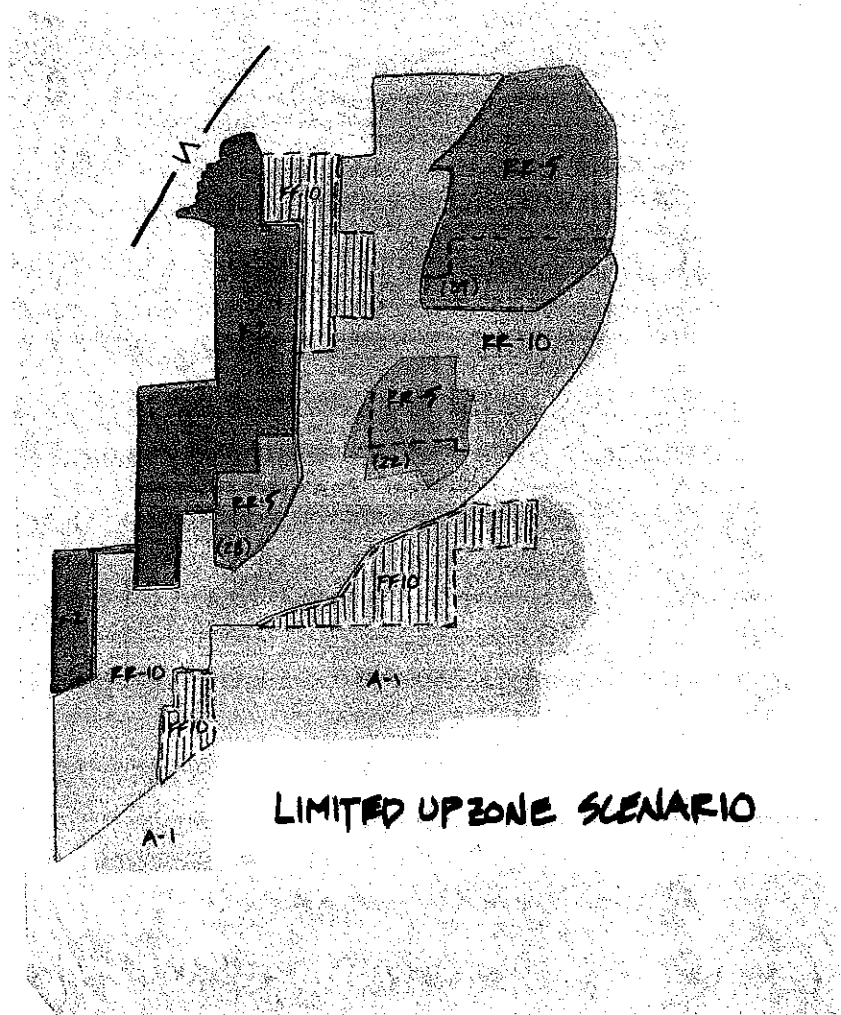
- TDR is a new concept and will be difficult to understand and/or explain.
- There is no guarantee that development rights will be purchased and built out in the "receiving areas;" however, the alternative acknowledges the value of creating incentives, rather than regulating development through such methods as downzoning.
- TDR may be complex and difficult to implement because of higher administrative costs and staff time commitments.
- Creates higher densities in "receiving areas" than zoning would indicate.

### 6.2 Limited Upzone Alternative

The Limited Upzone Alternative identified areas that are best suited for an upzone based on development suitability (Figure 17). Generally, these are areas that have good road access, are in a fire district, are in an impacted Big Game Winter Range area, and are located in an aquifer that has few anomalies. There is not a transfer of development rights (TDR) in this alternative.

#### 6.2.1 Seven Mile Hill Area

In the Seven Mile Hill Area, the Limited Upzone Alternative would be the same as with the TDR Alternative, but there would not be the opportunity to transfer or sell development rights.



Map from Wasco County, OR, 1997

7961032 9/12/97

Wasco County Transition Lands Study Area  
Limited Upzone Alternative

FIGURE  
17



SRI/SHAPIRO/AGCO  
INCORPORATED

## **6.2.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area, the Limited Upzone Alternative would retain the existing F-F (10) areas that have a higher resource value (the same as Alternative 1). However, this scenario identifies two areas for an upzone from F-F (10) to R-R (5). These areas are identified as having a high development value and include the following:

- Area 1--south of the existing R-R (5). Rezoning this area to R-R (5) would result in approximately 39 additional homesites.
- Area 2--south of Lutz Lane. Rezoning this area to R-R (5) would result in approximately 22 additional homesites.

## **6.2.3 Intent and Impacts of the Limited Upzone Alternative**

### *What is the intent of the Limited Upzone Alternative?*

- Rural densities would increase in the most appropriate areas.
- Upzoning and downzoning are familiar concepts; therefore, the action would be easily understood by landowners.

### *What are the impacts of the Limited Upzone Alternative?*

- The number of potential homesites would increase by 60+, which would put more demand on infrastructure and services, such as the road system.
- It would be difficult to "go back" once areas are upzoned.

## **6.3 Future Expansion Alternative**

The Future Expansion Alternative identifies the same two areas for an upzone as are identified in the Limited Upzone Alternative (Figure 18). In this scenario the upzone of an area would be phased in as development pressure occurs in the future, and as more information on water is gathered. There is no difference between this alternative and the Limited Upzone Alternative other than the rezone areas are identified and reserved for future growth.

## **6.3.1 Intent and Impacts of the Future Expansion Alternative**

### *What is the intent of the Future Expansion Alternative?*

- Does not increase number of homesites above what current zoning allows at this time.
- Identifies those areas where development is most suitable for future growth.
- Has no immediate impacts.

### *What are the impacts of the Future Expansion Alternative?*

- The number of homesites would not increase at this time.
- As need for homesites increases, areas for future upzones have been identified.





## **7.0 FINAL RECOMMENDATION**

The final preferred alternative recommendation combines features of both the Transfer of Development Rights and the Limited Upzone (Figure 3). It identifies Area 1 for an immediate upzone from F-F (10) to R-R (5) and it identifies Area 2 as a test case area to receive Transfers of Development Rights.

### **7.1 Seven Mile Hill Area**

In the Seven Mile Hill Area the Final Recommendation would be:

- Retain the existing R-R (5) and A-1 (80) EFU zoning.
- Retain the existing F-F (10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F (10) lands to R-R (10). F-F (10) areas would be able to transfer development rights to the area identified as the test area (Figure 3).

### **7.2 Mill Creek/Cherry Heights Area**

In the Mill Creek/Cherry Heights Area the Final Recommendation would be:

- Retain the areas with R-R (5) zoning.
- Retain a small area of F-F (10) and areas of F-2 (80) along the western area boundary.
- Upzone Area 1 - south of the existing R-R (5) - from F-F (10) to R-R (5). Rezoning this area would result in approximately 39 additional homesites.
- Identify Area 2 - south of Lutz Lane, existing R-R (5) zone - as a test case receiving area for the Transfer of Development Rights.
- Rezone the remainder of lands currently zoned F-F (10) to R-R (10).

### **7.3 Intent and Impacts of the Final Recommendation**

#### ***What is the intent?***

- The overall density (number of new homes above current zoning) would increase by 39 and be directed in the most appropriate area.
- Transfer of Development Rights concept could be tested to determine its success.
- Rural character would be maintained.
- Development would proceed with caution, and allow time for water monitoring data to be completed.

#### ***What are the impacts of the limited Upzone Alternative?***

- The number of homesites would increase by 39 and provide some additional housing opportunities.
- There is no guarantee that development rights will be purchased and built out in the test area. However, it allows an opportunity to explore a new concept which creates incentives for development to occur in an appropriate place rather than regulating development through such methods as downzoning.
- Transfer of Development Rights densities in “receiving areas” at higher densities that zoning would indicate.

**EXHIBIT 2**

**Transition Lands Study Area**

**(Memo)**

## **MEMORANDUM**

**To:** Wasco County Court  
**From:** Planning Staff  
**Hearing Date:** Feb. 18, 1998  
**RE:** Staff summary of Issues for the Transition Lands Study Area (TLSA)

---

### **Background**

A nine member citizen based Steering Committee and a Technical Advisory Committee, comprised of local resource experts, was appointed by the County Court in Jan. 1994. The Steering Committee and Technical Advisory Committee met monthly from July 1996 through September 1997. The purpose of the Steering Committee was: 1. to be representatives for the community in response to concerns about development and resource protection 2. to assess the resources of the Transition Lands Study Area and establish a factual database for decision making and; 3. to assess the carrying capacity of the land.

The Steering Committee held a public informational meeting for public input on their recommendations. The Citizens Advisory Group and the Planning Commission held public hearings to consider the Steering Committee recommendations.

### **Purpose of the TLSA Study**

The TLSA study was initiated in 1993 in response to concerns of the Wasco County Planning Commission, elected officials, and members of the community about development in northern Wasco County, including the Seven Mile Hill and Browns Creek/Cherry Heights area. Concerns stemmed from availability of groundwater to serve domestic needs, fire hazards, conflicts with wildlife, and available lands for rural residential lifestyles in this developing area.

The product of this planning effort is a report, the 'Wasco County Transition Study Area, Sept. 12, 1997, which builds on information gathered throughout the TLSA project and makes policy recommendations for integrating future development with resource protection within the Study Area.

### **Summary of TLSA Steering Committee Recommendations:**

The Steering Committee recommendations and the process and methodology which guided their recommendations are documented on page two of the report. A vast amount of data was collected and evaluated with project goals in mind. The outcome of the project relied on this information to establish best land use practices for the Study Area through a public process. Attachment A 'Qwik Facts' provides an overview of key data considered by the Steering Committee.

There were five key recommendations made by the TLSA Steering Committee. The complete list of policy recommendations and action items are discussed more fully on page 2 and 3 of the TLSA study included in your packet.

## **EXHIBIT 2**

**Steering Committee Recommendations:**

- 1. Change a portion of the F-F(10), Farm-Forest zone to R-R(10) Rural Residential zone(a new zone).
- 2. Upzone approximately 200 acres of existing F-F(10) land to R-R(5) adjacent to existing R-R(5). The upzone is in an area where there is fire protection, adequate road capacity for additional traffic, and within an area which shows no groundwater anomalies. The upzone would add approximately 32 additional homes to the number of new homes allowed by current zoning.
- 3. Designate a " test" receiving area for the Transfer of Development Rights (TDR)  
Attachment B explains TDR's).
- 4. Implement development standards for fire, scenic, and roads within the new R-R(10).
- 5. Do not implement House Bill 3661 provisions for the Lot of Record or Template Test dwellings in the F-2, Commercial Forest zone.

**Action of the Citizens Advisory Group:**

A public hearing was set For November, 18, 1997. There was not a quorum of the members attending, therefore we could not hold a hearing to review the Steering Committee recommendations. Rather than try to reach a consensus, on the SC Recommendations, the CAG members voted on the five steering committee recommendation listed above Their votes are noted on the Attachment C

**Main Issues Discussed by the Planning Commission:**

Issue 1 - House Bill 3661 provisions for Lot of Record dwellings and Template Test dwellings in the F-2 Commercial Forest zone

The Steering Committee recommendation was not to implement either of the two provisions for dwellings in the F-2 zone. Their recommendation was based on inventory data showing this area as having a high resource value, and a low development value (due to lack of infrastructure).

What is the difference between the two provisions? The Lot of Record provision would allow dwellings to those landowners who have owned the land prior to 1985 and still own it. The Legislative intent for this provision was for fairness and equity to those landowners who may not have been aware of the state landuse laws adopted in 1974. The Template test for dwellings was based on available area wide information regarding overall landuse pattern, land values, and infrastructure within the area. Criteria in the Statue for applying the template test provision address the facilities and service capabilities of the area. These criteria would result in a denial of all applications based on the data resulting from the TLSA study. Specifically, the data showed a lack of road capacity and fire protection, that is, it exceed the facilities and service capabilities of the area.

Issue 2 - Implementing the Transfer of Development Rights test area, The Planning Commission asked to get an opinion from the District Attorney on the legality, and or risk involved, other



issues were the discrepancy between the upzone area and the TDR area.

An opinion was provided by District Attorney Smith (Attachment D). To summarize, the Transfer of Development rights tool is valid planning tool, but he cautions that it has not been tested in Oregon. Smith also listed concerns with two different treatments, both which are being recommended, for the upzone and TDR area, and suggested that if approved the Commission's findings clearly spell out the reasons why the areas are being treated differently. His overall advise is to proceed with caution.

#### **Planning Commission Recommendations**

- 1. To Change a portion of the FF-10 zone to R-R (10) (a new zone, L.U.D.O. Section 3.220 "R-R" Rural Residential) as proposed by the TLSA Steering Commission and as delineated on the map entitled TLSA Recommendation, and dated, September 1997, and also including as R-R(10), those areas shown on the map as the proposed R-R(5) upzone, and Transfer of Development Rights Test Area.**
- 2. To adopt development standards for fire, scenic, and roads within the new R-R(10) zone, with two wording changes in Section D.2. Scenic Development Standards D.2. (b) and (g) from mandatory requirements for house colors, and fences, to non-mandatory requirements; and with a wording change in Section E. 9. (e) Fire Standards from undergrounding of power and telephone being located underground where practicable instead of where possible. (Ordinance Attached)**
- 3. To implement the Lot of Record provision in the F-2 Commercial Forest Zone for parcels within a fire protection district or by contracting for fire protection, based on the Legislative intent to provide for fairness and equity to landowners owning prior to 1985 and, not to implement the Template Test provision based on the available area wide information regarding overall landuse patterns, land values, and infrastructure in the F-2 Commercial Forest Zone based on the TLSA study.**
- 4. To put on 'hold' the Transfer of Development Rights Test Area with direction to planning staff to explore the necessary size of the receiving area; look into who manages the conservation easements and; to gather more information in order to determine the reason and potential effectiveness of implementing this tool in the TLSA area.**
- 5. Not to upzone the approximately 200 acre area identified by the Steering Committee from a F-F (10) zone to a R-R (5) zone, and to review this issue at the bi-annual advisory group review with respect to the additional information that will be available concerning the Transfer of Development Rights.**



# ATTACHMENT "A"

## TLSA " QUICK FACTS"

The TLSA 'Quick Facts' sheet was put together to provide a broad overview of the extensive data that provided the basis for the recommendations of the TLSA study.

### GROUNDWATER AQUIFERS

- The previous report information presented two years ago was a broad overview of water in TLSA. This study identified overdraft areas with a computer model based on assumptions about aquifer behavior.
- Since then the TLSA study has done more detail mapping of well behavior. The facts seem to indicate that the original model was too pessimistic.
- The Jervey Study, December 1996, provided more water data in the TLSA:
- All of the aquifers in TLSA are water table aquifers or hydraulically tied to water table aquifers.
- These aquifers were identified and mapped, for the first time, through the TLSA process. Aquifer systems were identified using similar rock types; similarities in static water levels of the aquifers; similarities in yield, decline and performance criteria, and aquifer continuity.
- 817 wells were included in this review, 592 wells were located and are shown on TLSA maps.
- There is no obvious overall trend of aquifer depletion in TLSA.
- Declines in wells (observed) occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts.
- Deepenings of wells (where there was a lowering of static water levels) are due to specific negative situations having to do with the geology adjacent to the wellbore.
- Generally, 7 Mile Hill has basalt aquifers and; Cherry Hill/Browns Creek has sedimentary aquifers.
- Basalt aquifers have a more erratic behavior i.e., higher fluctuations (higher highs, lower lows); sedimentary aquifers have lower yields, but consistent performance.

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page 1

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- Domestic water usage per average household (gross) is approx. 200,000 gallons/year.
- Irrigation water usage (gross) is approx. 434,555 gallons/year per acre.
- Information gained through this study provides the foundation for a data base. Continued monitoring can be used to help individual property owners to better understand the behavior of their wells and help to avoid future problems.

## COUNTY ROADS

- Wasco County Public Works Dept. maintains 70 miles of roads in the TLISA but many of the rural properties are served by private roads and public roads which are maintained by adjacent landowners.
- Roads that are not paved now are unlikely to be paved by Wasco County in the foreseeable future.
- Under existing zoning regulations, in rural residential areas of TLISA, 498 new homes could be built (301 existing). This would increase demand of services on roads that the county would have to provide. 185 of the total potential new homes could be built on Seven Mile; 313 in the Cherry Heights/Browns Creek. (Does not count potential new homes in resource zones).
- The capacity of a road is expressed as a maximum daily volume measured in Average Daily Traffic (ADT), along with other factors applicable to capacity assessments for individual road segments, such as grade, curves, lane and shoulder width. The capacity of a road is unaffected by whether it is a gravel road or a paved road. (1 home averages 4 trips/day) This is a 30 year old figure, the estimate is low.
- Four county maintained roads in TLISA have the traffic capacity remaining to accommodate new development under existing zoning. The following roads would be within their design capacity as constructed today. Roads in TLISA with at least 25% capacity remaining are shown below .

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	Capacity	ADT	at Buildout (current zoning)	Total
Mill Creek Rd.	1500	317	(+60 ADT) =	377
Cherry Hgts. Rd.	1500	724	(+472 ADT) =	1196
Browns Crk. RD.	1500	353	(+478 ADT) =	831
State Rd.(not counting east & west ends which do not have existing capacity)	1500	352	(+740 ADT) =	1092

- Funds for road maintenance and improvements do not come from property taxes. Funding sources include: 1. Timber receipts (which are being phased out) and; 2. a portion of the state highway funds allocated to Counties based on number of vehicles registered in the county. Property owners with cars registered in another county do not contribute to county roads.
- There are some public roads that are not maintained by anyone. You can experience problems with the maintenance and cost of maintenance of your road.

## FIRE

- There are two fire protection districts in the TLSA. Not all areas are in a fire protection district. Rural Residential areas in the TLSA are, for the most part, in either the Mosier Rural Fire Protection District, which is made up of volunteers; or Mid Columbia Rural Fire Protection District.
- The Oregon Dept. of Forestry Fire Protection District covers wildfires in the TLSA. ODF does not cover structural fires. Residences pay a tax to the ODF for wildfire coverage.
- Fire District response times (time it takes to get to a call) vary depending of access to the property and distance. Portions of the TLSA within the Mid Columbia Fire Protection District are not accessible for fire trucks
- Emergency response time can not be guaranteed. Under some extreme conditions, you may find that emergency response is extremely slow and expensive.

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## POTENTIAL DEVELOPMENT

- Under current zoning the potential for new houses is:
- In the Rural Residential, R-R(5) zone = 93
- In the Farm Forest, F-F(10) zone = 405
- In the Agricultural zone AG -1 = 14
- In the Commercial Forest, F-2(80) zone = 51 Template Test Dwellings  
42 Lot of Record Dwellings  
(24 In a fire district)

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**EXHIBIT 3**

**2000 Settlement Agreement**

## SETTLEMENT AGREEMENT

This settlement agreement dated as of January 5, 2000, and the parties to this agreement are Kenneth A. Thomas ("Thomas"), Wasco County (the "County"), and Joseph Betzing ("Betzing").

### Recitals

A. In LUBA Case No. 99-178 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance No. 99-111. This appeal is stayed pending mediation.

B. In LUBA Case No. 99-109 Thomas filed an appeal with the Land Use Board of Appeals regarding County Ordinance 99-114. This appeal is stayed pending mediation.

C. In LUBA Case No. 98-043 Thomas appealed a permit for a dwelling issued by the County to Betzing. This case has been remanded by the Land Use Board of Appeals for further proceedings consistent with their opinion.

D. The parties to this agreement mutually wish to agree to a framework for resolution of the above cases and all disputes arising out of those cases. Therefore in exchange for their mutual promises, the parties agree as follows:

### Terms

1. The County Department Staff, acting in good faith shall use best efforts in supporting a legislative zone change and comprehensive plan change to modify to zoning and comprehensive plan designation of the property marked in exhibit A, from F-2 to FF-10. The changes will be initiated by the County unless Thomas elects to initiate them. If property owners other than Thomas elect not to participate then Thomas and the County will proceed and exclude the other property owners' land from the change.

2. Thomas acting through his attorney Michael J. Lilly shall assist the County staff by submitting evidence, drafting staff reports, and drafting findings for the zone and plan changes referenced above.

3. Betzing hereby waives all rights to remonstrate against the zone and plan changes referenced above.

4. Thomas hereby waives all rights to remonstrate against Betzing's application for a single family dwelling if the conditions set forth exhibit B are imposed on the dwelling permit for Betzing. Betzing agrees to accept the conditions set forth in Exhibit B and agrees to abide by the terms and conditions of the permit.

5. If the zone change and plan change applications referenced in paragraph 1 are approved by the County Court, and become final without an appeal or are affirmed on appeal, then Thomas will withdraw the appeals referenced above in paragraphs A and B. If the zone change applications are not



approved by the Wasco County Court then Thomas and the County agree to enter non-binding mediation but Thomas will be free to continue the appeals referenced in paragraphs A and B if the mediation fails to result in a settlement.

6. If the zone and plan changes are approved by the County Court and the approvals are appealed then the County shall support its decision, but not be obligated to prepare or file briefs in opposition to the appeal. Thomas will file briefs in opposition to the appeal, but shall not be obligated to file briefs regarding issues that are not relevant to property in his ownership.

7. If the zone change or plan change are reversed or remanded on appeal, and if Thomas and the County are unable to agree on an appropriate course of further action, then Thomas and the County will enter into non-binding mediation. If the mediation does not result in a settlement then Thomas may continue the appeals referenced in paragraphs A and B.

#### Miscellaneous Provisions

8. Binding Effect. This Agreement shall be binding on and inure to the benefit of the parties and their heirs, personal representatives, successors, and assigns.

9. Attorney Fees. If any suit or action is filed by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit or action as fixed by the trial court, and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

10. Amendments. This Agreement may be amended only by an instrument in writing executed by all the parties.

11. Entire Agreement. This Agreement (including the exhibits) sets forth the entire understanding of the parties with respect to the subject matter of this Agreement and supersedes any and all prior understandings and agreements, whether written or oral, between the parties with respect to such subject matter.

12. Counterparts. This Agreement may be executed by the parties in separate counterparts, each of which when executed and delivered shall be an original, but all of which together shall constitute one and the same instrument.

13. Waiver. A provision of this Agreement may be waived only by a written instrument executed by the party waiving compliance. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. Failure to enforce any provision of this Agreement shall not operate as a waiver of such provision or any other provision.

14. Further Assurances. From time to time, each of the parties shall execute, acknowledge, and deliver any instruments or documents necessary to carry out the purposes of this Agreement.

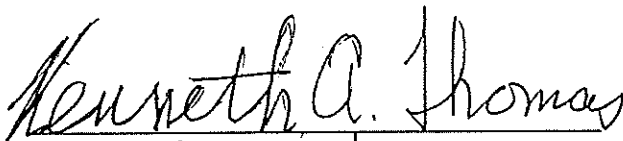
15. Time of Essence. Time is of the essence for each and every provision of this Agreement.

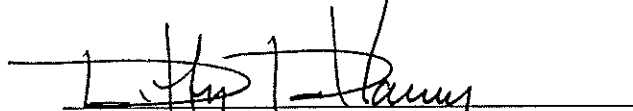
16. No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to confer on any person, other than the parties to this Agreement, any right or remedy of any nature whatsoever.

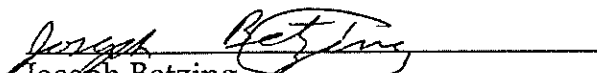
17. Exhibits. The exhibits referenced in this Agreement are a part of this Agreement as if fully set forth in this Agreement.

18. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the state of Oregon.

Dated: 1/5/00

  
Kenneth Thomas

  
Wasco County Planning Director

  
Joseph Betzing



**EXHIBIT 4**

**Transition Lands Study Area**

**Groundwater Study**





**JERVEY** Geological  
Consulting

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**TRANSITION LANDS STUDY AREA  
GROUND WATER EVALUATION  
WASCO COUNTY, OREGON**

Gay M. Jervey

**EXHIBIT 4**



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## TRANSITION LANDS STUDY AREA GROUND WATER EVALUATION WASCO COUNTY, OREGON

Gay M. Jervey

### SUMMARY

The evaluation of ground water quantity is important to residents of the Transition Lands Study Area (TLSA). Assessment of the volume available has been difficult because of one major problem; regardless of the method of assessment used or the assumptions made in estimating available ground water, none of the ground water models used to date explain the declines seen in some wells in the TLSA or the fact that some wells have had to be deepened due to lack of water in the wellbore.

The purpose of this report is to examine this one issue in detail using available information. The conclusions presented are:

- all of the aquifers in the TLSA are water table aquifers or hydraulically tied to water table aquifers
- these aquifers can be identified and mapped
- there is no obvious overall trend of aquifer depletion in the TLSA
- declines observed occur primarily in basalt aquifer wells and appear to be linked to the internal structure of the basalts
- deepening (where related to lowering of static water level) are due to specific negative situations having to do with the geology adjacent to the wellbore
- more work needs to be done to better understand basalt aquifer performance
- close observation of wells in densely drilled areas is necessary to improve estimation of appropriate well spacing

- well spacing should not exceed what has been demonstrated to be effective within the TLSA unless additional information is provided to the Wasco County TLSA Steering Committee or other County representatives

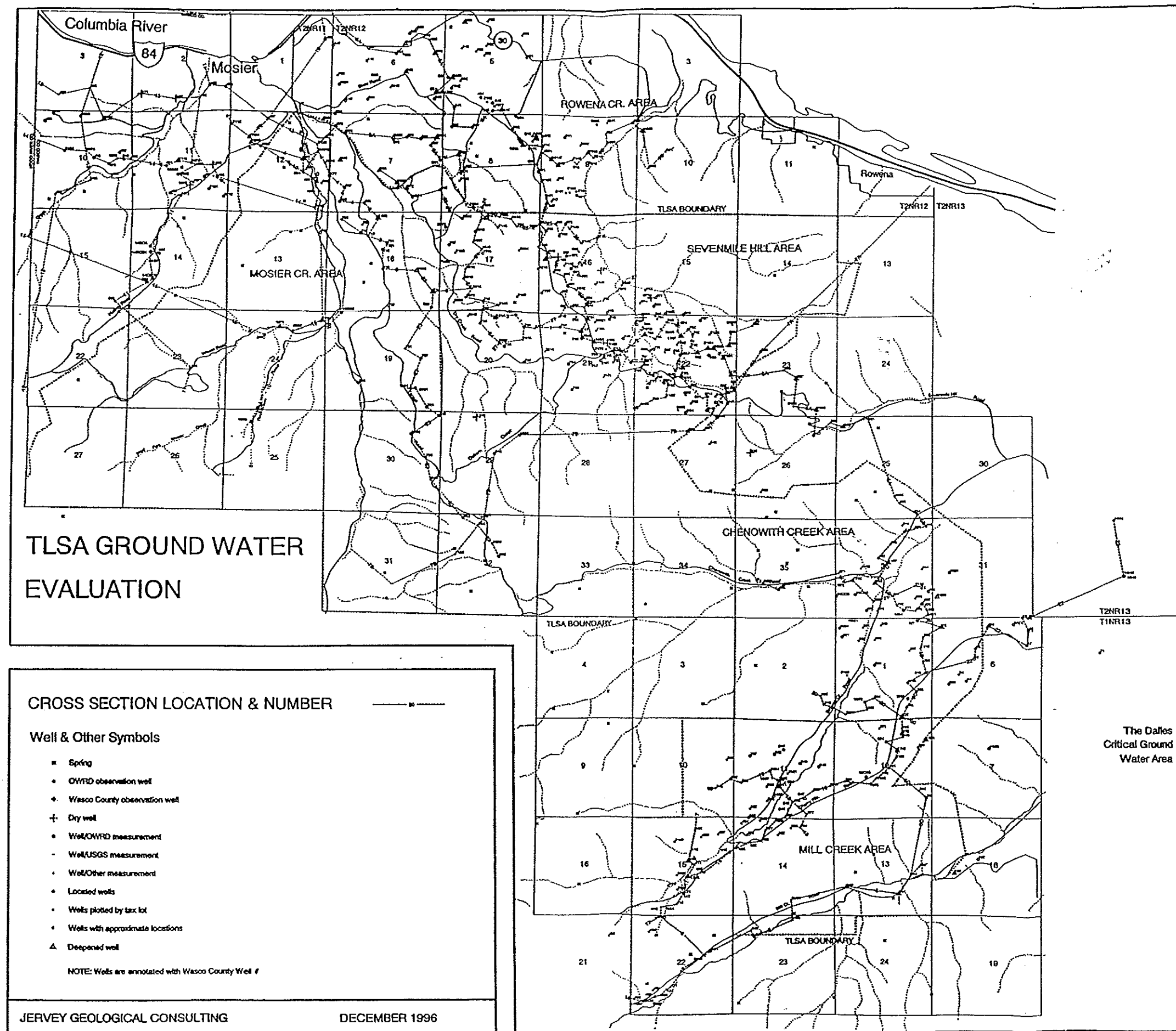
### INTRODUCTION

The main questions which must be addressed in order to better understand aquifer behavior and availability of ground water in the TLSA are:

- 1) How much ground water is available to the individual land owner?
- 2) Why do some wells have to be deepened?
- 3) Why do some wells show water level declines?
- 4) How close together can wells be and still operate properly (without undue interference)?

In order to address these questions, a detailed study of water wells in the TLSA was conducted. Records for a total of about 817 wells in and adjacent to the TLSA were included in this review. It is estimated that there are an additional 40 to 60 wells within this area that have no well records and were not included. The lack of this information is probably not critical to this review, since it is a small proportion of the data set which has been examined.

An initial and ongoing problem is the uncertain geographic location of a number of the water wells within the TLSA. Work done by the Wasco County Watermaster has contributed a great deal toward



locating existing wells. Of the well records mentioned above, 592 wells were located and are shown on the map on the preceding page (a large version of this map with topography added is also available). Almost all of the wells inside the TLSA area were located, at least approximately (by tax lot). Most of the 225 unlocated wells lie outside the TLSA boundary, mainly in the Rowena and west The Dalles areas. Within and immediately adjacent to the TLSA, 58 deepened wells were identified and studied in detail. The data collected for the wells in this review is in Table A at the end of this report (Appendix A). Included in this table are multiple measures of static water levels made in certain wells. Multiple static water level measures are also included in Tables A1, D and E (Appendix A).

Sources of information for this report are primarily the extensive previous studies done in this area and referenced at the end of this report (Lite and Grondin, 1988, and Kienle, 1995). Important additional information was contributed by the people listed in acknowledgment at the end of this report who work or reside in Wasco County or have a general or specific interest in the topic covered. However, errors in data or interpretation present in this report text are entirely the responsibility of the author.

The data and interpretations in this report are provided as a service by Jervey Geological Consulting in response to questions raised by the TLSA Steering Committee. Jervey Geological Consulting is primarily involved in oil and gas exploration and has no special qualifications in the evaluation of ground water resources. Therefore, this document should be primarily used as a basis for evaluating the data and observations it records. It is not specifically designed to be used in formulating public policy. The material collected here may also be helpful for use in future studies by qualified hydrogeologists.

#### GROUND WATER AVAILABILITY

An estimate of available recharge volume is necessary to evaluate how many wells per unit area an aquifer can support. For the most part, the aquifer systems in the TLSA are recharged by precipitation (diffuse) and intermittent runoff in valleys. The lowest aquifer systems, are also probably recharged and maintained by perennial streams (Mill Creek, Chenowith Creek, and Mosier Creek).

A key factor in recharge to the TLSA area is its precipitation pattern. The area lies in an intermediate position between humid and arid climates. The cycles of heavy and low precipitation that occur over many years reflect this intermediate position. Because of this, a range of recharge volumes should be calculated that

reflect both normal (or average) conditions and low precipitation conditions over specific time intervals.

The graph in Figure 1 shows precipitation volumes in Hood River and The Dalles. The longest dry cycle in recorded history is the period from 1922 to 1944 (23 years) overlapping the occurrence of The Great Dust Bowl in the central United States. The average precipitation in Hood River during this period was 26 inches (84% of normal values). On the average, rainfall in The Dalles is about 48% of the amount recorded in Hood River.

Figure 2 is derived from Oregon Water Resources Department Ground Water Report #33 on the Mosier area (Lite and Grondin, 1988) showing the most probable change in precipitation levels across the TLSA. The western boundary, closer to Hood River, probably receives over 25 inches per year; the eastern boundary near The Dalles, about 15 inches.

A recent report on the Columbia Plateau aquifer system issued by the U.S.G.S. (Whiteman, et al, 1994) includes part of the TLSA on the extreme southwestern margin of the report area. The estimate for recharge for the TLSA from this report would be 2 to 15 inches per year, depending on total precipitation. In effect, the lower the rainfall, the smaller the percentage of water that is available for recharge. Using an average of 20 inches of precipitation per year, an example estimate of recharge can now be calculated. At this level of precipitation, the proportion returned as recharge is around 30% (values presented in the Whiteman report are 6.82" of recharge for 21.06" of precipitation in a temperate climate). Under dry conditions over several years, this percentage probably drops to about 26%. The overall calculation for recharge in this example is shown in Table 1 (page 5).

The estimates used were drawn from several sources; but primarily from U.S.G.S. Professional Paper 1413-B on the Columbia Plateau Aquifer System (Whiteman, et al, 1994).

#### DOMESTIC WELL USAGE

Water usage per average household has been estimated by several authors working in this general area:

- Lite and Grondin (1988)  
288,350 gallons/year
- Kienle (1995)  
191,760 gallons/year
- OWRD information pamphlet for well owners  
(1993) average of values cited:  
217,500 gallons/year
- Local utilities, Chenowith and The Dalles:  
90,000 to 350,000 gallons per year



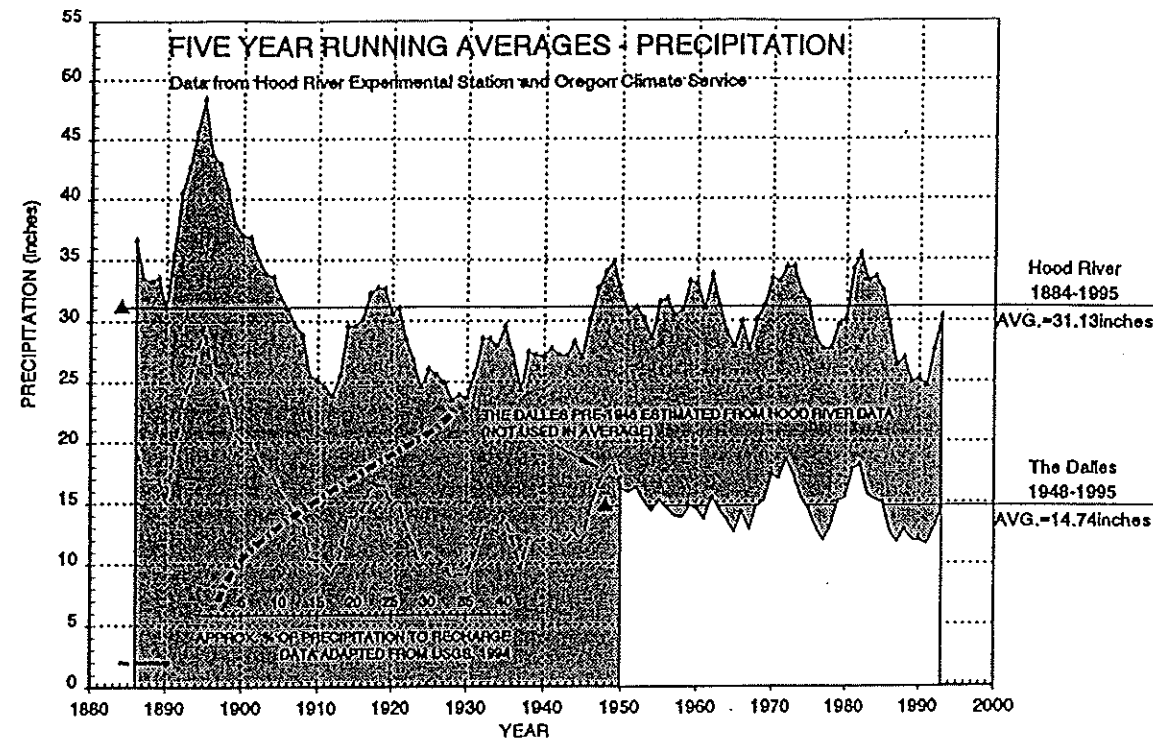


Figure 1. Precipitation for Hood River and The Dalles, Oregon, five year running averages.

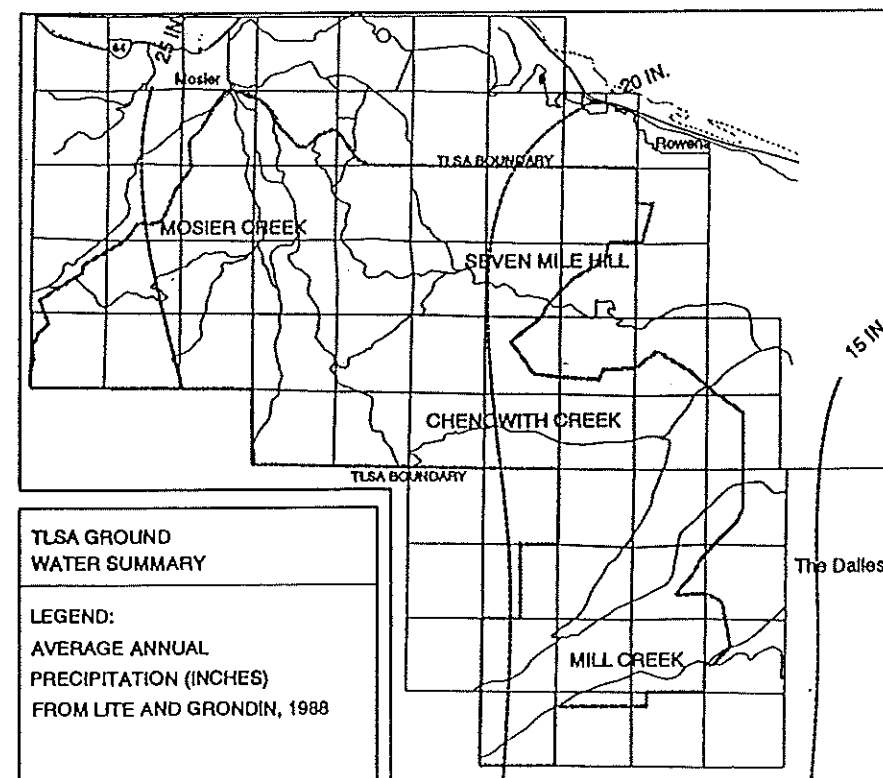


Figure 2. Average annual precipitation, TLSA (from Lite and Grondin, 1988).

CALCULATION OF RECHARGE						
EXAMPLE	A PRECIPITATION PER YEAR (INCHES)	B % TO RECHARGE	C RECHARGE PER YEAR (INCHES) A*B	D RECHARGE PER YEAR (FEET) C/12	E CUBIC FEET PER ACRE D*43560	F GALLONS PER ACRE PER YEAR E*7.482
TLSA AVERAGE	20.0	30%	6.0	0.5	21,780	162,958
TLSA DRY CYCLE	16.8	26%	4.4	0.4	15,856	118,633
NGS REPORT MAXIMUM		5.6%				99,100
NGS REPORT MINIMUM		5.6%				13,800

COMPARISON OF USAGE & RECHARGE/DOMESTIC WELLS					
	A DOMESTIC USE, GROSS GALLONS/ YEAR	B % RETURN TO RECHARGE	C DOMESTIC USE, NET GALLONS/ YEAR A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E ALLOWABLE ACRES PER DOMESTIC WELL C/D
TLSA AVERAGE	200,000	30%	140,000	162,958	0.9
TLSA DRY CYCLE	200,000	26%	152,000	118,633	1.3
NGS REPORT MAXIMUM	191,625	0	191,625	89,100	2.2
NGS REPORT MINIMUM	191,625	0	191,625	13,800	13.9

COMPARISON OF USAGE & RECHARGE/IRRIGATION WELLS					
	A IRRIGATION USE, GROSS GALLONS/ YEAR PER ACRE	B % RETURN TO RECHARGE	C IRRIGATION USE, NET GALLONS/ YEAR PER ACRE A*(1-B)	D GALLONS PER ACRE PER YEAR RECHARGE (FROM ABOVE)	E RECHARGE ACRES TO SUPPORT ONE ACRE OF IRRIGATION PER YEAR [C/D]
TLSA AVERAGE (16"PER ACRE)	434,555	30%	304,189	162,958	1.9
TLSA DRY CYCLE (19"PER ACRE)	516,034	26%	392,186	118,633	3.3
NGS REPORT MAXIMUM (30"PER ACRE)	814,790	0	814,790	89,100	9.1
NGS REPORT MINIMUM (30"PER ACRE)	814,790	0	814,790	13,800	59.0

Table 1. Examples of recharge and discharge calculations using different assumptions.

It is evident that there is a range of usage, but on the average over a large group, a figure of 100,000 to 300,000 gallons per year is probably a reasonable range.

Of the ground water used, a percentage of household waste water and lawn irrigation is returned as recharge. Designs for most domestic systems (in houses) assume an average volume of around 200 gallons per day per household (73,000 gallons per year) is produced as waste water. In addition, a small percentage of the water used in the lawn and garden will return as recharge to the aquifer.

The amount returned is extremely difficult to estimate, because it depends on precipitation levels, time of year, type of waste water, and the amount of water usage of the household. Under favorable conditions of rainfall, water use, soil type and other factors, 50% or more of water extracted from an aquifer may return as recharge (Stephens, 1996). However, because there is no data in the TLSA area that can support an estimate of this magnitude, it is better at this time to simply use the same percent of recharge that was used in the estimate of natural recharge.

The calculations for usage can be compared with average recharge to yield an approximation of well densities (Table 1) which could perhaps be supported by the aquifers in the TLSA. In addition to these figures the estimates made for minimum to maximum elevations in the NGS, Inc. TLSA study (Kienle, 1995) are provided for comparison. There is a range of volumes presented; neither case can be definitively proven at this point in time.

There is a problem that appears at once; even at far lesser well density than the most conservative figures in Table 1, TLSA domestic wells show declines and some have to be deepened. This observation will have to be addressed before any ground water model can be considered acceptable.

Even with very conservative estimates for recharge such as those used in the NGS, Inc. study of the TLSA (Kienle, 1995), there is no indication that current levels of usage have exceeded recharge. The reason that a number of sections appeared to be in an overdraft situation was due to the maximum permitted water usage used in the model calculations (about 816,790 gallons per acre per year for sections with water right acres). This is far in excess of what has been documented as actual irrigation usage (Lite and Grondin, 1988, and Whiteman et al, 1994). The actual use of ground water in irrigation is summarized in the next discussion.

## IRRIGATION USAGE

The same procedure used for domestic wells can be used when assessing irrigation usage versus recharge. Previous reports (Lite and Grondin, 1988 and Kienle, 1995) estimated actual irrigation use at about 1.1 to 1.5 acre feet per acre of orchard per year, or about 488,000 gallons per acre per year. This was based on an estimate of 36" of water required per year by orchard crops, 18" of which was supplied by rainfall in the orchard area around Mosier. The calculations shown in Table 1 assume that if the average rainfall is 20", average usage for irrigation would be around 16" of water per acre. The following calculations assume that the majority of ground water available for irrigation is replaced by diffuse recharge. It is likely that additional recharge by local sources such as perennial streams is available to the lowest aquifers in the TLSA. It is also important to note that a substantial fraction of irrigation (20-50%) is from surface water sources.

To reiterate; the central issue that needs to be examined is that of the declines and well deepenings observed in wells throughout the TLSA. A corollary observation that must also be addressed is that other wells do not seem to show the effects of decline.

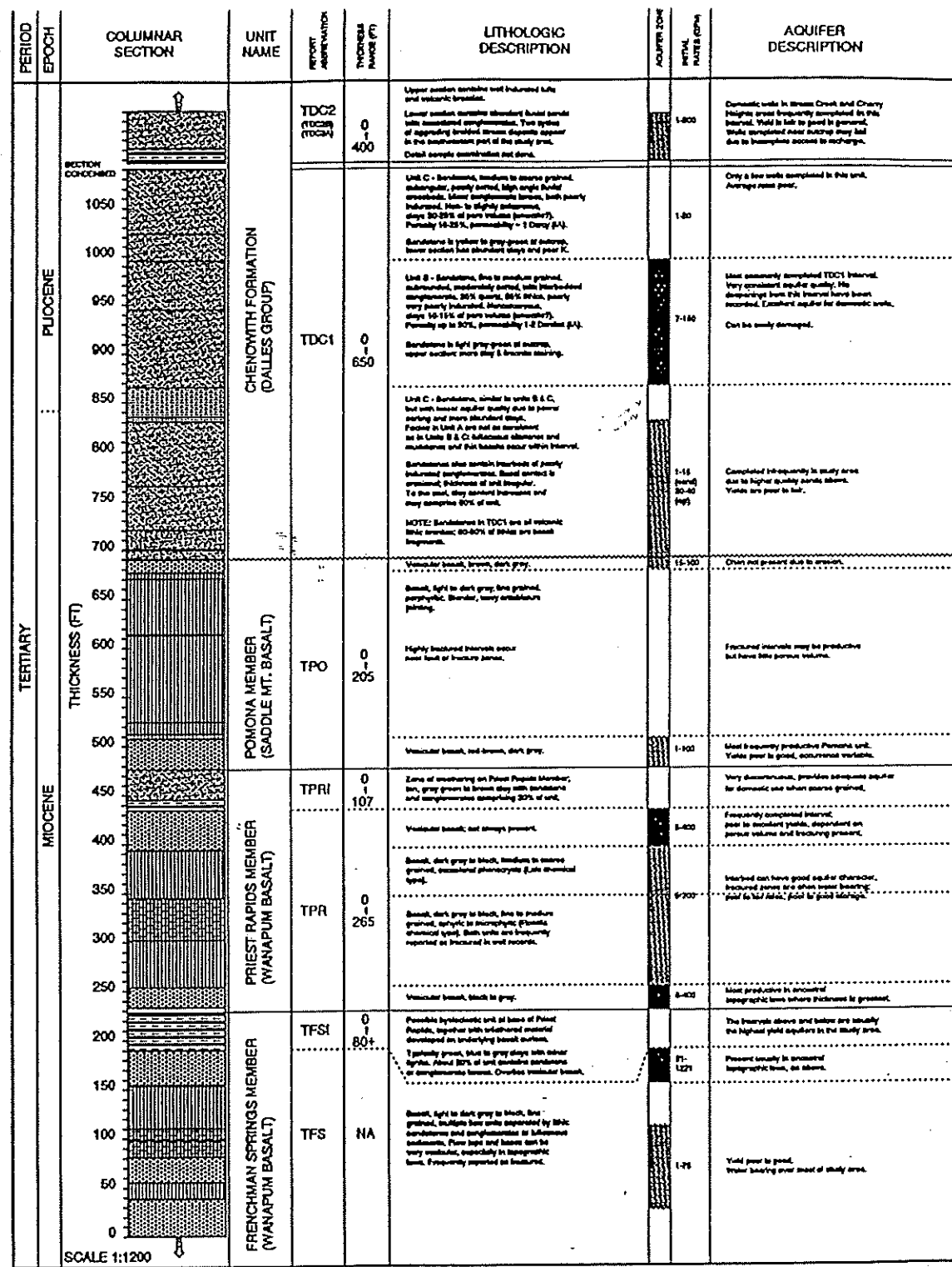
At this point, it is necessary to briefly describe aquifer types and their characteristics. Once this information is presented, an assessment of the assumptions concerning recharge and discharge can be made.

## GENERAL GEOLOGY - AQUIFERS

The descriptions in this part of the report are drawn from a variety of sources, primarily Lite and Grondin, 1988, Kienle, 1995 and others which are listed at the end of the report text and from field work in parts of the study area. There are some indications that differences between basalt aquifers and sedimentary (sandstone and conglomerate) aquifers give rise to differences in water well performance. It is critical to examine the two aquifer types before looking at individual aquifer systems. In addition, there are some important differences among basalt aquifers which need to be introduced at this time. This discussion will be limited to the description of characteristics which affect aquifer behavior. Figure 3 is a columnar description of the sequence of various rock types found in the TLSA and contains brief descriptions of aquifer qualities.

## BASALT AQUIFERS

Figure 4 is from the U.S.G.S. Columbia Plateau report previously cited (Whiteman, et al, 1994). It shows the internal structures in typical basalt flows and some of the physical characteristics, such as porous volume, which affect their performance as aquifers. In



GENERALIZED STRATIGRAPHIC SECTION

TLSA, WASCO COUNTY, OREGON

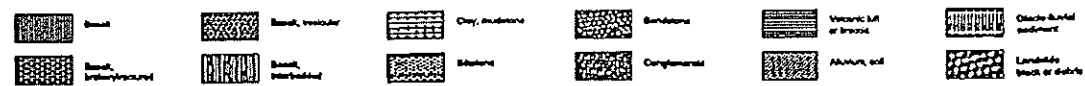


Figure 3. Generalized stratigraphic section, TLSA, Wasco County, Oregon (adapted in part from Keinle, 1995, and Lite and Grondin, 1988).



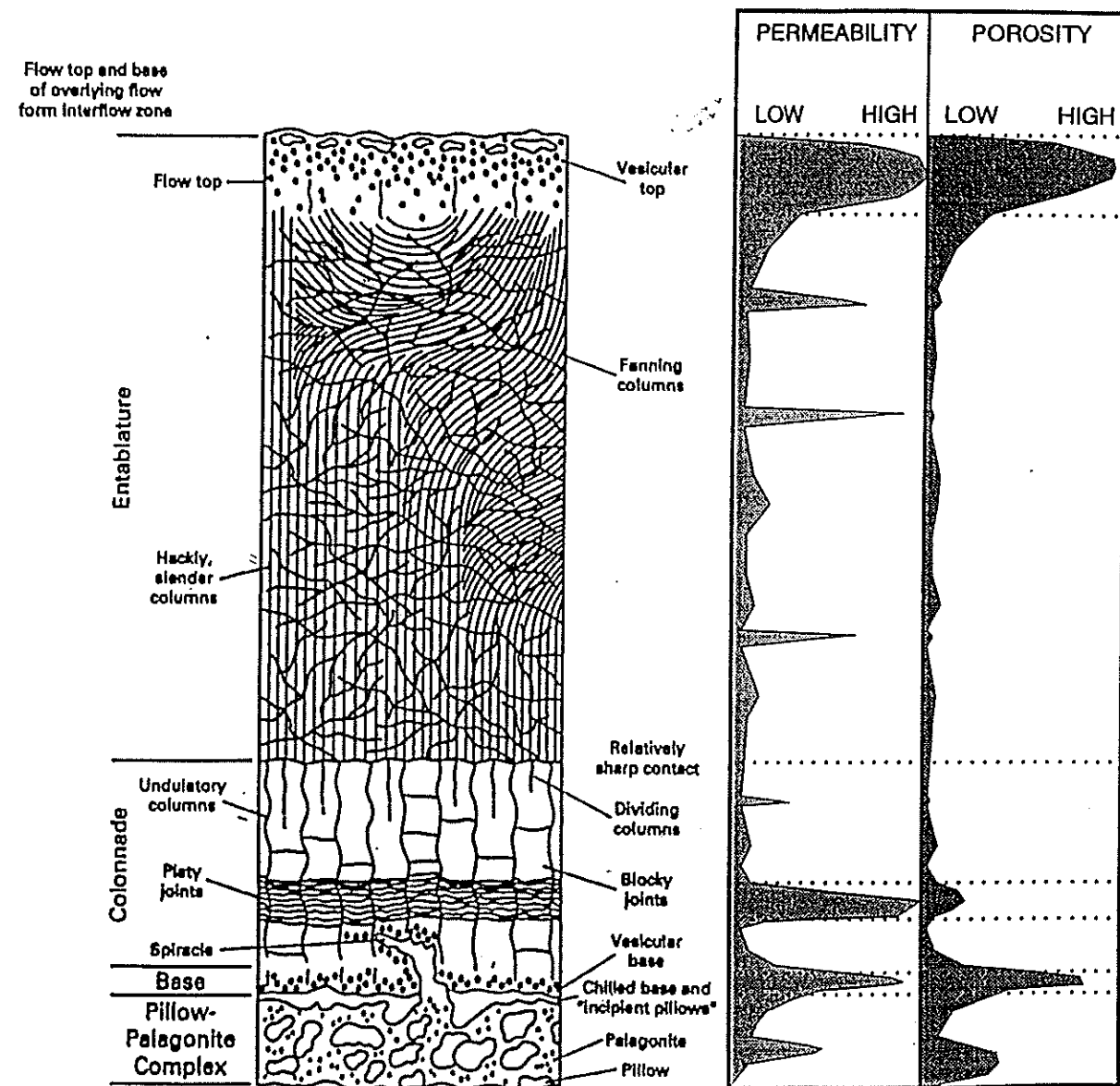


Figure 4. Aquifer quality variation in basalt flow units (diagram on left from Whiteman, et al, 1994).

general, the flow tops and bases, with vesicular (vesicles: openings left by escaping gases when lava cools), and other types of porous volume (breccias: broken rock fragments) can have both high porosity and high permeability. The entablature and colonnade portions of the flows have far less porous volume. Porous volume in these central parts of a lava flow exists mainly in fractures and is very low in comparison with flow tops and bases, in general. The interbeds of basalt flows consist of soils, sands and clays developed on top of flows and the clay-rich pillow palagonite complex formed when the base of the next basalt flow contacts water or moisture bearing soils and sediments.

The curves drawn in Figure 4 show diagrammatically how porous volume and permeability change through the basalt section. None of the section is usually entirely impermeable, but great variations occur from top to bottom of the flows. The best aquifers, which occur in vesicular and/or brecciated flow tops and bases, have internal variations which are also of significance. The porous volume can consist of two types of openings; 1) vesicles and interfragment porosity of breccias, and 2) the porous volume occurring in open fractures connecting them. These two features have very different hydraulic character.

Entablature and colonnade units seem to have very poor lateral (horizontal) permeability, but the fractures in them can have fair vertical permeability. Occasionally, if in the vicinity of a fault or fracture zone, these two basalt types can be completed as aquifers, but their long-term performance is questionable. The interbed sediments may also occasionally act as good aquifers, if they consist of well sorted sands or gravels.

The Pomona, Priest Rapids and Frenchman Springs basalts are the commonly penetrated water bearing units in the central and western parts of the TLSA. The most important differences among them are listed below and shown in Figure 3.

- Pomona (TPO)
  - flow top is often eroded away, vesicular flow base is generally in the order of 5-15 feet thick
  - canyon filling and restricted to lower elevations in the western part of the study area
  - shows an intercalated relationship with Dalles Group sediments at its flow margins
- Priest Rapids (TPR)
  - distinguished by a commonly very thick pillow palagonite (lava erupted into water or water bearing sediment) sequence at its base and well developed vesicular zone
  - in some parts of the report area composed of

two flow units; the interbed between them can be an adequate aquifer

- Frenchman Springs (TFS)
  - At least three submembers occur in area: Ginko (oldest), Sand Hollow and Sentinel Gap
  - frequently exhibits a very continuous, thick vesicular flow top in topographic lows
  - highest yield wells in the TLSA are usually completed in the uppermost part of the Frenchman Springs, combined with the overlying Priest Rapids flow base
- Grande Ronde (TGR)
  - very few wells completed in this unit; oldest and deepest basalt exposed in TLSA wells

#### SEDIMENTARY AQUIFERS

Two sedimentary formations act as aquifers in the report area; the Dalles Group (TDC) and various younger alluvial and flood-deposited sands and gravels, referred to as Quaternary alluvium (QAL) and glacial flood deposits (QGF). Most of the wells in sedimentary rocks are completed in the Dalles Group.

The primary difference between the basalt and sedimentary aquifers is illustrated in Figure 5. The basalts are rigid and brittle: they are easily fractured. The basalt flow tops and bases may contain vesicles or breccias which provide large porous volumes. Together with fractures, this type of rock is a high quality aquifer with high porosity and high permeability. On the other hand, basalt that is fractured but not connected to pore spaces such as vesicles, may have high permeability but very low porous volume. In comparison, sedimentary aquifers tend to be more uniform in porosity and permeability but with lower well yields than the best basalt aquifers.

The Dalles Group consists of several aggrading cycles of braided stream sandstones and gravels and associated floodplain deposits. It also contains ash fall tuffs and abundant tuffaceous material, particularly in the upper third of its thickness. In structure and organization of its rock types, it is very similar to the main producing section in Prudhoe Bay, North Slope, Alaska. Figure 6 shows the vertical sequence in this deposit as an illustration of the environment of deposition similar to that in the lower part of the Dalles Group in the TLSA.

Examination of samples and well records in the Dalles Group also indicates that at the base of the braided stream cycles (Chenoweth Creek-TDC1 and Brown Creek-TDC2A and TDC2B, discussed later in this report), permeability and porosity are often very good and fairly consistent across the aquifers. The highest

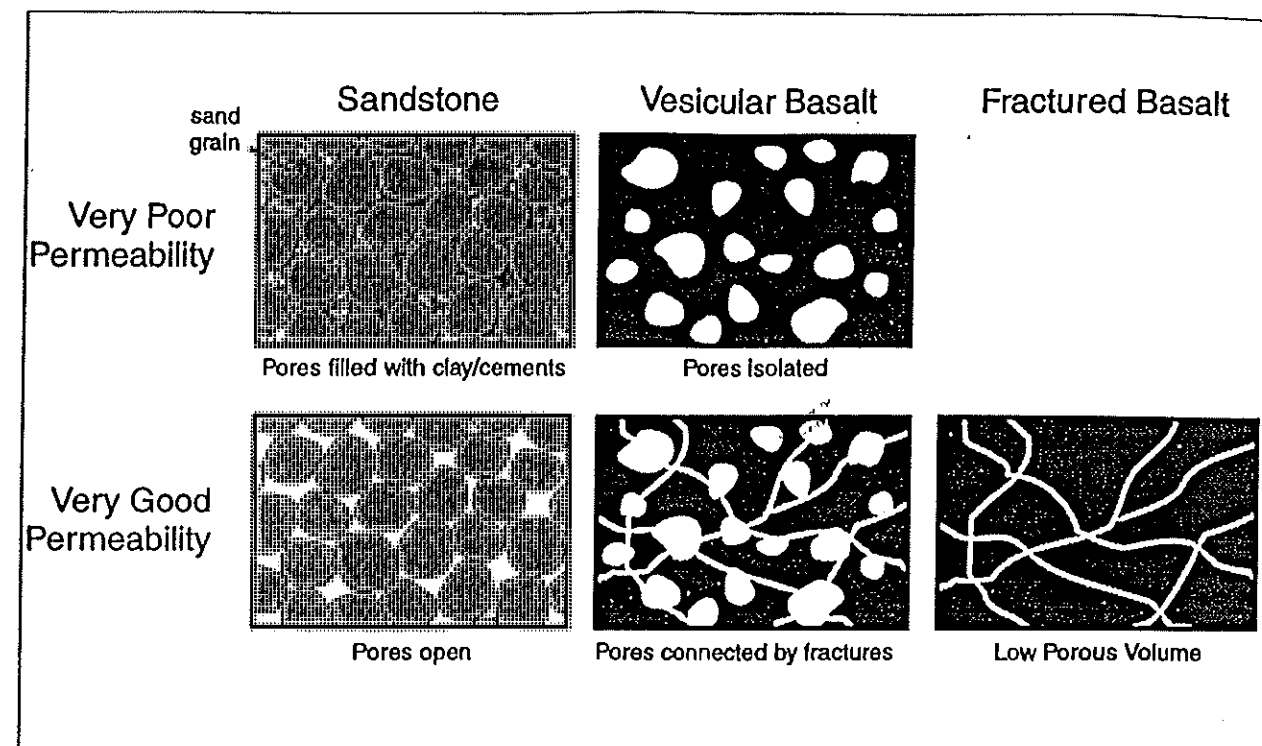


Figure 5. Comparison of basalt and sandstone internal structures, porosity and permeability.

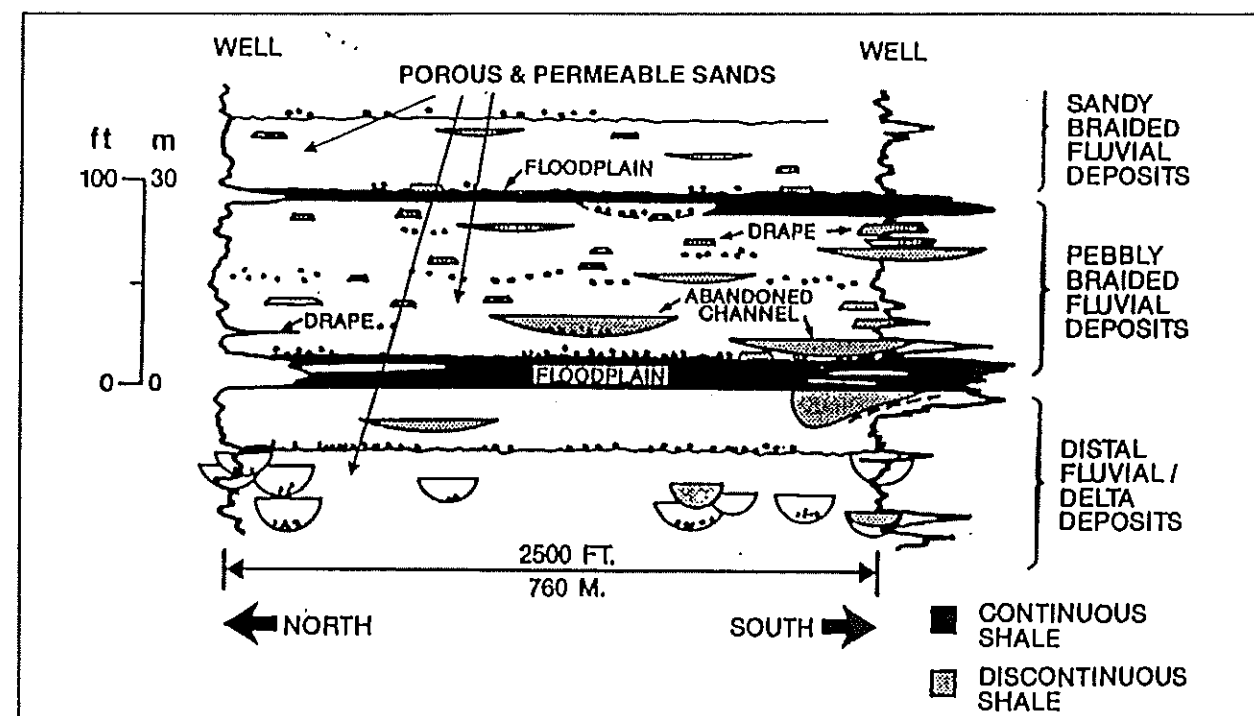


Figure 6. Distribution of rock types, typical deltaic/braided stream association as an analog to Dalles Group aquifers. Diagram is of the Ivishak Sandstone, Prudhoe Bay, North Slope, Alaska (adapted from Atkinson, et al, in Barwis, McPherson and Studlick, 1990).

quality basalt aquifers exceed the Dalles Group aquifers in both yield and volume of water in storage per unit area. However, for domestic well development and possibly for irrigation, the Dalles seems to display very stable aquifer behavior. Most of the subunits mentioned above are exposed in layers in the weathered cliffs adjacent to The Dalles, Oregon and in the southern and western part of the study area.

## TLSA AQUIFER SYSTEMS

The three maps on the following pages show depth to aquifer, depth to static water level and water yield in the TLSA. T2NR12E sections 9, 16 and 19 have some of the deepest wells in the TLSA. The Mill Creek, Chenoweth Creek and Mosier Creek valleys have the most productive wells in the area. The variety seen in these maps can be attributed to the occurrence of water in separate aquifer systems.

A collection of 28 cross sections was constructed to assist in the identification of aquifer systems in the review area. Seven of these sections extend into areas beyond the TLSA. Cross section locations are shown in the location map at the beginning of this report. A selection of the cross sections is used to illustrate points in the remainder of this report.


Formation boundaries were identified using previous studies, surface exposures of the formations and rock types identified in the well records. Aquifer systems were identified using:

- similar rock/formation types,
- similarities in static water level of the aquifers,
- aquifer continuity, and
- similarities in yield, decline and other performance criteria.

When examining the cross sections the following items are of importance:

- Each section is exaggerated vertically; the actual slope of the surface and tilt of the subsurface formations are much more subdued than shown. The sections are exaggerated vertically so that changes from well to well may be more easily seen.
- Patterns on the vertical columns representing a well are based on rock type as described by the driller. A legend describing these patterns is shown in Figure 3 and is also included at the beginning of Appendix B. Speckled patterns are sandstones or conglomerates, generally found in the Dalles Group, alluvial deposits or in interbeds

between basalts. Vertical banded patterns are basalts and horizontal banded patterns are usually clays or interbedded clays and basalts. Hexagonal dotted patterns are vesicular basalts.

- Water producing intervals are indicated with this symbol  next to the well column. The static water levels are shown in blue. For more details as to symbols in the cross sections, please refer to the cross section legend at the beginning of Appendix B. The data presented is not altered materially from the original driller's description.

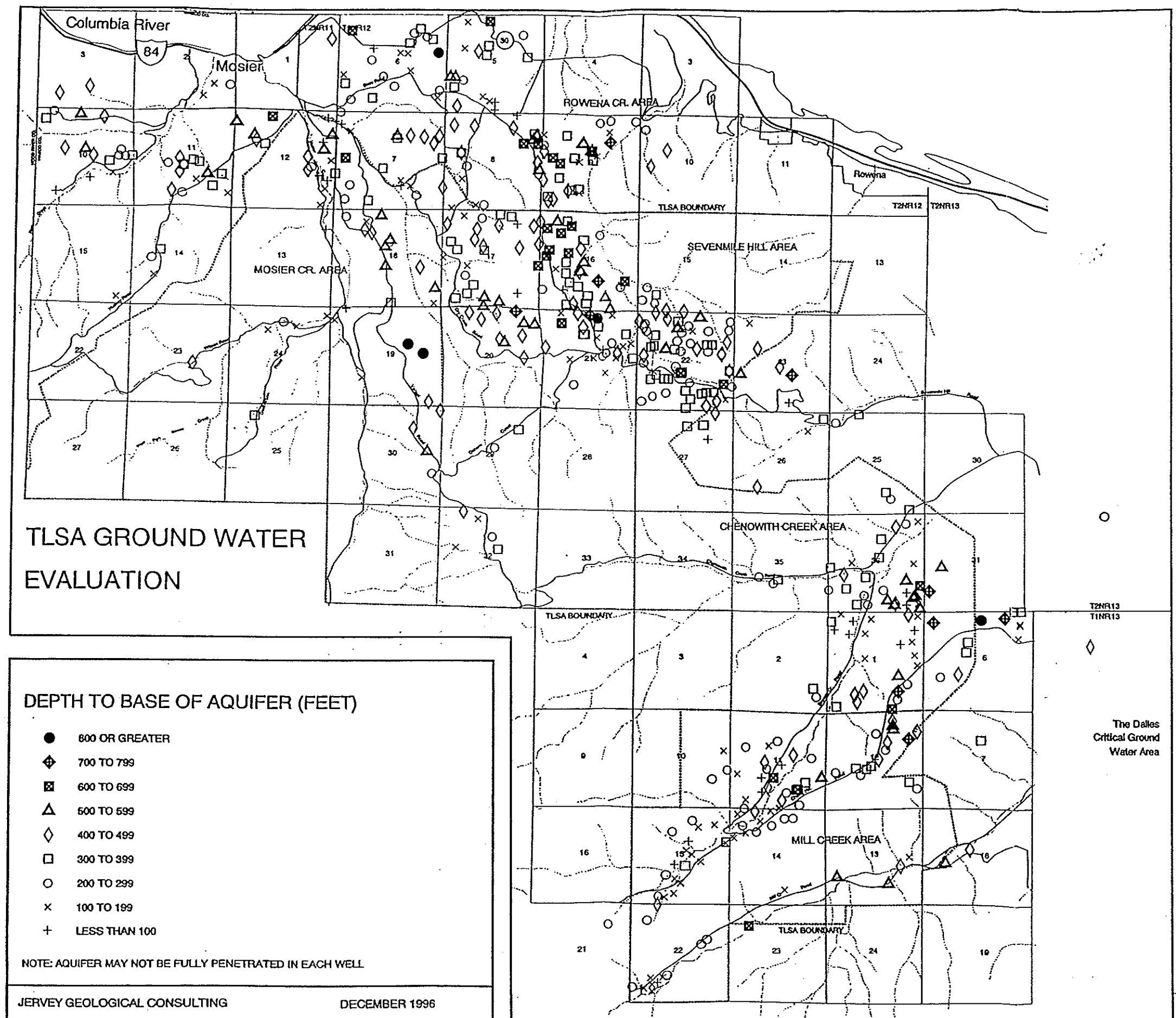
Cross section 26 is a detail section and differs from most of the other sections in that it has very few wells and more descriptive information. However, it is a good example of the kinds of situations that can be discovered by cross section construction. The section is located immediately west of the western TLSA boundary and has a well belonging to a TLSA Steering Committee member on it (W. Huskey).

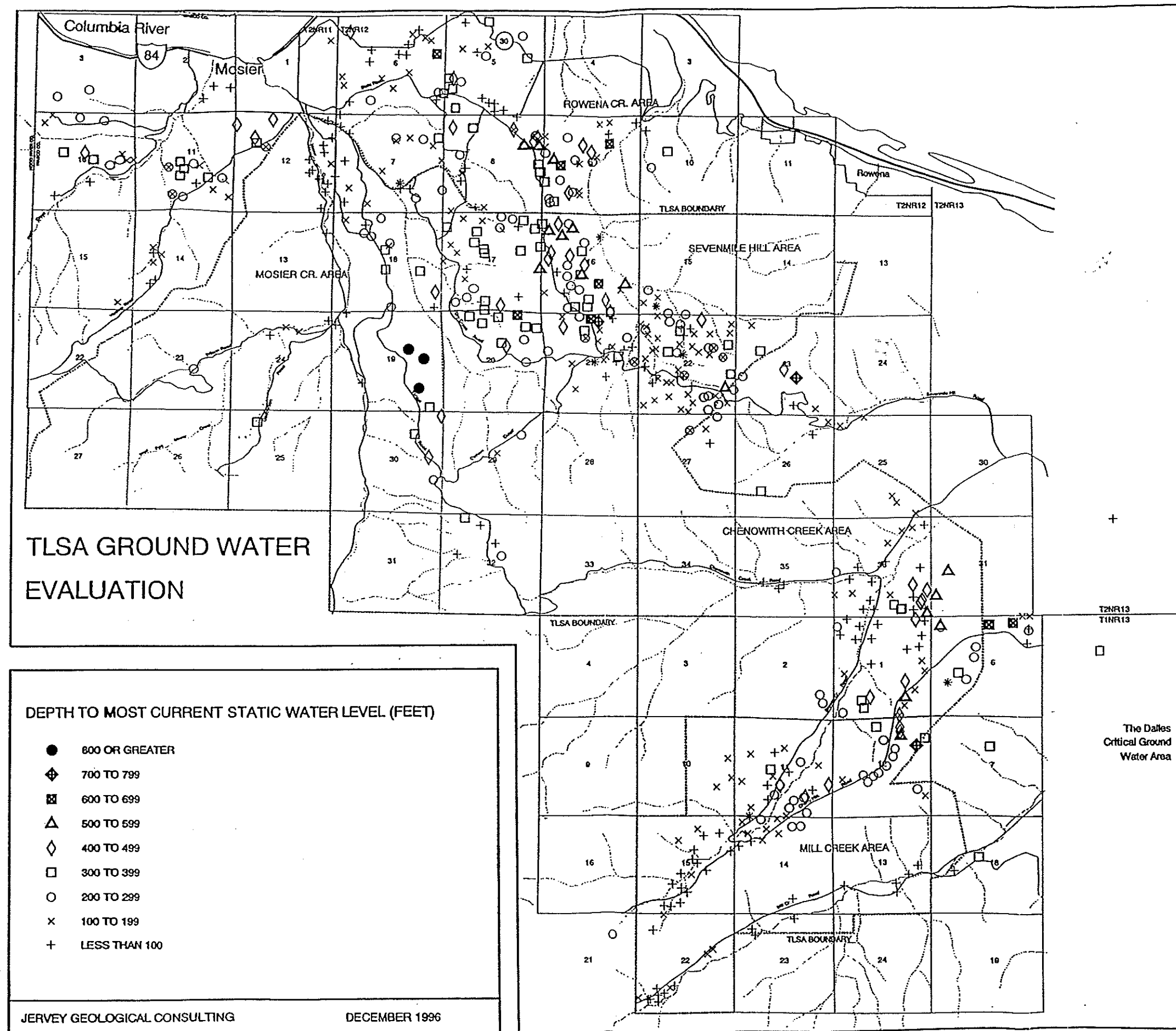
The aquifers on the section are in basalts; the wells penetrate three separate aquifer systems. The systems can be identified by the change in elevation of the static water level and the change in position of the aquifer zone itself. To the south (right) side of the section, a well penetrates the Pomona, Priest Rapids and the top of the Frenchman Springs basalts. It is water productive only in the Frenchman Springs and is distinguished by a high water column and good production characteristics (yield approximately 25 gpm, drawdown unknown). This aquifer is separated from the adjacent well's aquifer by a fault and there is an almost 200' difference in water level between them.

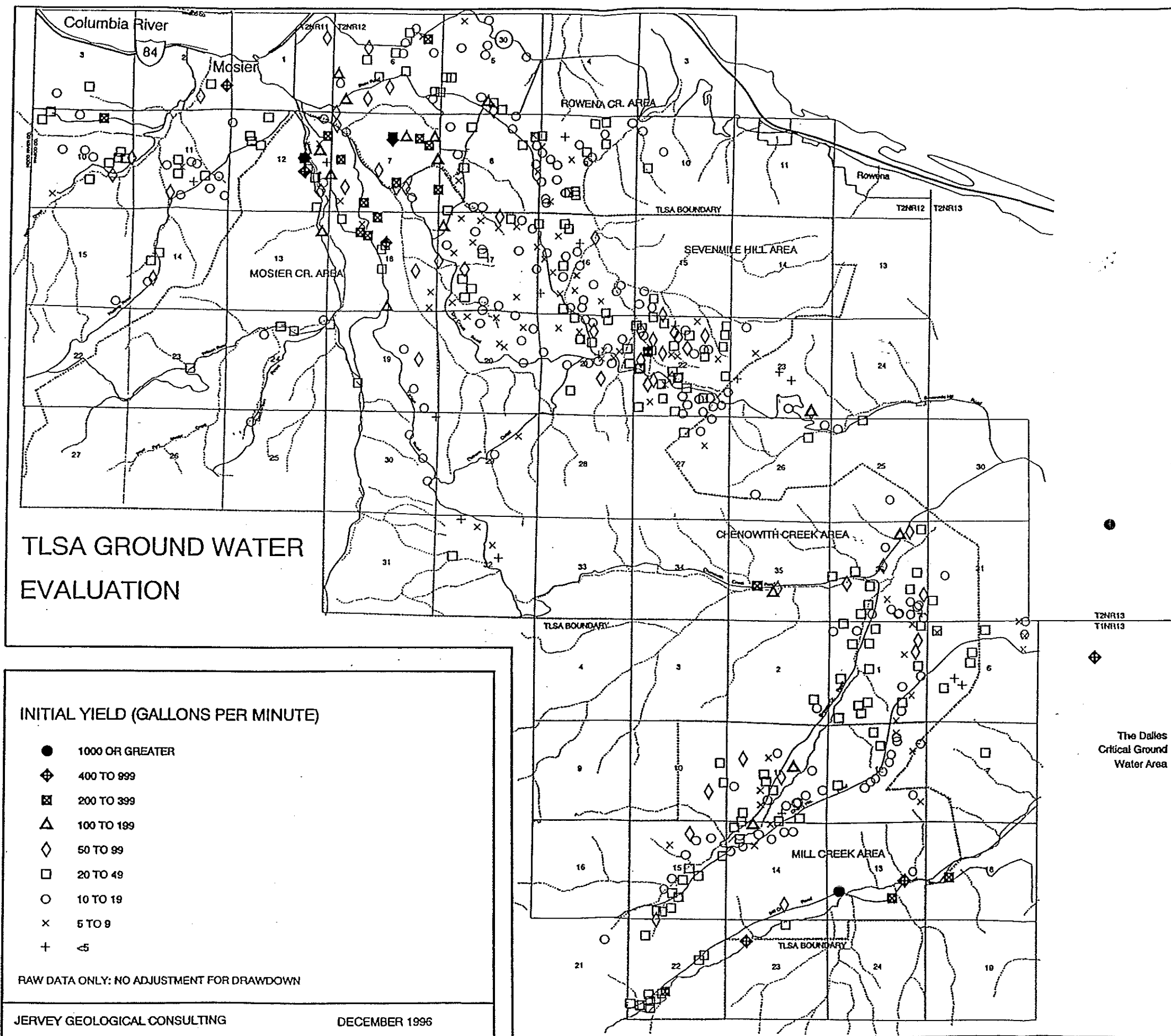
The two central wells are in the same aquifer and are quite similar in other respects as well as static water level. It is interesting to note that the LeSasso well was originally drilled to the Pomona/Priest Rapids interbed in 1976. At some point not long afterwards the well was deepened to the Priest Rapids/Frenchman Springs interbed. At that time there were only three residences in the entire section and no irrigation wells. Two other wells 1.5 miles away in the Rocky Prairie area are similar to this one (deepened from the Pomona before use). The Pomona in this area is well exposed and forms the cliffs surrounding the town of Mosier. It appears to fill and empty at the outcrop on an annual basis. In wells such as the LeSasso well, in January (when the well was drilled) it would appear to be an adequate aquifer; by August it would be effectively drained. In the adjacent Mizeski well, this zone was not water bearing.

The Huskey well, on the far left side of the section, benefits from being immediately adjacent to a canyon flowing into Rock Creek. Static water levels often rise









WEST  
ROCK CREEK TRIBUTARY

SOUTH

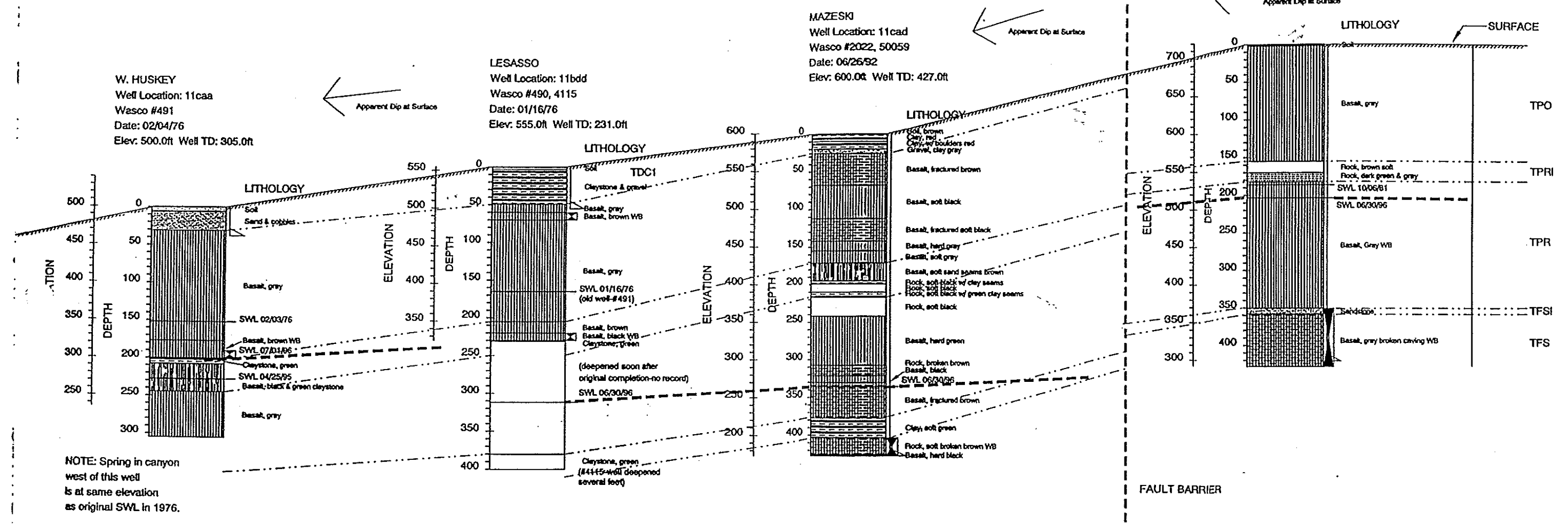
NUTTER/SODEN/MILLER  
Well Location: 11cda  
Wasco #492  
Date: 10/06/81  
Elev: 720.0ft Well TD: 428.0ft

NORTH  
HUSKEY ROAD

W. HUSKEY  
Well Location: 11caa  
Wasco #491  
Date: 02/04/76  
Elev: 500.0ft Well TD: 305.0ft

LESASSO  
Well Location: 11bdd  
Wasco #490, 4115  
Date: 01/16/76  
Elev: 555.0ft Well TD: 231.0ft

MAZESKI  
Well Location: 11cad  
Wasco #2022, 50059  
Date: 06/26/92  
Elev: 600.0ft Well TD: 427.0ft



TLISA GROUND WATER EVALUATION  
T2NR11E S.11 WASCO COUNTY, OREGON  
DETAIL SECTION 26  
ROCKY PRAIRIE AREA

DIAGRAMMATIC SECTION  
STRUCTURE DATUM  
JULY 5, 1996

HORIZONTAL SCALE APPROXIMATE 1:2400  
VERTICAL SCALE 1:1200  
WATER-BEARING ZONE  
MOST RECENT STATIC WATER LEVEL  
FORMATION BOUNDARY

TDC1=Duffes Formation  
TPO=Pomona Basalt  
TPRI=Pomona/Priest Rapids Interbed  
TPR=Priest Rapids Basalt  
TFSI=Priest Rapids/Frenchman Springs Interbed  
TFS=Frenchman Springs Basalt



as such a feature is approached. It also appears to be affected by a local fracture trend which delivers water to the wellbore immediately after a rainfall event. The drawback to being in this position is that the behavior of the static water level can be quite erratic; the well is drained in dry seasons as quickly as it fills during wet cycles and the volume available in summer months may be unreliable.

The information above is somewhat interpretive and other investigators may come to different conclusions about this material. But it is important to do this kind of correlation in order to understand the relation of one well to another and the position and distribution of each aquifer. If pump tests were performed on these wells, a great deal more information would be gained by identifying which wells are in direct communication.

Table 2 is a summary of the aquifer systems in the TLSA area and the map on the page following shows their areal distribution. The system names are based on common geographical names. Most of the abbreviations refer to the main producing formations, except in systems where several formations are productive. As can be seen in this table, each system also has characteristic static water level declines and types of well deepenings (or lack of them).

The aquifer systems described are usually separated from other systems by changes in topography or faults. The position of the static water level within each of them is roughly correlative to the surface elevation at the well.

Figure 7, a plot of static water level versus elevation illustrates the point made above. The aquifer static water level elevations show a very close correlation with surface elevation of the well. Each aquifer system develops a gradient unique to its members, but the overall picture is one of aquifers very closely tied to ground level and existing in specific compartments separated by lateral changes (faults, topography, etc.). This is one reason why use of diffuse recharge is probably appropriate in the calculation of the TLSA water budget. Almost all of the TLSA aquifers are water table aquifers. Even the artesian flowing wells seem to be closely linked hydraulically to surrounding water table aquifers above them.

It is perhaps easier to see the relation between ground level and static water level by quickly reviewing the cross sections in Appendix B. In these sections, the static water levels, where continuous, show a distinct relation to ground surface elevation.

#### STATIC WATER LEVEL (SWL) CHANGES

Table D (Appendix A) contains data from all multiple measures recorded in and adjacent to the TLSA

over the last 40 years. Many measures were made by a U.S.G.S. study in 1979 and by Oregon Water Resources Department in the period 1981-1986. The long term hydrographs for wells within the TLSA are included in Figures 8A-8E of this report.

The values shown in Table D are somewhat subjective in that some consideration of time of year of measurement and length of time between measurements has to be made in order to arrive at an estimate of decline or average annual fluctuation. This may introduce error in the estimates of as much as +/- 10-20 feet. But, in general, the overall trend of decline (or lack of it) and annual variation will probably yield the same picture when the group is considered as a whole.

The most striking feature of this collection is the frequent occurrence of SWL declines in the basalt aquifers. All but two of the 21 hydrograph wells in basalts and about 64% of the multiple measures in basalts show declines from 15 to 307 feet from the initial SWL, with a most frequent range of 30 to 80 feet of decline. The amount of decline often appears to be independent of time of drilling, rate of water extraction or height of the water column. Declines in SWL occur in areas with only a few wells per section, early in the history of ground water development and it occurs in recently drilled wells in densely drilled areas. In contrast, about 36% of measured basalt aquifer wells and almost all Dalles Group aquifers do not show declines greater than might be expected from seasonal fluctuation, even in areas of fairly dense drilling.

A corollary and equally important observation is that most of the basalt wells that show significant declines reach a stable position at some point during the life of the well. The position of stabilization is most commonly 30' to 80' below the original driller's static water level. The hydrographs in Figure 8a through 8e illustrate this observation. (Figures 8a-8e show summary hydrographs; individual hydrographs are available in previous Committee documents or in Kienle, 1995.)

Basalt aquifers do not show large declines if:

- they are extremely shallow (10 to 80 feet deep) and in a catchment position (shallow basin, or in an seasonally active drainage),
- occur immediately below a sandstone such as the Dalles Group or a Quaternary gravel or sand,
- occur immediately below a thick clay unit with overlying basalt aquifer units that are not saturated.

These three situations account for all the basalt aquifers which do not show large initial declines. The collection of observations suggests, but does not

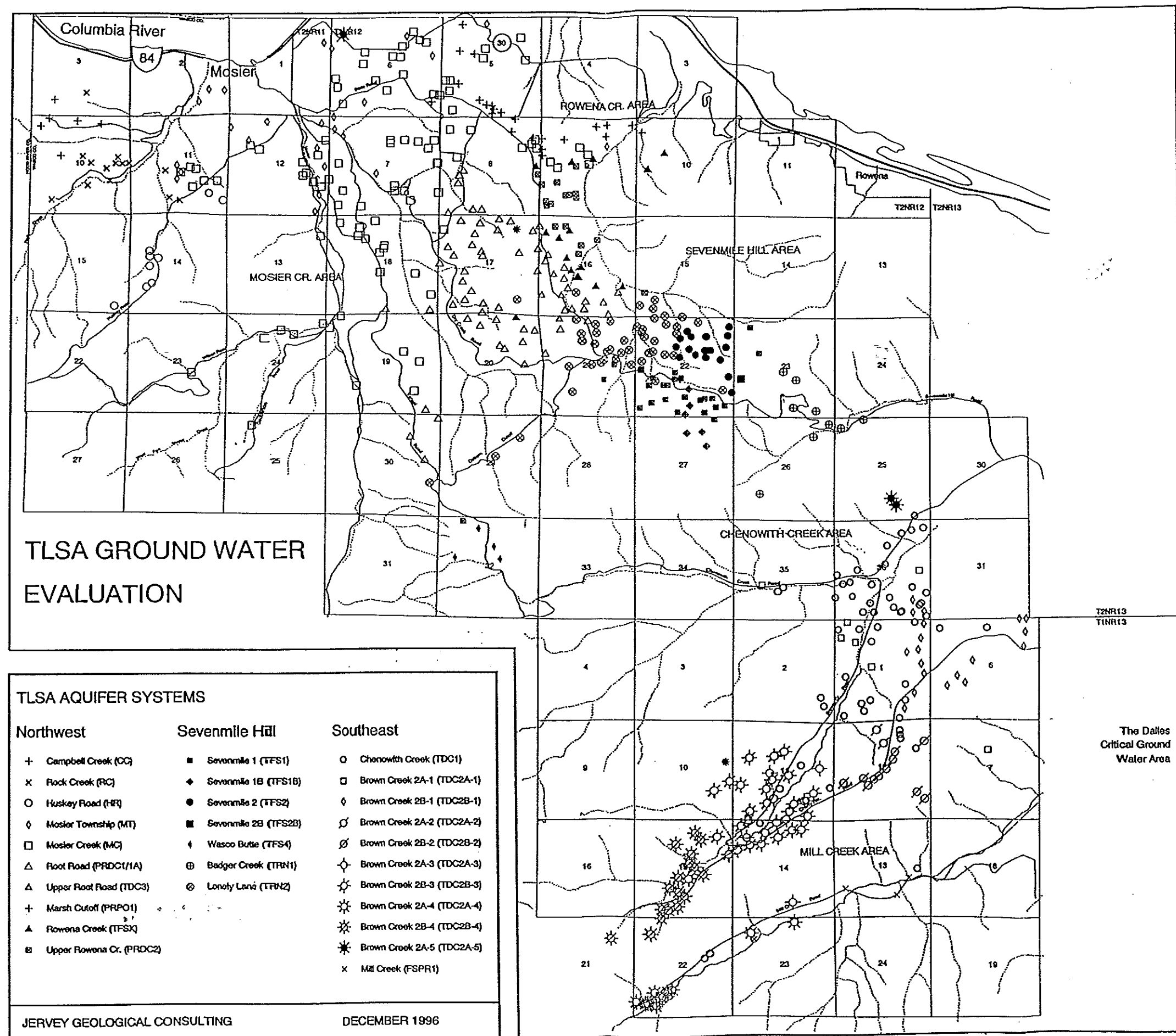
(all data in imperial units)

AQUIFER SYSTEM & ABBREVIATION	MAJOR FORMA- TIONS	APPROX # OF WELLS	AVG ELEV	AVG DEPTH	AVG RATE GPM	AVG SWL ELEV	AVG DEPTH H2O	# OF DEEPEENINGS	MULT	# OF WELLS	AVG CHNG	AVG TEMP	P	COMMENT	
NORTHWEST TLSA															
Campbell Creek (CC)	TFS	6	1005	397	14	778	230	167	0	0	0	1	-32	61	1 WELL @ 200GPM OMITTED
Rock Creek (RC)	TPR	14	719	286	30	545	174	113	0	1	0	4	-26	56	
Huskey Road (HR)	TDC	9	979	236	26	857	122	90	0	0	1	6	5	58	
Mosier Township (MT)	FSPR	23	422	326	32	216	206	120	0	0	0	9	0		* 1 WELL @ 400GPM OMITTED
Mosier Cr (MC) Low Rate	FSPRPO	68	669	360	22	423	242	119	5	5	6	13	-50	58	HIGH VARIABILITY:SWL CHNG
Mosier Cr (MC) High Rate	FSPRPO	26	548	401	219	419	130	204	0	0	4	16	-60	61	HIGH VARIABILITY:SWL CHNG
Root Road 1 (PRDC1)	PRDC	51	1110	399	15	816	291	67	2	1	0	6	-1	60	2 ANOMALOUS SWLS OMITTED
Root Road 1A (PRDC1A)	PRDC	13	1323	386	17	1024	299	87	1	0	0	0	*	60	SIMILAR TO PRDC1?
Upper Root Road (TDC3)	TDC	5	1317	149	9	1219	98	51	0	0	0	1	-1	53	
Marsh Cutoff (PRPO1)	PRPO	23	755	225	21	652	104	122	0	3	0	2	*	56	SWL CHANGES: -257, -12
Rowena Creek (TFSX)	TFS	14	1117	546	13	653	463	96	0	0	0	0	*	61	
Upper Rowena Cr. (PRDC2)	FSPR	17	1078	359	18	821	257	102	1	0	0	1	-58	59	
SEVENMILE HILL															
Lonely Lane (TRN2)	FSPR	47	1469	354	28	1259	210	141	0	1	2	5	-50	57	HIGH VARIABILITY:SWL CHNG
Sevenmile 1 (TFS1)	TFS	25	1718	294	21	1561	156	134	0	1	0	2	-62	55	
Sevenmile 1B (TFS1B)	TFS	7	1792	326	21	1689	103	223	0	0	2	4	-22	53	
Sevenmile 2 (TFS2)	TFS	18	1711	297	28	1533	178	120	0	0	0	8	-18	60	
Sevenmile 2B (TFS2B)	TFS	4	1775	283	10	1619	156	127	4	0	0	0	*	53	ALL 4 WELLS: DEEPEMED
Wasco Butte (TFS4)	TFS	4	2021	228	10	1907	115	114	0	0	0	0	*	52	SIMILAR TO TFS1 & TFS2?
Badger Creek (TRN1)	TFS	10	1281	354	21	1009	272	93	1	1	0	0	*		* SIMILAR TO TRN2?
SOUTHEAST TLSA															
Chenoweth Cr. (TDC1)	TDC	61	760	395	30	502	262	136	0	1	4	6	-3	58	
Brown Creek 2A (TDC2A)	TDC	29	820	220	44	699	121	93	2	1	0	4	2	50	
Brown Creek 2B (TDC2B)	TDC	82	1038	217	20	903	135	88	3	3	1	15	2	56	1 SWL CHANGE OMITTED(+122)
Mill Creek (FSPR1)	FSPR	5	511	559	707	666	-155	714	0	0	3	4	-61	77	

NOTE: COMMENTS ARE IN REGARD TO CALCULATION OF AVERAGE VALUES  
OR ARE OBSERVATIONS ABOUT AQUIFER CHARACTERISTICS

FOR COMPLETE DATA SEE TABLES IN APPENDIX A

Table 2. Summary of characteristics, aquifer systems, TLSA, Wasco County, Oregon.



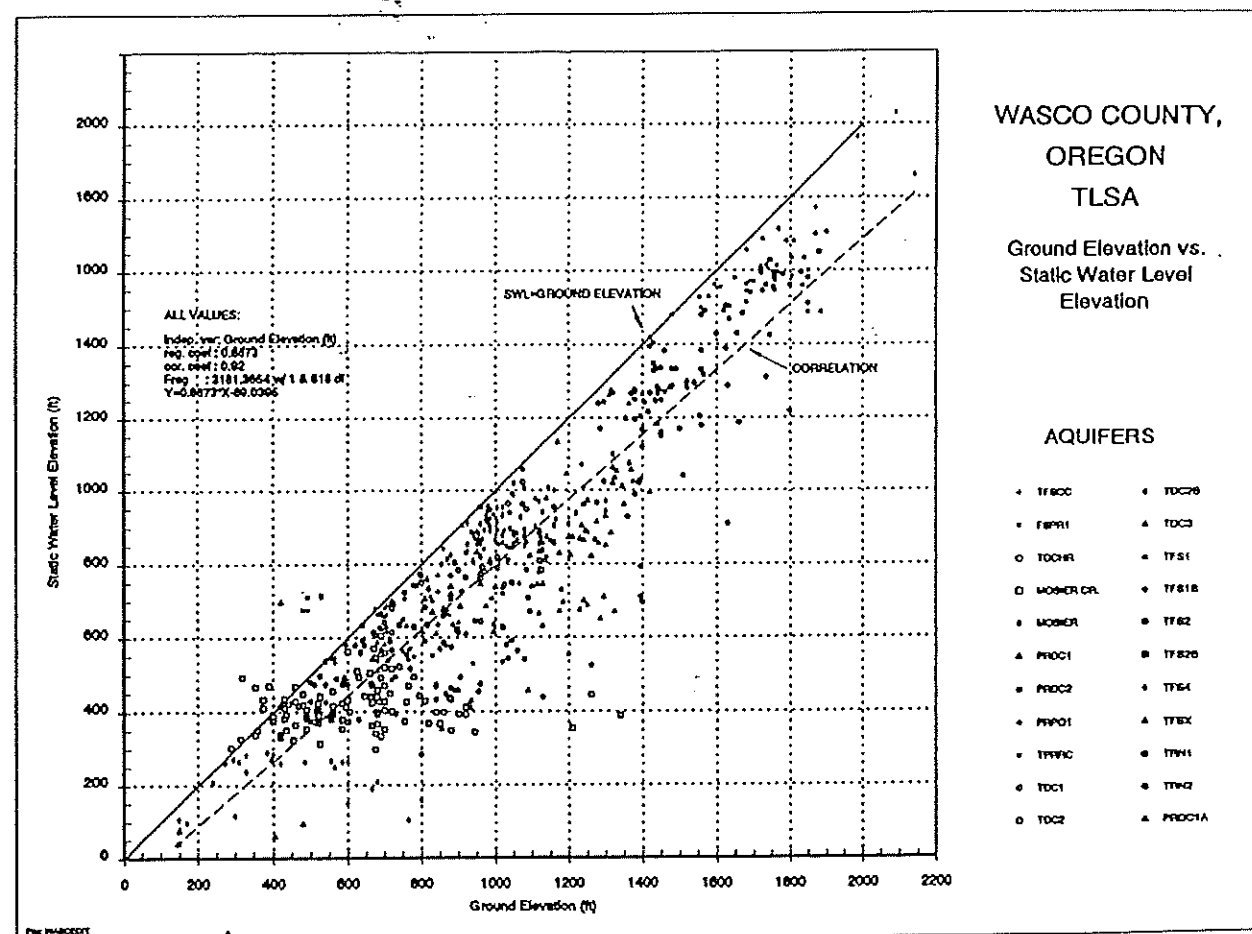


Figure 7. Static water level elevation versus ground elevation, TLSA, Wasco County, Oregon.



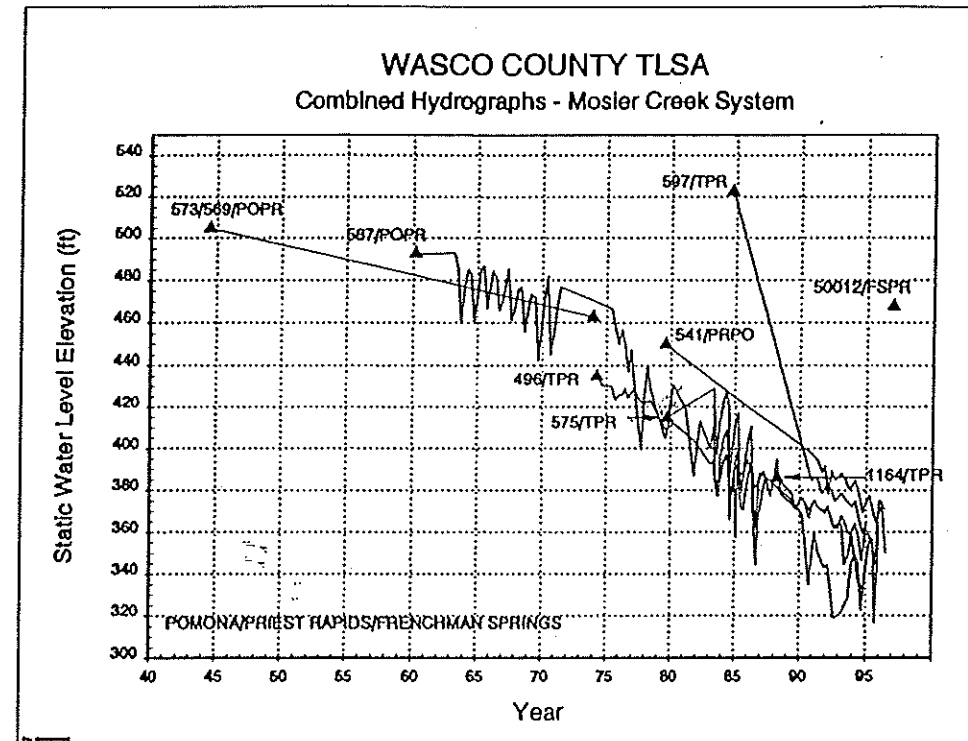


Figure 8A. Combined hydrographs, Mosier Creek System, TLSA, Wasco County, Oregon.

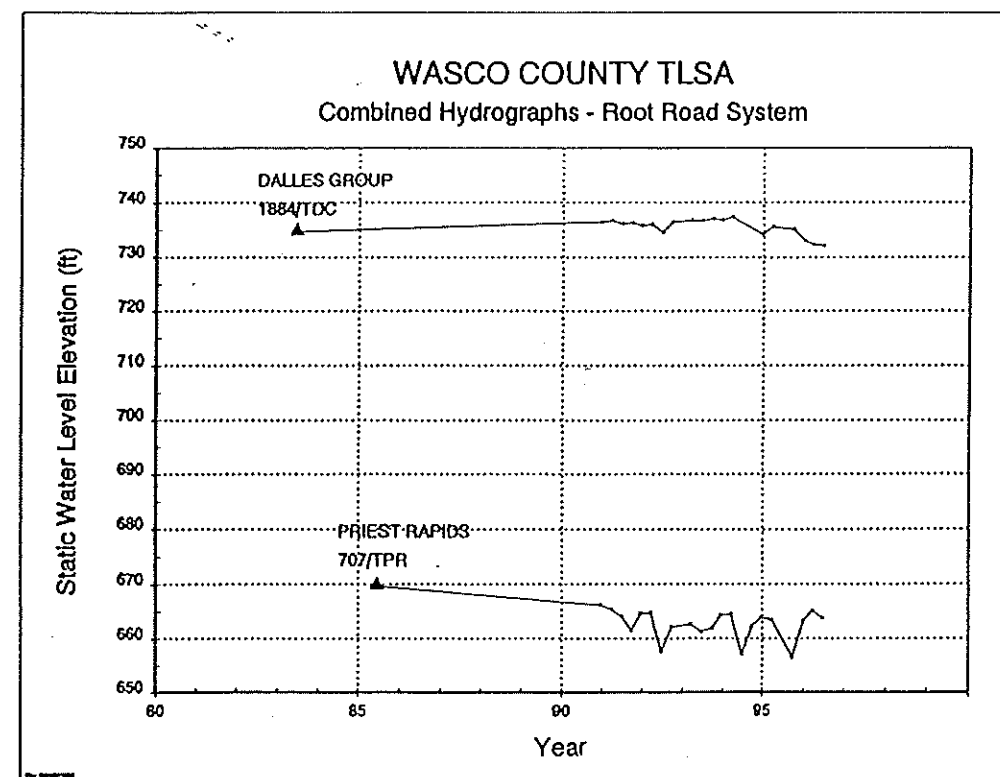


Figure 8B. Combined hydrographs, Root Road System, TLSA, Wasco County, Oregon.

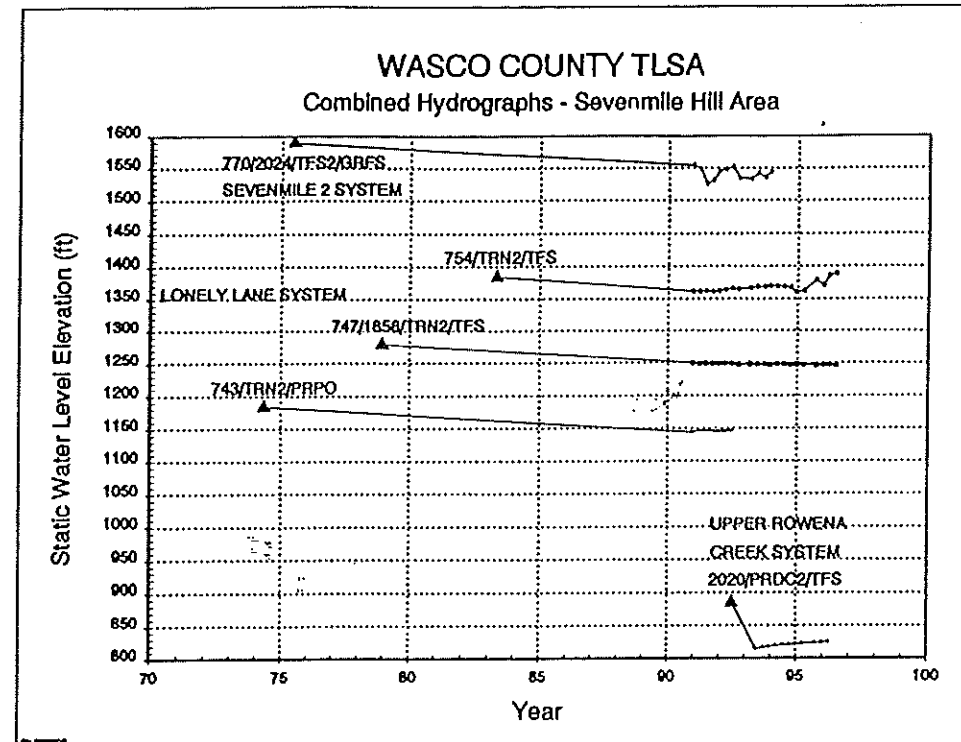


Figure 8C. Combined hydrographs, Sevenmile Hill Area, TLSA, Wasco County, Oregon.

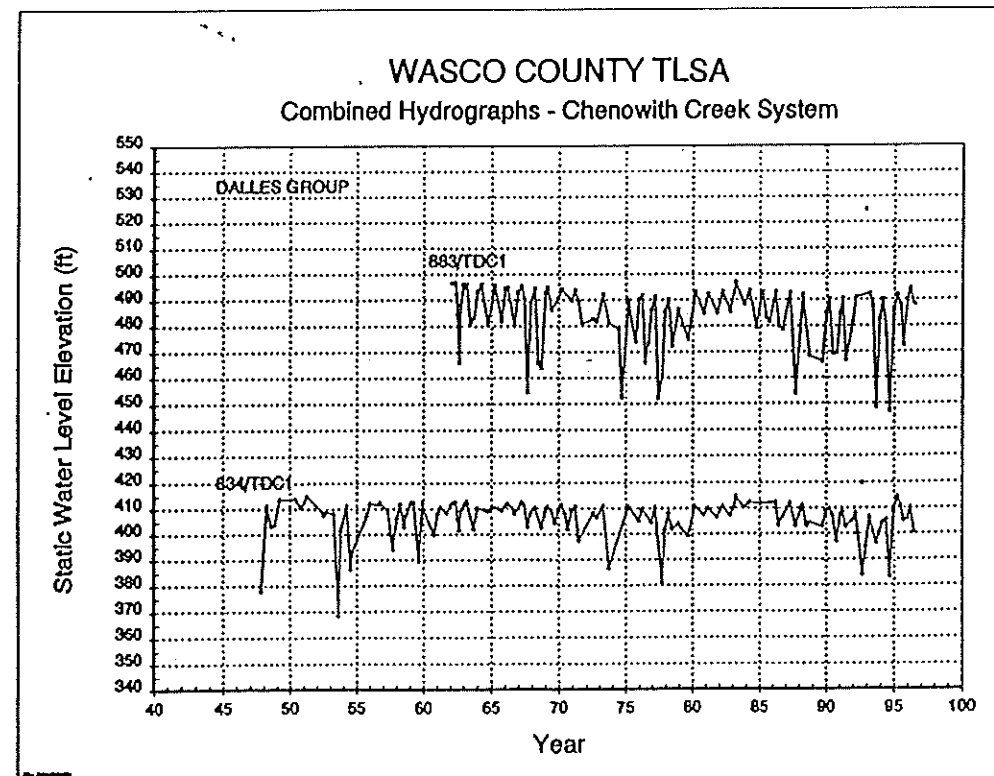


Figure 8D. Combined hydrographs, Chenoweth Creek System, TLSA, Wasco County, Oregon.

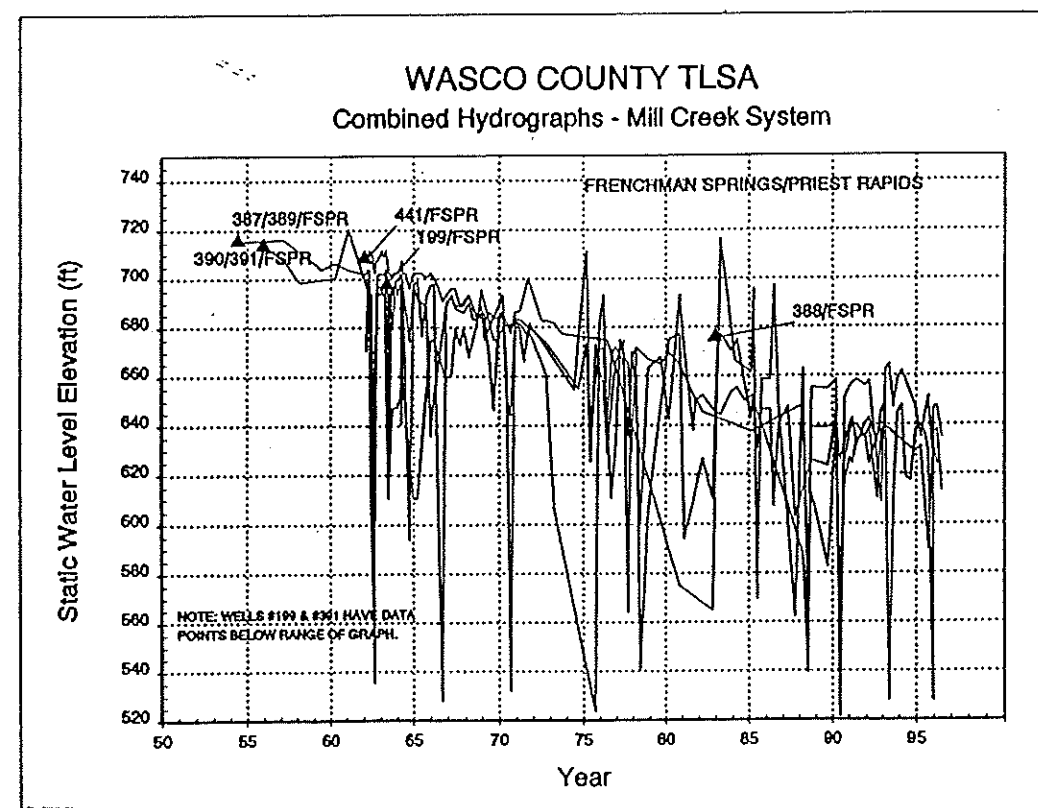


Figure 8E. Combined hydrographs, Mill Creek System, TLSA, Wasco County, Oregon.

prove, that the initial declines seen in basalt aquifers may somehow be related to their internal structure, the dual porosity found in fractures and vesicles or breccias. The diagram in Figure 4 is an illustration of a possible explanation for the rapid initial declines seen in some basalt aquifers. If the zone of saturation below the vadose zone (the transition from no saturation to 100% saturation) occurs in the entablature or colonnade parts of a basalt, the actual volume of water contained in the highest part of an aquifer may be very small. This part of the basalt may have very little horizontal connection with the rest of the aquifer. As the well is produced, decline in this section of the basalt may only recover under conditions of very high recharge. Each time the well is produced the water level will drop slightly and not recover until a point is reached that can be supported by the high volume porous part of the basalt aquifer. The fact that large declines are not seen in basalts that are overlain by Dalles Group or alluvium suggests that this explanation may be valid for some basalt aquifers, particularly those at higher elevations.

An alternative or possibly contributing explanation is in the normal response of fractured reservoirs to fluid withdrawal. The shape of the pressure sink around a well in a fractured rock is often one that shows a rapid but small drop of very large radius, and afterwards very little change in static water level while pumping. Figure 9 is a display of the data on two basalt aquifer tests presented in the Lite and Grondin 1988 report. The recovery curve is roughly an inverted mirror image of the decline during pumping. The shape of the build up curve, shown in Figure 10, indicates that recovery to original static water level may take much longer than the pumping time interval.

The decline in SWL may not be easily detectable after any one pumping period, but during seasons of heavy use, each time the well is pumped, the static water level will fail to rise back to its original position. Over a year the discrepancy may be large (10-20 feet) and unless the well is shut in for a long time, this process will continue until the fracture system pressure drops and equilibrates with the matrix (pore volume) pressure. At this point the well will maintain a reasonably constant static water level, if the volume extracted per unit time remains constant. Figure 10 shows a different type of plot with a logarithmic scale which allows for analysis of aquifer character. The change in slope seen in the Pomona test may be the pressure decline encountering a barrier or it could be the transition period before the fracture system reaches equilibrium with the porous matrix.

The hypotheses above are not necessarily correct. It may simply be that the basalt aquifers have poor

storage volume and/or access to recharge and consequently are declining and will fail in the near future. However, there are a few indications that this is not the case. These include:

- the observation that many hydrographs show static water level decline to a specific level, followed by stabilization,
- the continued drilling of new wells which appear to encounter original or near original aquifer pressures (suggesting that SWL declines are tied to individual wellbores), and
- the overall stability of static water levels in each aquifer system over the past 40 years

Each of these points will be illustrated with a specific example.

Figures 8a-8e contained all hydrograph curves in and adjacent to the TLSA. The Mill Creek, Dalles Critical Ground Water area, and Sevenmile Hill curves have declined to specific positions and are not, in general, showing rapid decline at this time. A few of the Mosier Creek wells have reached such an equilibrium position; the rest of them have not been measured for a number of years and cannot be assessed. The Chenoweth Creek and Root Road hydrographs are not indicative of a rapidly declining systems.

Almost every cross section in Appendix B that displays basalt aquifers shows at least one example of new wells being drilled adjacent to older wells with higher SWL than the older wells which have demonstrated declines. Figure 11 shows 3 wells in T12NR12E Section 7, Mosier Creek System. The oldest well (#569/573 Root) has developed a cone of depression that makes its static water level lower than the other two, younger wells. The difference between the SWL in the Root well and the Reeves well is around 50 feet. Many of the cross sections show examples of this situation. In these sections, an older well is displayed adjacent to a well drilled long afterward. In many cases, even though the wells are not separated by great distances, the newest well shows a higher static water level than the current SWL of the older well. This suggests that declines are directly the result of producing the well and are not perhaps representative of the state of the aquifer as a whole.

Figures 12 and 13 are displays of the static water levels in the TLSA aquifer systems versus time. The thin lines connecting points are multiple water level measurements in single wells. It is apparent that many of the basalt aquifer systems have wells which show declines. However, the trend of initial static water levels in all of the TLSA aquifer systems has not shown any correlation with time. In other words, there is no



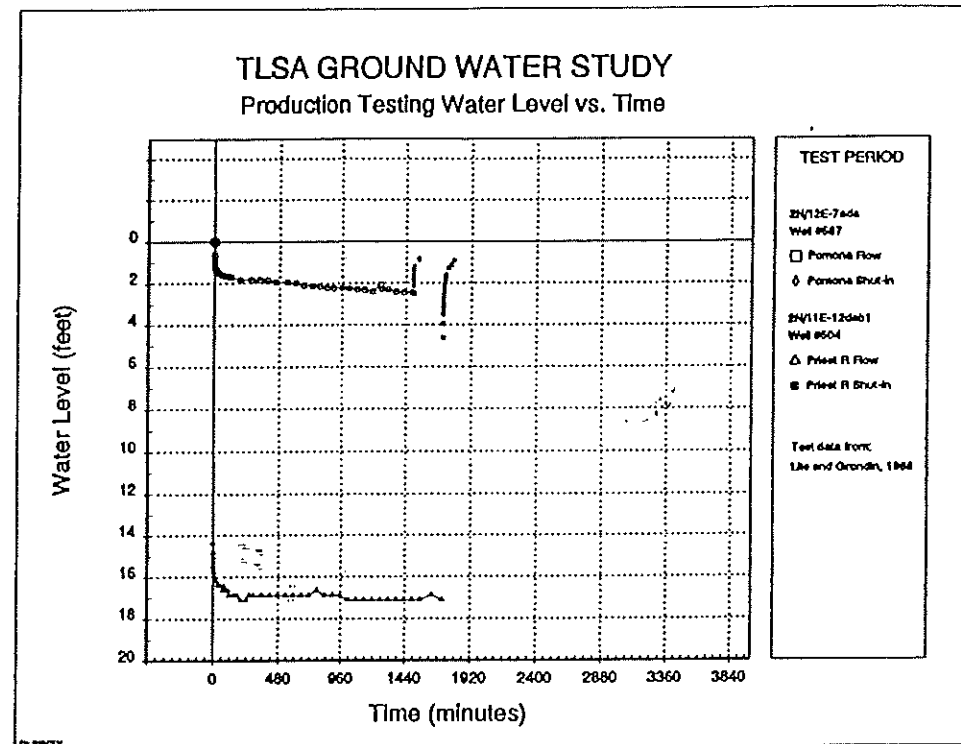


Figure 9. Pomona and Priest Rapids pump test data, Mosier Creek System (data from Lite and Grondin, 1988).

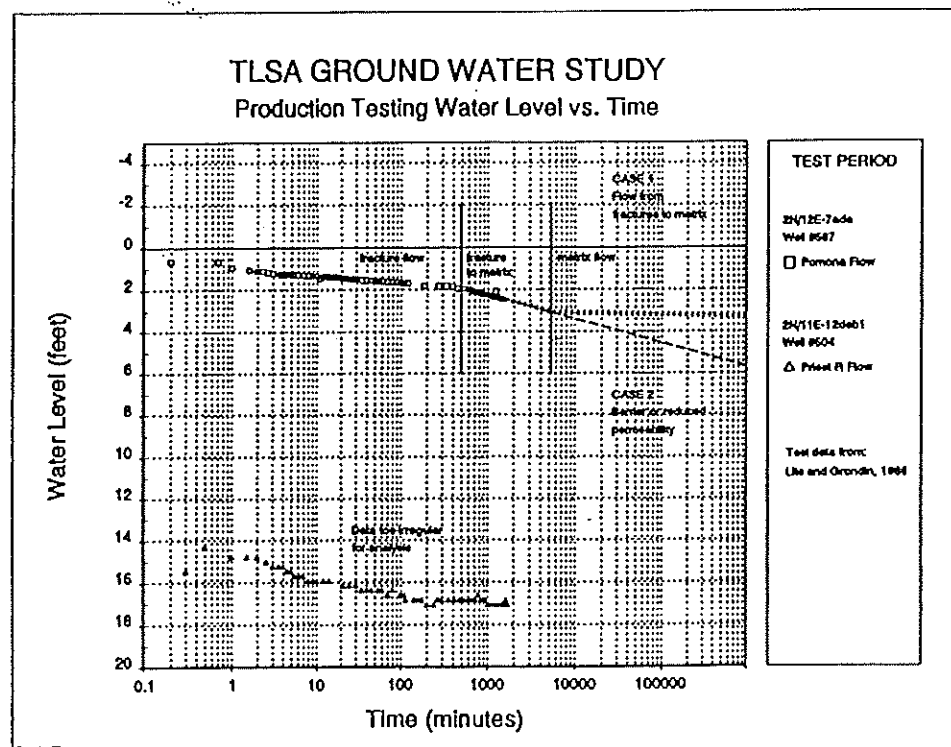


Figure 10. Logarithmic plot, Pomona and Priest Rapids test data, Mosier Creek System (data from Lite and Grondin, 1988).

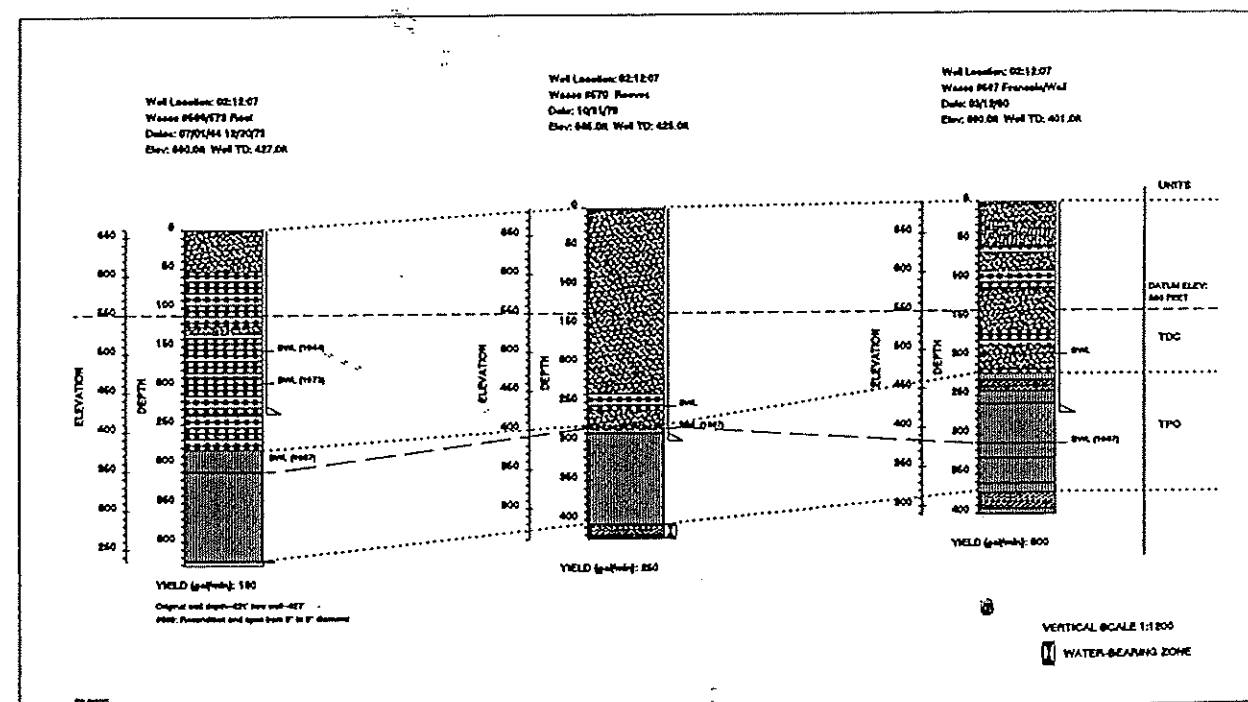


Figure 11. Static water levels, Mosier Creek System, TLSA, Wasco County, Oregon.

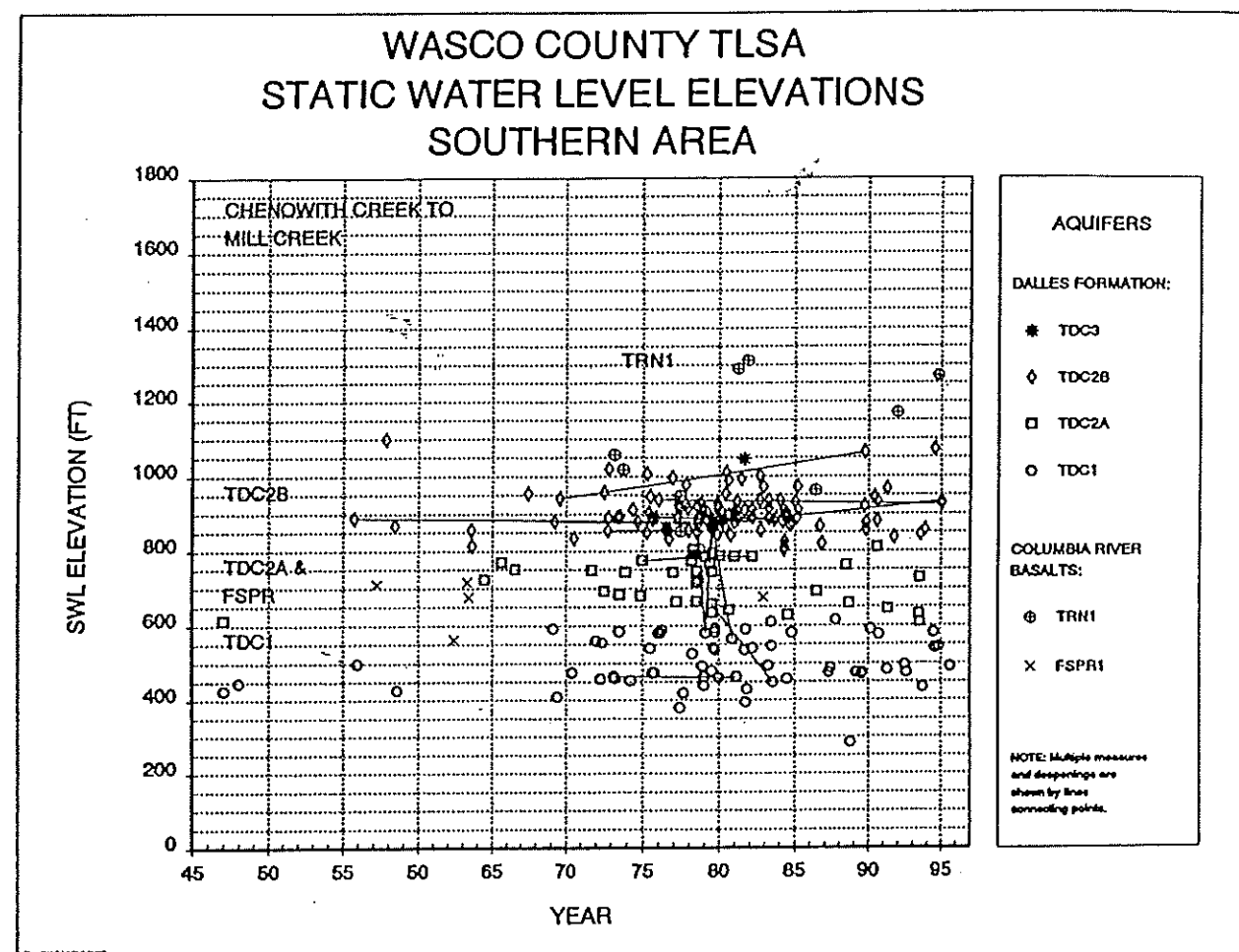


Figure 12. Initial static water level elevations versus time, TLSA southern area. Multiple measures connected with a thin line.

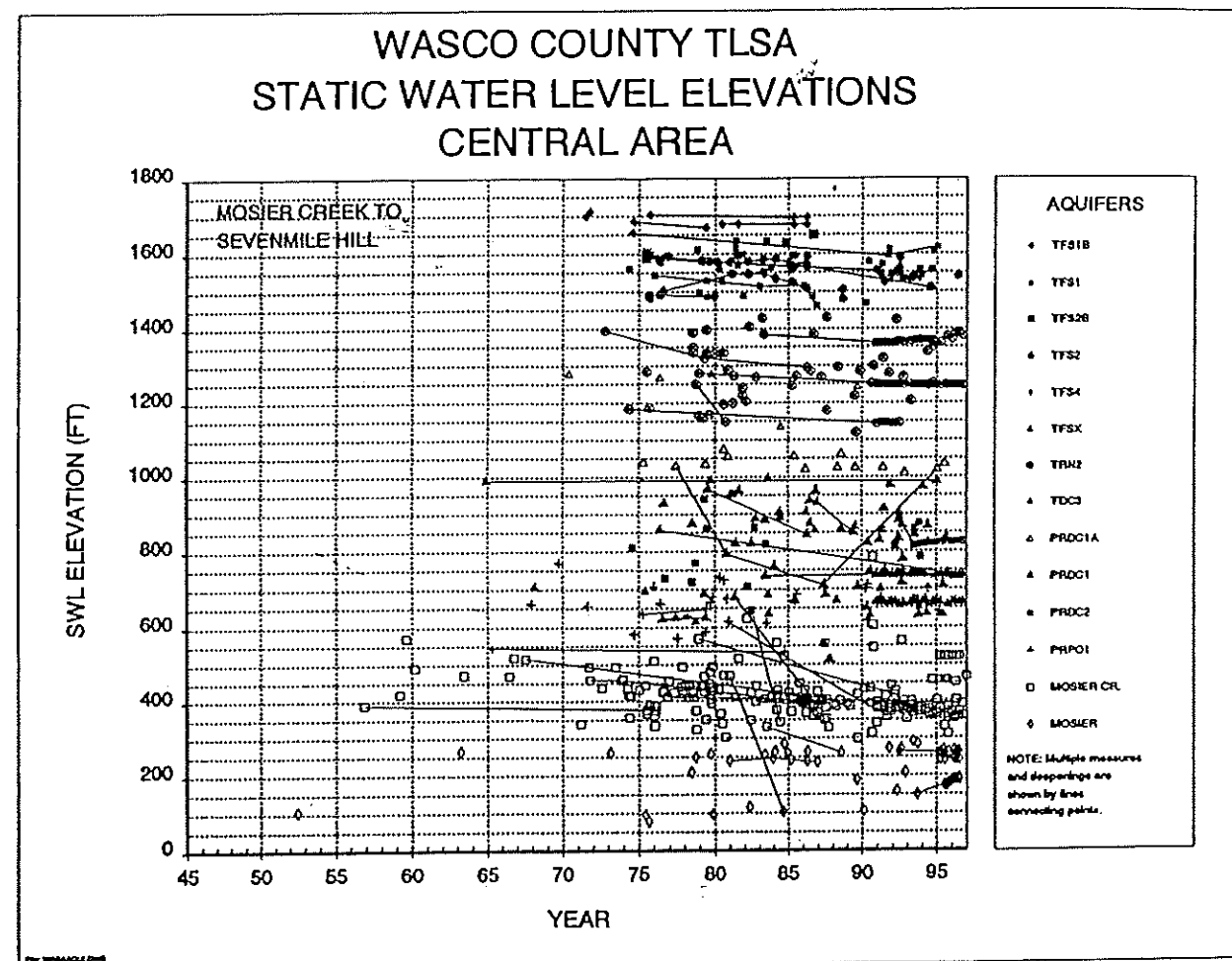


Figure 13. Initial static water level elevations versus time, TLSA central area. Multiple measures connected with a thin line.



significant increase or decline in any of these systems (this also implies that no appreciable co-mingling is occurring between systems). A minor exception to this summary is the Sevenmile Hill TFS2B aquifer. This aquifer is very shallow, of limited extent and three out of four wells in it were deepened to the Sevenmile TFS2 system.

Another significant observation is that in a few wells, recovery to original static water levels has occurred in basalt aquifers with large initial declines. It is notable that only in particular cases does the high rate of initial decline continue, resulting in aquifer failure. Most of the wells showing large declines continue to provide water in a satisfactory manner. The specific reasons for aquifer failure will be discussed in the next section.

In order to assess the previously mentioned observations, it would be useful to look in detail at how the static water level reacts to production and/or rainfall volumes in a well where there is a fairly complete set of data. The Chenoweth Co-op Wells #1, 2 and 3 provide about 300,000,000 gallons of water per year to customers. Most of the production is from Well #3, which is near The Dalles Racquet Club. Wells #1 and 2 are twins (drilled side by side) and are located a few city blocks from Well #3. The wells are completed in the Priest Rapids/Frenchman Springs basalts and are shown on Cross Section 22. They are very similar to the irrigation wells in Mill Creek (Cross Section 6), excepting that the water column in the Chenoweth wells is much smaller. The Chenoweth wells are part of the Dalles Critical Ground Water system.

The curves in Figure 14 cover a long time period during which production of water from these wells rose from about 200 million gallons per year to 300 million gallons per year. The first 13 years of production saw a rapid decline of about 50 feet in static water level. Over the next 30 years, static water level seemed to reflect the level of production rather than to decline. In 1975, production was estimated at about 250 million gallons/year. In 1994, production had risen to almost 300 million gallons/year and the stabilized water level dropped, but did not decline appreciably after the initial drop. A point of interest; the bulge in the static water level curve beginning in 1987 does not correlate with rainfall volume during or immediately before that time period.

A more detailed examination of well data is shown in Figure 15. The curves for water level, rainfall and production all seem to have a relationship (although due to time lag, it cannot be quantified easily). The peaks of rainfall, water level and the lowest production volume seem to occur at about the same time. Whether the responses on the water level curve are

due to rainfall or production recovery is difficult to say. It may be that both factors affect the water level in this well. It is notable that some of the recovery curves begin before the beginning of increased rainfall. This may mean that the shut in or low production period allows the water level to recover and that this water level increase may be primarily a build up rather than a response to new injection of water volumes after rainfall.

Another example of the water level response to water production volume in basalt aquifers occurs in a very different type of well; the domestic well #492 in Cross Section 26 shown previously in this report. This well had an original static water level of 186'. It was drilled in 1981 and only used intermittently for many years. For most of its early history, there were only a few wells in the section, all of which were domestic wells. In 1995, the next static water level measured was 201'. For most of that year, the water level stayed within one foot of that measure. At that point only one household was using the well on a full time basis. In late 1995, another household was added to the well system. The water level immediately dropped to 204'. Subsequent measures throughout 1996 remained very constant at or near that value.

The point of this discussion is that the specific stable static water level for a particular well may depend entirely on the volume extracted per unit time. If the volume produced is increased, the water will drop to a new equilibrium position. If the production volume is reduced, the water level will show an immediate return to a higher position. The amount of water that can be extracted depends on the porosity and permeability of the specific aquifer and the rocks above it. If the production volume exceeds the capacity of the well, the aquifer will fail in the vicinity of the wellbore, but a shut in period will allow it to recover.

#### DEEPENED WELLS

Wells which are deepened occur throughout the TLSA, but are most numerous in several areas. The common reasons that a well is deepened are

- land owner wishes to access a larger supply of water,
- the shallowest aquifer present shows a reduction in rate and static water level to the point where deepening the well is required to maintain water in the wellbore, or
- collapse and/or caving of the wellbore damages its ability to provide water

The second reason above has the most interest in the evaluation of ground water supply in the TLSA. A

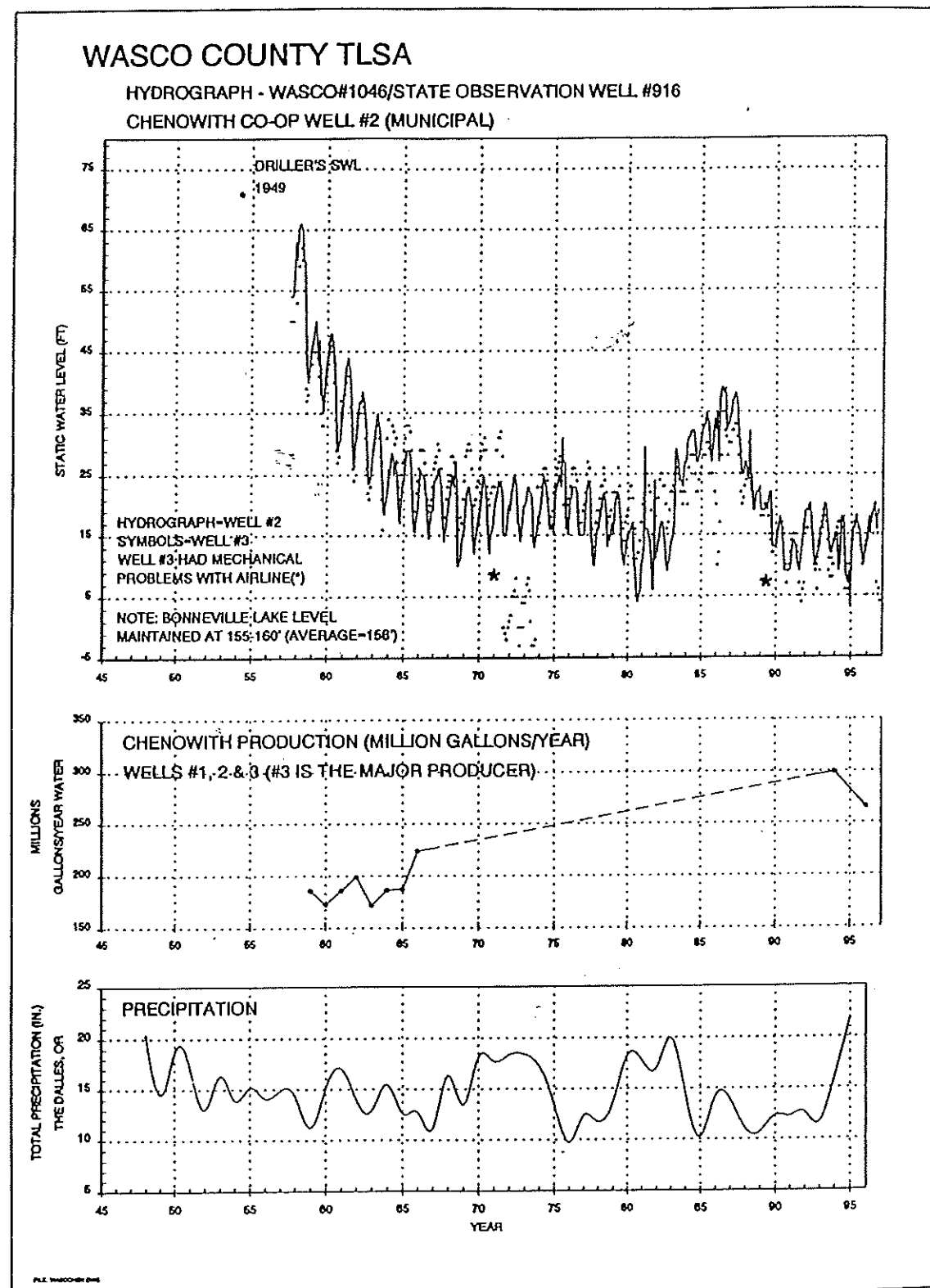


Figure 14. Chenowith Co-op water well data, 1949-1996.

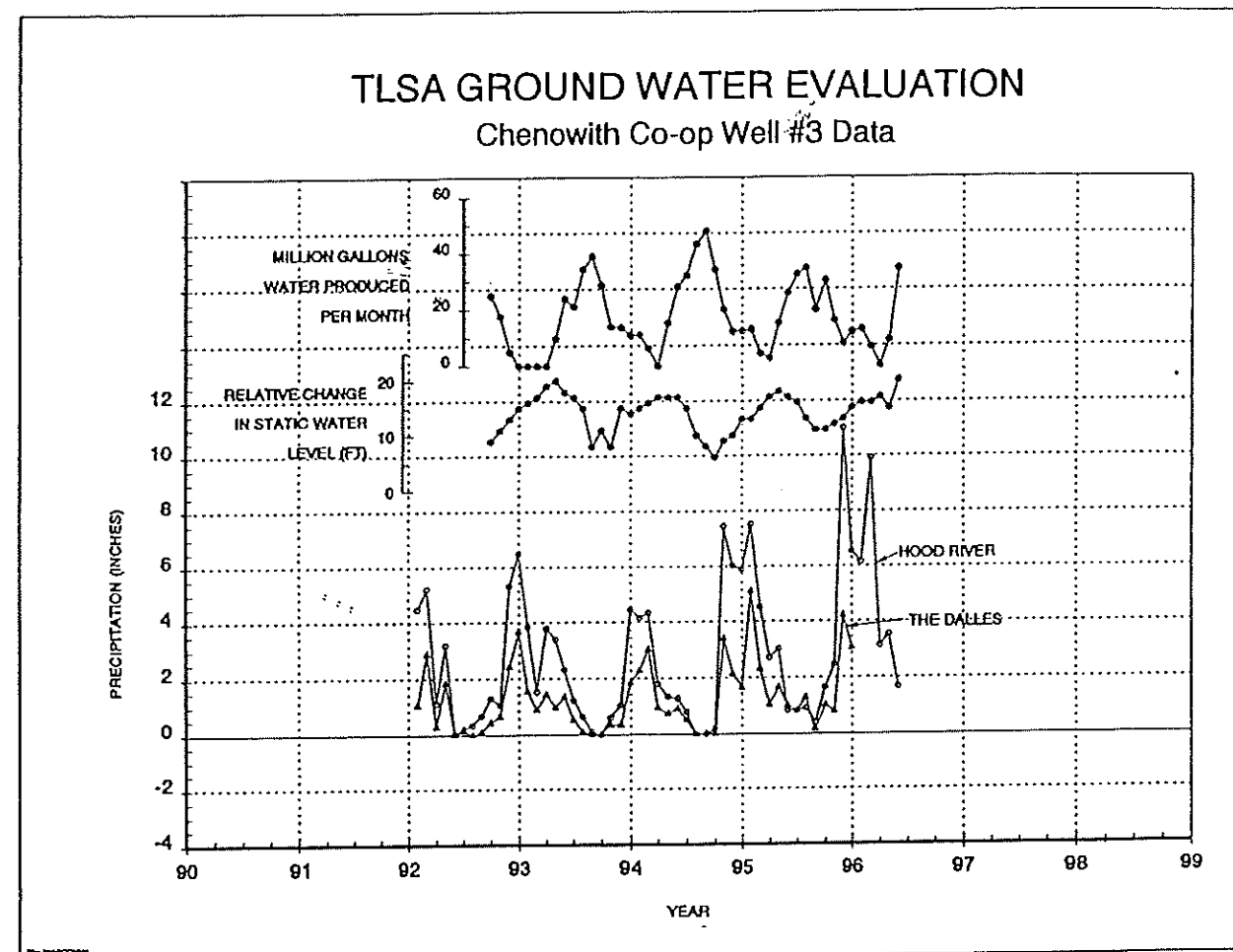


Figure 15. Monthly detail, Chenoweth Co-op water well data, 1992-1996.

similar interest pertains in wells that have had multiple static water level measures over time and show significant decline in static water level (>30').

From the previous discussion on basalt aquifer initial decline, it is apparent that in many basalt wells enough water column must be available to accommodate the initial decline that many of them will experience. In many instances of deepened wells, the original well did not penetrate enough aquifer thickness to support water production over time. In these wells, deepening is required to more fully expose the aquifer system to the wellbore. In other instances, the entire system is abandoned and the well is deepened to a new aquifer system. It is now necessary to review available data and summarize how many wells of each type exist and the aquifers in which they tend to occur.

The 58 deepened wells examined may be categorized as follows:

- Minor (22 wells): 3 to 50 foot increase in well depth
  - repairs damage through caving or extended use
  - very little to no new aquifer thickness is exposed
  - static water level does not change
  - may be considered well rejuvenation
- Moderate (17 wells): 20 to 250 foot increase in well depth
  - repairs damage due to partial penetration
  - exposes more central part of aquifer system
  - static water level change is minor and remains within the same aquifer system
- Major (19 wells): 200 to 600 foot increase (or more) in well depth
  - abandonment of original aquifer system
  - static water level is 100 to 400 feet lower than in original well
  - represents a significant failure of shallowest aquifer system.

The deepened wells are listed in Table E ( Appendix A). Minor and moderate deepenings may be regarded as fairly normal occurrences in the development of a ground water resource. They are only of concern when the overall rate or percentage of them sharply increases over a particular time period. This may signal the stressing of the shallow ground water systems.

As is shown in Figure 16, deepenings in the TLSA area have occurred at a fairly constant percent of total wells drilled through the history of water well development. It should be noted that wells drilled during high rainfall cycles may have a tendency to be deepened more than wells drilled during normal or dry cycles.

Major deepenings are of serious concern. If no other explanation for them is identified, they signal failure of the shallow aquifer and depletion of the ground water resource. However, in the case of most of the major deepenings within the TLSA area, an explanation for failure can be demonstrated.

The following conditions may cause failure of the shallow aquifer. Each of them is illustrated by a cross section in Appendix B showing the condition described:

#### 1) POOR PERMEABILITY AND/OR POROSITY IN THE VICINITY OF THE WELLBORE

Aquifers are not uniform throughout their occurrence. For a variety of reasons, internal variation within them is normal and can be expected. In some areas, poor performance of an individual aquifer can be identified and mapped. A good example of this occurs in the northern part of the ridge between Mill Creek and Brown Creek and is shown in the northern end of Cross Section 5B. The Brown Creek-TDC2B aquifer (Dalles Group) is a frequently completed unit in this area. However, northeast of T1NR12E Section 11, it gains in clay content (clay lenses) to the point that in some cases, wells were not even completed in this zone, but were drilled deeper to the TDC1 aquifer. Other wells completed in this the TDC2B were later deepened, probably because of insufficient water volume. The TDC2B in this area also has the problems mentioned in #2 and #3 below.

#### 2) DESTRUCTION OF ORIGINAL AQUIFER CONDITIONS BY FRACTURING OR FAULTING

Faults and fractures can be very detrimental to aquifer performance in the following ways:

- Plugging of porous rock by deposits of minerals resulting in low porosity and permeability and poor interconnection with the main body of the aquifer.
- In contrast, fracturing may be seen as an enhancement to aquifer permeability in fault/fracture zones which are not mineralized. However, if it is extreme and continues to an adjacent canyon, fracturing can act as a drain, enhancing permeability to the point where the rock is no longer able to maintain high water volume.



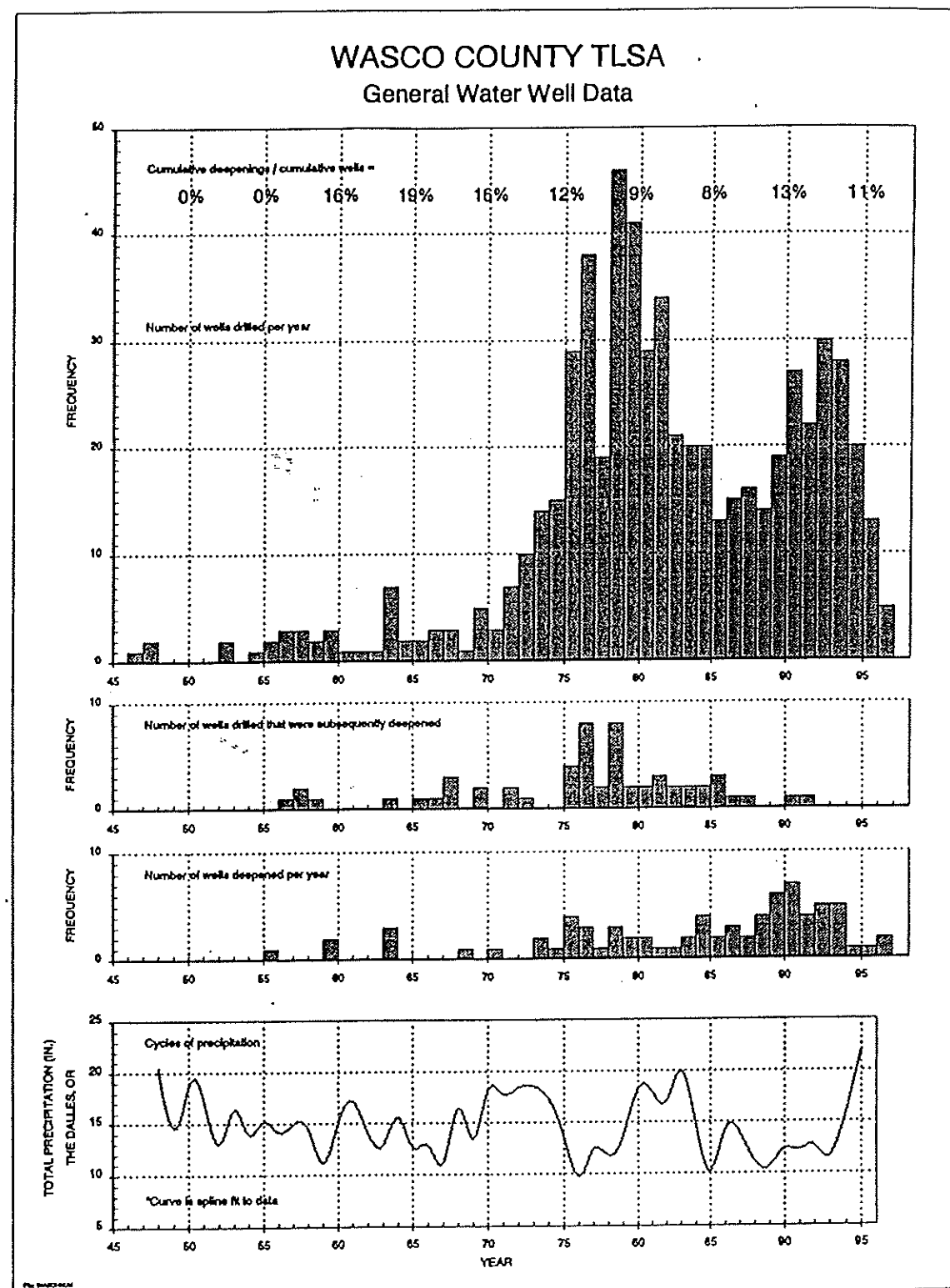


Figure 16. Wells drilled and well deepenings versus time, TLSA, Wasco County.

The detrimental effect of fault/fracture zones can be seen in Cross Section 2 in the Sevenmile Hill area. Two wells in this section are abandoned after encountering no water. The driller's description in both wells indicates that mineralization has destroyed original aquifer quality by allowing mineral-bearing fluids to deposit material in available fractures and pore space. Away from the fault zones, the basalt aquifers here are quite acceptable in terms of rate and productive capability.

A rather serious condition occurs in T2NR12E Section 9 shown in Cross Section 9B. In this area, two major fault zones cross, one going east-west, the other trending northwest-southeast. Some wells in the vicinity of this intersection are either very deep originally, or have to be deepened to depths greater than 550 feet. The map on the following page shows trends of wells with drilling problems such as caving, fractures or lost circulation, dry holes, deepened wells and wells with very large declines (>100 feet) and the pattern of major fault and fracture zones identified on surface or in cross section. Figures 17, 18 and 19 are aerial photographs which show some of the features mapped as fault or fracture zones. The Wasco County Planning Office has complete aerial photo coverage in the TLSA for those who have an interest in this topic.

The presence of a fault or fracture zone is shown on the report cross sections as a vertical line. The faults in this general area are high-angle reverse, lateral or normal faults. If actual displacement is seen in cross section or in outcrop, the formations on either side of the fault line will be offset on the cross sections. A quick review of any selection of the cross sections will show how faults or fractures can depress static water levels in their vicinity.

### 3) WELL IS LOCATED TOO CLOSE TO THE MARGIN OF AN AQUIFER SYSTEM

In cross section 5B discussed previously, the TDC2B aquifer was becoming very shallow and close to its exposure at surface on adjacent slopes. Cross section 3 shows the Upper Dry Creek aquifer system (PRDC1) as it approaches its exposure on the slopes of Dry Creek valley. This aquifer system occurs in basalts immediately below the Dalles Group or in the base of the Dalles Group itself. Wells #726/714 and 713/715/2068 are on the margin of the system and their initial water columns are intermediate between the Root Road and Mosier Creek systems. These wells were deepened in 1986 and 1992, respectively, to the Mosier Creek system (elevation about 350-400 feet). If a well is drilled in a marginal position, it receives recharge from perhaps only about half the area of a

normal aquifer. In addition, diffuse recharge on slopes is probably less than diffuse recharge in flatter areas.

In all of the instances of major deepening, one or more of these conditions existed. The detrimental features described above all reduce the ability of an aquifer to gain recharge from the area surrounding it. In essence, these wells are deepened because they were produced at rates that exceeded their capacity to supply water. The aquifer conditions in each of them would not support water production at even low rates for an extended period of time.

Other conditions which may cause water level decline and lead to deepening are:

- Partial penetration of the upper part of an aquifer system. The Root well in Figure 11 is possibly affected by this condition.
- Damage caused by bacteria and/or deposition of fine sediment, both of which occlude porosity and permeability.
- The presence of ductile clays (often adjacent to basalt aquifers which can deform plastically over time. The result is an eventual "choking off" of the aquifer interval.
- Wells may also be affected by composite cones of depression, but this subject will be covered in the section below on well spacing.

In Figure 20 three unrelated wells are shown to illustrate an important problem. The Wilds well (T2NR12E Section 21) at the left, was deepened twice and now is at a depth of 799 feet. The two upper aquifers which have been subsequently abandoned were evidently of low quality. The 1995 measurement of static water level (NGS, Inc.) may be only apparent because the well measure also reported cascading water. What is certain is; the two upper zones could not support domestic requirements. This well is on trend with two dry holes, #753 and #4103, near one of the fault zones shown in the drilling hazard map. The third aquifer at the base of the well appears to be of higher quality than the other two. Other wells in the vicinity, including Wasco County Observation Well #743, appear to be stable and are about one half the depth of this well.

Also displayed in Figure 20 are two other wells in T2NR12E (Sections 16 and 9) which are abnormally deep for the area, and have abnormally low static water level elevations. It is this type of well which requires the most future investigation. There are many questions about such wells to be answered:

- Does the great depth to static water level reflect a restricted access to diffuse recharge?

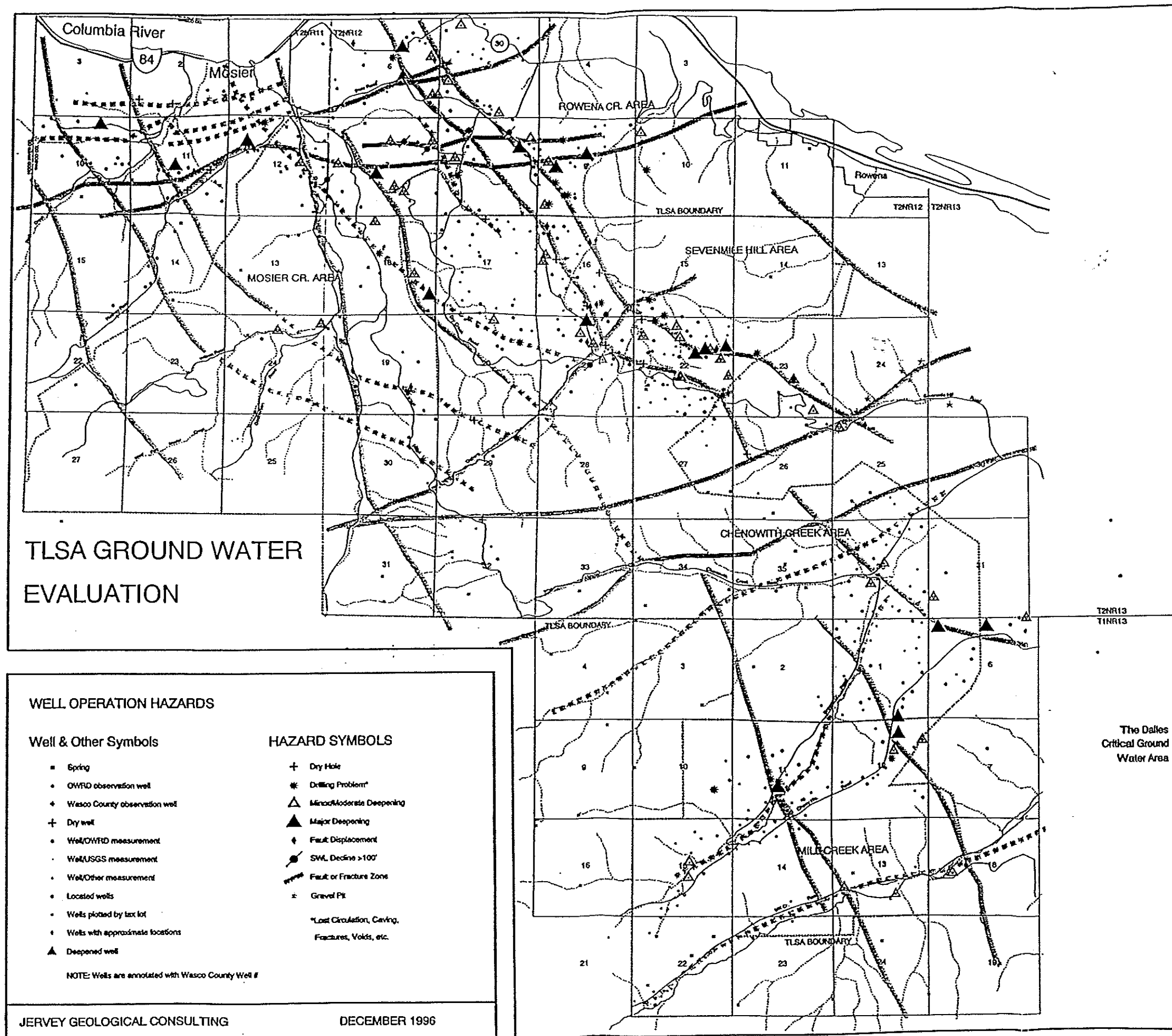




Figure 17. Aerial photograph showing fault zone near Cherry Heights Road, Wasco County, Oregon.

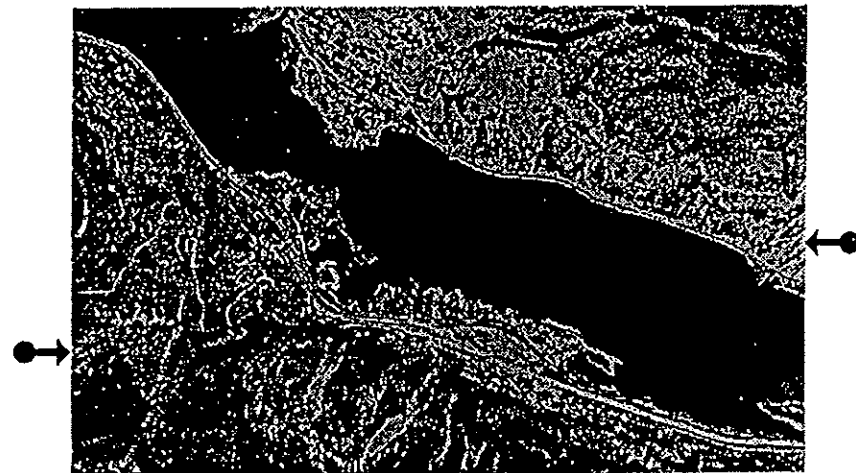


Figure 18. Aerial photograph showing fault zone visible from Interstate 84 at Rowena.

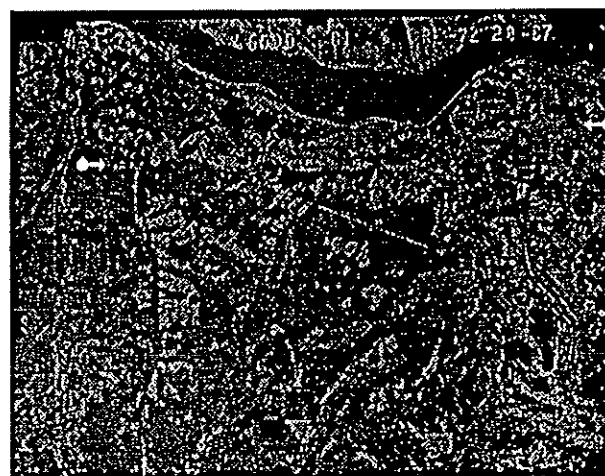


Figure 19. High altitude aerial photograph showing fault displacements, northern Wasco and Hood River Counties, Oregon.



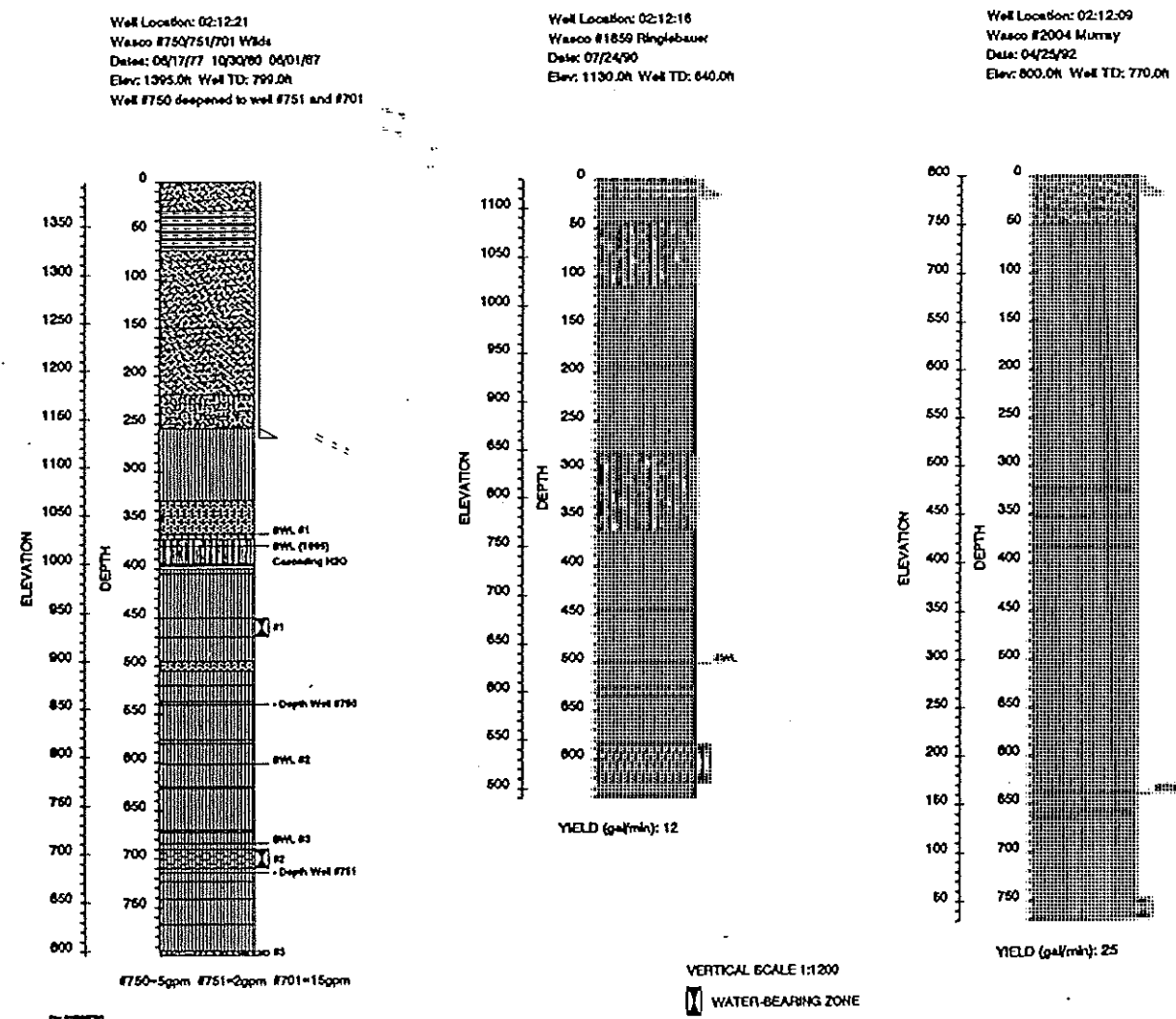


Figure 20. Examples of deep wells with deep static water levels, TLSA, Wasco County.

- Are these wells stable in regard to static water level?
- Should areas with a high proportion of these wells have more restricted allowable well spacing?

To date, there are no hydrograph wells are very few multiple measures in this type of well. This issue will be discussed again in the report recommendations.

The problem for both individual land owners and for Wasco County is that the prediction of well performance is highly dependent on individual well conditions. The best course to follow under these circumstances is close monitoring of existing densely spaced and deep wells and pump testing in a variety of aquifers. The following discussion attempts to answer in part, how closely spaced wells may be for optimum performance.

#### WELL SPACING - DOMESTIC

The subject of appropriate well spacing is a controversial one. In order to clarify points made in this discussion, proper well spacing is defined as spacing required in order to allow good operation of a domestic well in the shallowest perennial aquifer available. High rate irrigation wells will be addressed separately at the end of this section.

Regardless of aquifer type, most wells outside of the agricultural areas of TLSA show similar characteristics of rate and capacity (5 to 60 gpm at 100% drawdown in one hour). Under these conditions, observations may be made about the area of influence of any individual low rate, low specific capacity domestic well.

Since production (pump) tests are not available, at the present time it is necessary to use other observations to estimate the area affected by a single domestic well. A review of the 28 cross sections in this report shows the minimum horizontal distance to outcrop that can be maintained by several typical TLSA aquifers. On average, most low rate aquifers (basalts and sandstones) can maintain a distance to outcrop of 300-400 feet before failure. This distance is approximately the radius that would be affected by these wells if they were at 100% drawdown. Under most conditions, wells are only operated at 60% or less of maximum drawdown. Ideally, then, on the average, minimum well spacing should be in the range of 360 to 500 feet. Well spacing closer than one half this range should be avoided.

This somewhat vague estimation can be supplemented by other data. The map on the following page shows areas (called units) where well spacing is dens-

est in the TLSA. These units can be important tools in planning for conservation of ground water resource.

Table 3 shows each unit, the aquifers present in its wells, well densities, age of wells and average well spacing and average of the closest one third well spacing. These areas can provide the best information possible to support ground water development (or limitations on development). It is obvious that current average well spacing is controlled by zoning. But in each unit, some wells are very closely spaced, and it is this group which should be used to direct future development.

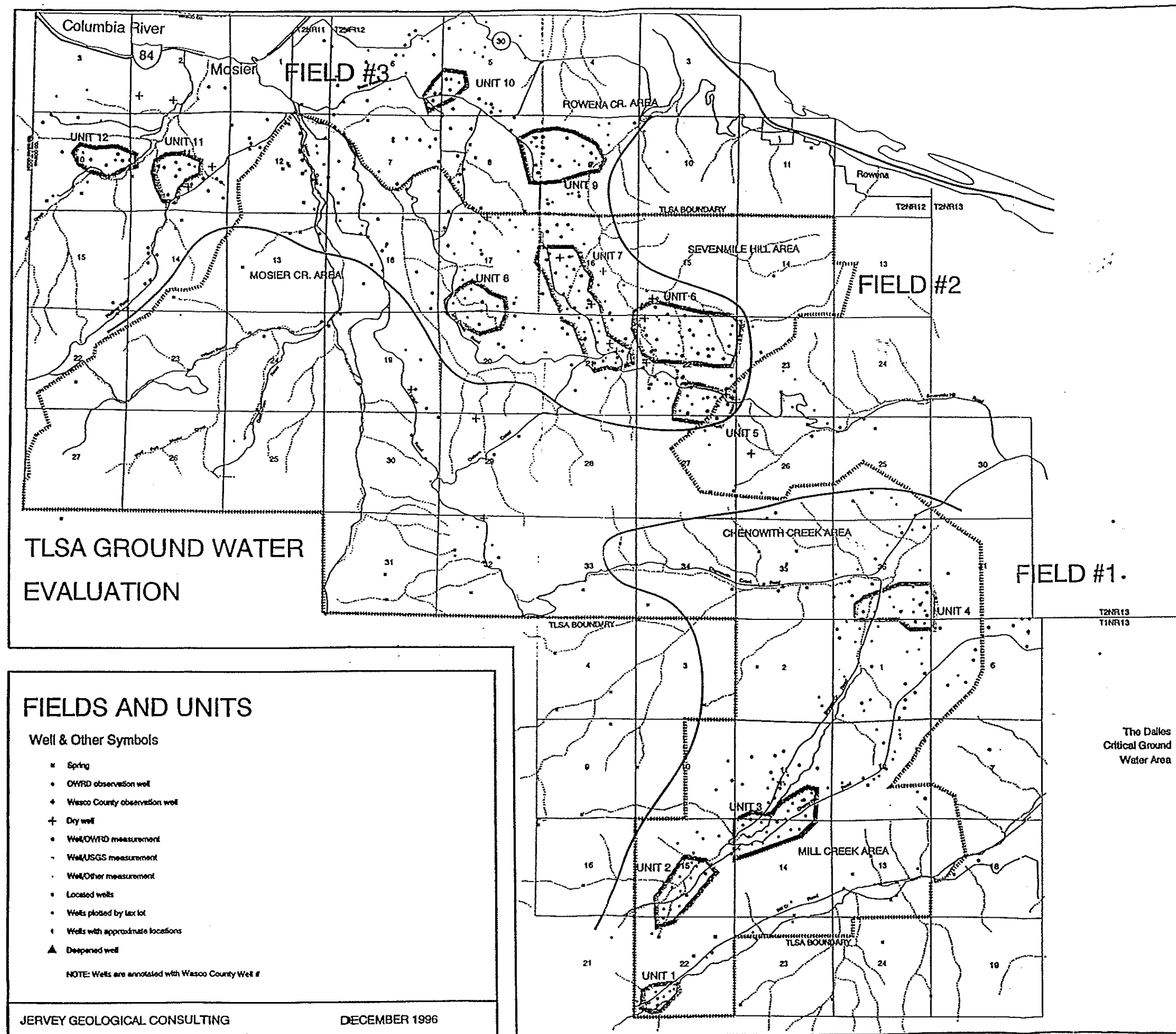
Going back to the beginning of this report, clearly there is a wide spread of theoretical estimates of how much recharge might be available. There is no inexpensive way to determine by these methods an accurate estimate of recharge or discharge. The biggest problem is in accurately estimating the amount of recharge any individual aquifer can receive, not how much is available. The best sources of information about this subject are actual wells that have been operated successfully over a reasonable period of time at a particular well density.

#### REDUCE RISK BY USING EXISTING WELL SPACING AS A GUIDELINE

Table 3 shows that for the most part, the units considered appear to support one well per 10 acre spacing. In addition, there are wells that are more closely spaced and give guidelines about what possible minimum spacing could be supported.

From this information, a simple planning tool can be developed. For sections where aquifer type and performance are known and drilling density is highest, well spacing may be one well per 10 acres (optimum) without undue risk. Because there are indications that higher densities may be feasible, an additional 10% of locations may be at closer spacing, for a total of about 70 wells per section allowable, with a 10 acre optimum and a 5 acre minimum spacing. Obviously there should be flexibility in applying this as a guideline.

In sections which have few wells, and especially in such sections with deep wells and static water levels a more conservative guideline should be set. A suggestion is that this type of section be limited to twenty acre per well spacing until such time as more is known about aquifers present and their performance. When that well density is approached, a section or area can be reviewed to see if a closer spacing is feasible. Or, if enough data exists, to compare it with other more densely drilled areas, which may be used as a rationale to increase drilling density.



REVIEW WELL DATA AS MORE INFORMATION IS AVAILABLE

When sections or areas reach about the maximum density described above, further subdivision should be reviewed in view of well performance. If the wells over time have not responded adversely to the closest current spacing, a slight increase in well density may be prudent. On the other hand if well performance has negative warning flags new drilling (or subdivision) may be restricted.

At this point it would be extremely useful to look at analogs in other areas, if they exist. Comparable development in conditions of similar rainfall and in similar aquifer types would also be helpful in assessing risk of increased well density.

This type of process should be in a deliberate manner for the best and most successful result. If well drilling were to immediately proceed from no wells in a section to one or two acre density, many errors and some severe problems would be unavoidable. This type of risk is unacceptable both to county residents using ground water and county taxpayers who must pay for court costs incurred by the county to defend permitted subdivision.

The following recommendations can be made to assist Wasco County in planning ground water development:

- In the short term, the recommended and minimum spacing discussed previously could provide a guideline for planning.
- Guidelines should be reviewed periodically as new information may affect them.
- The unit areas indicated (or some version of them) should be the sites for further collection of data. At least two measured wells and several pump tests in each of them would be a goal for the next two years. This information could be used to further refine the estimated wells allowed per acre above.
- Most of this effort should be made by landowners as volunteered work. Wasco County may be able to coordinate the collection of data and verify it, but the manpower requirement to survey these units is onerous and perhaps not primarily the responsibility of the county. It is possible that interested individuals may be able to do a great deal more in the area of data collection

UNIT #	AQUIFER SYSTEM	TOTAL ACRES		AVERAGE WELL DISTANCE FEET	AVERAGE LOWER 1/3 WELL DISTANCE FEET	DENSEST ACRES PER WELL	PRIORITY
		TOTAL WELLS	AREA ACRES				
1	TDC2A	8	49	6	388	318	3
2	TDC2A&D	12	142	12	604	416	4
3	TDC2B	19	212	11	653	478	5
4	TDC1&2B	17	177	10	708	491	5 HIGH
5	TPS1&1B	12	123	10	602	393	4
6	TF62/TRN2	33	342	10	599	386	3 HIGH
7	TRN2 PRDC1A TPSX	32	322	10	563	333	3 HIGH
8	PRDC1	9	138	15	798	580	8
9	PRPO1 HC TPSX	18	216	12	-	-	- HIGH
10	HC	7	68	10	-	-	-
11	MT/RC	7	97	14	-	-	-
12	RC	7	91	13	-	-	-

Table 3. Summary of well spacing in TLISA units.



than local or state government could afford to do.

- The effort above would have many positive rewards; one of the most important of these would be the emphasis on knowledge and control for the individual well owners. The more they know about their own situation and ground water as a whole, the better off the entire community will be.
- Continued effort on a number of fronts to improve well location accuracy; particularly important are dry holes, deepened wells and any wells with multiple static water level measurements.
- A manner of well naming so that one location would have one designation for all of its history. Many problems are caused by renumbering a well any time anything happens to it. The clerical problems this will create in the next ten to twenty years could be enormous.

The reason it is important to commit to this type of project is actually for the long term. At some point in future, one to two acre spacing for wells may be requested by development. At this extreme, it is best to use actual examples of well development to either permit or restrict denser drilling. Wasco County has done an exemplary job of data collection and should continue this effort.

#### WELL SPACING - IRRIGATION AREAS

Wells with high rates occur in the following areas: Mill Creek, Chenoweth Creek, Mosier Creek and adjacent orchard area. Wells with sustainable rates of greater than 60 gpm can, if operated continuously, easily affect water levels in areas of 1 to 5 square miles in the same aquifer system. In view of the possibility that these wells establish a more or less permanent cone of depression, it is probable that they have an impact on some domestic wells around them, if they are in the same aquifer system.

The cone of depression formed will, in the case of fracture controlled aquifers, not be circular but will have dimensions controlled by fracture trends. The domestic well owner should be aware of this and understand the possibility that his well may be affected by irrigation wells. For this and a variety of other reasons, production testing of a sampling of irrigation wells is strongly recommended in order to improve understanding of their performance characteristics and potential for interference over distance. This testing could also identify wells that have incurred significant damage over time, resulting in reduced rates. An

important relationship to develop would be the graph of well capacity versus radius of influence as a guideline to both irrigators and domestic well owners. This type of activity is probably best pursued by Oregon Water Resources Department.

The restriction of irrigation usage is not the domain of county regulation. However, the nomograph of capacity versus radius of influence should be used to control, at least to some extent, well spacing in irrigation wells. The detrimental effect of composite cones of depression could in many instances, be avoided with better information and spacing recommendations to water right holders. This matter has little to do with volume of water used; rather the proper and most efficient use of ground water available for irrigation.

#### WATER QUALITY

The evaluation of quality of ground water was not a primary goal of this report, however there are two general observations which may be made:

In the original TLSA questionnaire responses, more complaints were voiced about water quality than amount of water available. The most common objection was to water with high iron content and/or unpleasant odor. These wells are almost always located very close to fault or fracture zones. The ground water in them may be mixing with upward percolating warmer waters which also carry more minerals in solution. The most likely solution to this type of problem is in the purchase of equipment which will filter or remove offending minerals.

From the first section of this report, it may be surmised that septic fields might contaminate local water supplies in shallow aquifers. Periodic inexpensive testing for contamination is recommended to anyone concerned about this potential problem.

#### CONCLUSION

It is hoped that the information presented in this report will be helpful in the process of assessing the TLSA ground water resource. The current tendency toward higher precipitation offers an ideal time to gather data and learn more about TLSA aquifers. However, it is only a temporary reprieve from the average conditions that have to be incorporated into resource planning.

Many of the best observations and ideas in this report were based on comments by the TLSA Technical and Steering Committees, the interested public and the Wasco County Planning Staff. Together with well drillers and the local land owners, they can arrive at a reasonable approach to ground water development in the TLSA.

**ACKNOWLEDGEMENTS**

The people listed below were generous with ideas, suggestions and observations that are used in this study. The author wishes to thank them for their time and efforts.

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Betty Daniel	Greg Koonce	Mary Soden
Jim Deaton	Frank and Mary Kurz	Fred and Sylvian Stewart
Jackie Fulps	Nick and Mary Linebarger	

**PUBLIC AGENCIES/PRIVATE COMPANIES**

Larry Toll/Staff Wasco County Watermasters Office	Jerry Schmidt Oregon Water Consultants, Inc.
Ken Lite Oregon Water Resources Department	James Toole Toole and Sons Drilling
Rick Kienle Northwest Geological Services, Inc.	Ervin Sverdrup A & A Sales
Staff Wasco County Planning Office	Jim Johns/Staff Chenowith Irrigation Co-op
Members TLSA Steering Committee	Project Office/The Dalles Dam Army Corps of Engineers
Members TLSA Technical Committee	

**WATER WELL DRILLERS**

All well drillers in the past and present have contributed information to this study. Those who were especially helpful (in the detail of their well records and/or their comments on the subject) include:

Charles Austin	Leonard Marinelli
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Gilbert Clayton, Jr. and Sr.	Richard Murray
Harry Douthit	Clyde Root

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Exhibit B

Betzing Conditions

- 1) The permit shall allow one single family dwelling and attached garage only.
- 2) At a minimum all conditions required pursuant to the existing County ordinances regulating dwellings in RR-10 zone shall be applied as a condition of development.
- 3) The rear yard set back shall be the greater of 75 feet or the amount required by applicable County ordinance.
- 4) Betzing shall develop and maintain a water source which is capable of delivering water at the rate of 20 gallons per minute continuously for 50 minutes (1,000 gallons) on a year around basis.
- 5) Compliance with these conditions shall be checked though an on-site review by a qualified person selected by the County Planning Department.



**EXHIBIT 5**

**Soil Information – 49C and 50D**

## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				LIQUID LIMIT	PLAS- TICITY					
				(PCT)	4	10	40	200		INDEX				
0-7 IL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		IML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		IML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 IWB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (K)	EROSION FACTORS K	WIND EROD. GROUP (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	16.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	16.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
CEMENTED PAN														
BEDROCK														
SUBSIDENCE														
HYDROLYZABLE N														
FREQUENCY	DURATION	MONTHS	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP	FROST	ACTION
NONE			>6.0											

SANITARY FACILITIES		CONSTRUCTION MATERIAL	
SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY	ROADFILL	FAIR-AREA RECLAIM, THIN LAYER
SEWAGE LAGOON AREAS	SEVERE-SLOPE	SAND	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK	GRAVEL	IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE	TOPSOIL	FAIR-SLOPE
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER	POND RESERVOIR	WATER MANAGEMENT SEVERE-SLOPE

BUILDING SITE DEVELOPMENT														
SHALLOW EXCAVATIONS	MODERATE-DEPTH TO ROCK, SLOPE													
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE													
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE													
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE													
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION													
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE													
EMBANKMENTS, DIKES AND LEVEES	SEVERE-PIPING													
EXCAVATED PONDS, AQUIFER FED	SEVERE-NO WATER													
DRAINAGE	DEEP TO WATER													
IRRIGATION	SLOPE, ERODES EASILY													
TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY													
GRASSED WATERWAYS	SLOPE, ERODES EASILY													



RECREATIONAL DEVELOPMENT	
CAMP AREAS	MODERATE-SLOPE, DUSTY PLAYGROUNDS
PICNIC AREAS	MODERATE-SLOPE, DUSTY PATHS AND TRAILS
	SEVERE-SLOPE SEVERE-ERODES EASILY

[illegible]

Severe  
limitations  
(e) erosion

ORD SYM	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT'Y.	WINDTH. HAZARD	PLANT COMPET.	POTENTIAL PRODUCTIVITY COMMON TREES	SITE INDEX	TREES TO PLANT
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK	170	PONDEROSA PINE

Index of potential productivity @ avg. total ht. and 100yrs.

74 cubic metres/hectare/yr. = 57.2 ft<sup>3</sup>/ac.  $\triangleleft$

A = slight or no limitations.

U.S. Avg. = 41 ft<sup>3</sup>/ac/yr.

Index of potential productivity @ avg. total ht. and 100 g.s.

$$64 \text{ cubic metres/hectare/yr.} = 57.2 \text{ ft}^3/\text{ac.}$$

A = slight or no limitations.

U.S. Avg = 41 ft<sup>3</sup>/ac/yr.

[illegible][illegible]

POTENTIAL NATIVE PLANT	COMMONITY NAME	PERCENTAGE COMPOSITION (DRY WEIGHT)
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	
IDAHO FESCUE	FEID	45
BLUEBUNCH WHEATGRASS	AGSP	10
SANDBERG BLUEGRASS	POSE	5
NARROWLEAF BALSAMROOT	BASA3	2
ANTELOPE BITTERBRUSH	PUTR2	10
OREGON WHITE OAK	QUGA4	5
PONDEROSA PINE	PIPO	5

POTENTIAL PRODUCTION (LBS./AC. DRY WT):

FAVORABLE YEARS	
NORMAL YEARS	
UNFAVORABLE YEARS	

FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

50D WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH: (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.					LIQUID LIMIT	PLAS- TICITY			
				(PCT)	4	10	40	200		INDEX			
0-7	1L	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
7-28	1L, SIL	ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5			
28-44	1L, SCL	ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10			
44	1UB												
DEPTH: (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL	EROSION FACTORS	WIND EROD. GROUP	ORGANIC MATTER (PCT)	CORROSIVITY		
											STEEL	CONCRETE	
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.49	4	-	1-2	MODERATE	LOW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW	1.43					
44													
FLOODING				HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDRO- POTENTIAL	
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP
NONE			26.0						140-60	HARD	-		B MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK	SEVERE-PERCS SLOWLY, SLOPE			FAIR-AREA RECLAIM, THIN LAYER, SLOPE			
ABSORPTION FIELDS				ROADFILL			
SEWAGE LAGOON AREAS	SEVERE-SLOPE			SAND			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE			GRAVEL			IMPROBABLE-EXCESS FINES
SANITARY LANDFILL (AREA)	SEVERE-SLOPE			TOPSOIL			POOR-SLOPE
DAILY COVER FOR LANDFILL	POOR-SLOPE						
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE			EMBANKMENTS			SEVERE-PIPING
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE			DIKES AND LEVEES			SEVERE-NO WATER
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE			EXCAVATED PONDS			DEEP TO WATER
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE			AQUIFER FED			
LOCAL ROADS AND STREETS	SEVERE-SLOPE			DRAINAGE			SLOPE, ERODES EASILY
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE			IRRIGATION			SLOPE, ERODES EASILY
				TERRACES AND DIVERSIONS			
				GRASSED WATERWAYS			SLOPE, ERODES EASILY



## RECREATIONAL DEVELOPMENT

SEVERE-SLOPE		SEVERE-SLOPE	
CAMP AREAS		PLAYGROUNDS	
PICNIC AREAS	SEVERE-SLOPE	PATHS AND TRAILS	SEVERE-ERODES EASILY

## CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)

[illegible]

## WOODLAND SUITABILITY

[illegible]

# WINDBREAKS

[illegible]

## WILDLIFE HABITAT SUITABILITY

[illegible]

POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)

COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)
IDAHO FESCUE	FEID	45
SANDBERG BLUEGRASS	POSE	5
BLEEDING HEART GRASS	AGSP	10
NARROW LEAF BALSAMROOT	BASA3	2
MOUNTAIN LOOSESTRIFE	PUTR2	10
OREGON WHITE OAK	OUGA4	5
PONDEROSA PINE	PIPO	5
POTENTIAL PRODUCTION (LBS./AC. DRY WT.):		
FAVORABLE YEARS		950
NORMAL YEARS		800
UNFAVORABLE YEARS		450

---

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

## **EXHIBIT 6**

### **Guide for Using Soil Surveys**



**GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS**



**PREPARED BY  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON  
JUNE 1982**

GUIDE FOR USING SOIL SURVEY  
SINGLE PHASE INTERPRETATION SHEETS IN OREGON

This guide contains a detailed explanation of the Single Phase Interpretation Sheets (SPI), the kinds of rating terms used, and the information presented on the sheets.

Single Phase Interpretation Sheets have been prepared for each kind of soil that has been mapped in the county. Each sheet has a brief description of each kind of soil, its properties, and predictions of its behavior for various uses.

This guide has the following sections:

- I. Narrative Soil Description
- II. Estimated Soil Properties
- III. Explanation of Rating Terms
- IV. Sanitary Facilities
- V. Building Site Development
- VI. Construction Material
- VII. Water Management
- VIII. Recreational Development
- IX. Capability and Predicted Yield - Crops and Pasture
- X. Woodland Suitability
- XI. Windbreaks
- XII. Wildlife Habitat Suitability
- XIII. Potential Native Plant Community
- XIV. Terms and Definitions of Restrictive Features  
Used on "SPI" Sheets
- XV. Glossary

I. NARRATIVE SOIL DESCRIPTION

At the top of each SPI sheet is the map symbol, county in which applicable, and the name of the soil for each area on the soil map which has that symbol in it. Below this is a brief paragraph which describes the nature and properties of the soil and tells where the soil is on the landscape.



## II. ESTIMATED SOIL PROPERTIES

The table, "Estimated Soil Properties," at the top of the sheet, gives estimates of properties, characteristics, and conditions which influence the behavior of the soil when used for different purposes.

COMMENTS THAT FOLLOW HELP EXPLAIN EACH COLUMN ON THE TABLE.

Depth from Surface. The layers shown here take into consideration those properties that influence plant growth and the engineering behavior of the soil.

Classification. Three systems of soil classification are shown in this table. The USDA texture is determined by the percent of sand (.05 to 2.0 millimeters), silt (.05 to .002 millimeter), and clay (below .002 millimeter) after the particles larger than 2 millimeters have been removed. Major soil textural classes are given such as sands, sandy loams, silt loam, clay loam, and clay. Presence of significant amounts of rock fragments is indicated by modifiers such as gravelly, shaly, cobbly, or stony. Muck, peat, mucky peat, and peaty muck are used for organic soils in place of the textural class names for mineral soils.

In the block indicating USDA texture, standard abbreviations are used to indicate texture. Up to three textures can be entered on each line. If more than one texture is used, they are separated by commas. If modifiers are used, they are attached to the texture by a hyphen, e.g., GR-SL. If a layer is stratified, SR is used as a modifier, and the end members of the textural range are connected by hyphens, e.g., SR-S-L or SR-S-GR-C. The following list of modifiers and textures may appear on the Single Phase Interpretation Sheets:

### Modifier:

BY	Bouldery	GR	Gravelly
BYV	Very bouldery	GRC	Coarse gravelly
BYX	Extremely bouldery	GRF	Fine gravelly
CB	Cobbly	GRV	Very gravelly
CBA	Angular cobbly	GRX	Extremely gravelly
CBV	Very cobbly	MK	Mucky
CBX	Extremely cobbly	PT	Peaty
CN	Channery	SH	Shaly
CNV	Very channery	SHV	Very shaly
CNX	Extremely channery	SHX	Extremely shaly
CR	Cherty	SR	Stratified
CRC	Coarse cherty	ST	Stony
CRV	Very cherty	STV	Very stony
CRX	Extremely cherty	STX	Extremely stony
FL	Flaggy	SY	Slaty
FLV	Very flaggy	SYV	Very slaty
FLX	Extremely flaggy	SYX	Extremely slaty

Texture or terms used in lieu of texture:

COS	Coarse sand	CE	Coprogenous earth
S	Sand	CEM	Cemented
FS	Fine sand	DE	Diatomaceous earth
VFS	Very fine sand	FB	Fibric material
LCOS	Loamy coarse sand	FRAG	Fragmental material
LS	Loamy sand	G	Gravel
LFS	Loamy fine sand	GYP	Gypsiferous material
LVFS	Loamy very fine sand	HM	Hemic material
COSL	Coarse sandy loam	ICE	Ice or frozen soil
SL	Sandy loam	IND	Indurated
FSL	Fine sandy loam	MARL	Marl
VFSL	Very fine sandy loam	MPT	Mucky-peat
L	Loam	MUCK	Muck
SIL	Silt loam	PEAT	Peat
SI	Silt	SG	Sand and gravel
SCL	Sandy clay loam	SP	Sapric material
CL	Clay loam	UWB	Unweathered bedrock
SICL	Silty clay loam	VAR	Variable
SC	Sandy clay	WB	Weathered bedrock
SIC	Silty clay	CIND	Cinders
C	Clay		

The Unified system is based on the identification of soils according to particle size, plasticity, liquid limit, and organic matter. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW - well-graded gravel, GP - poorly graded gravel, GM - silty gravel, GC - clayey gravel, SW - well-graded sands, SP - poorly graded sands, SM - silty sands, and SC - clayey sands. There are six classes of fine-grained soils, identified as ML - inorganic silts, CL - inorganic clays (lean clays), OL - organic silts of low plasticity, MH - inorganic silts with high liquid limits, CH - inorganic clays of high plasticity (fat clays), and OH - organic clays of medium to high plasticity. There is one class of highly organic soils, identified as PT - peat and other highly organic soils.

The American Association State Highway Transportation Officials (AASHTO) system is used to classify soils according to those properties that affect use in highway construction and maintenance. In this system, a mineral soil is placed in one of the seven basic groups ranging from A-1 to A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. In group A-1 are gravelly soils of high-bearing strength, or the best soils for subgrade (foundation). At the other extreme, in group A-7, are clay soils that have low strength when wet and that are poorest soils for subgrade. Highly organic soils (peat and muck) are classified in an A-8 group. These organic soils are unsuitable for use in embankments and subgrades. They are highly compressible and have low strength.

Coarse fragments over 3 inches refers to percent by weight of rock fragments. In the Unified and AASHTO systems, these fragments are not considered in the classification. However, it is necessary to know how much of the fragments are present in evaluating the class.



Percent of Material Passing various sieve sizes is determined on a weight basis. The number 4 sieve is 4.7 mm in diameter, the number 10 is 2.0 mm, the number 40 is 0.42 mm, and the number 200 is 0.074 mm. In the Unified system, the fines (silt and clay) are the material passing the number 200 sieve. Gravel is that material retained on the number 4 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand. In the AASHTO system, the material passing the number 200 sieve is clay and silt. Gravel is the material retained on the number 10 sieve. The amount retained on the number 200 sieve minus the gravel is the percent sand.

The figures shown under each sieve size are obtained either by laboratory test data or by estimates based on USDA textural classes.

Liquid limit and plasticity index indicate the effect of water on the strength and consistence of soil material. As the moisture content of a clayey soil is increased from a dry state, the material changes from a semisolid to a plastic state. If the moisture content is further increased, the material changes from a plastic to a liquid state. The plastic limit is the moisture content at which the soil material changes from a semisolid to a plastic state; and the liquid limit from a plastic to a liquid state. The plasticity index is the numerical difference between the liquid limit and the plastic limit. It indicates the range of moisture content within which a soil material is plastic.

Liquid limit and plasticity index are obtained either by engineering tests or by estimates of USDA texture and consistence. Assuming 15-bar water is known, liquid limit can be estimated as follows: 2 times 15-bar water percentage plus 10 equals liquid limit.

Clay is shown as a range of total clay as a percent of the less than 2 mm material for each horizon. Where clay is not applicable, such as in organic layers, no figures are shown.

Moist bulk density of the soil is the mass per unit volume of the <2 mm material at a moisture content near field capacity (1/3-bar in most soils). It excludes the mass of the liquid phase, and the volume over which the weight is determined includes interparticle space. It is expressed as grams per cubic centimeter or pounds per cubic foot.

Permeability is that quality of a soil that enables it to transmit water or air. Accepted as a measure of this quality is the rate at which soil transmits water while saturated. Permeability is estimated on the basis of those soil characteristics observed in the field, particularly structure and texture. The estimates do not take into account lateral seepage or such transient soil features as plowpans and surface crusts.

The following classes and rates are used:

<u>Permeability class</u>	<u>Numerical range (inches per hour)</u>
Very slow	Less than 0.06
Slow	0.06 - 0.2
Moderately slow	0.2 - 0.6
Moderate	0.6 - 2.0
Moderately rapid	2.0 - 6.0
Rapid	6.0 - 20.0
Very rapid	More than 20

Available water capacity is the ability of soils to hold water for use by most plants. It is commonly defined as the difference between the amount of water in the soil at field capacity and the amount at the wilting point of most crop plants. The values are reported as inches of water per inch of soil.

<u>Class</u>	<u>Inches/inch</u>
Very high	More than .20
High	.15 - .20
Medium	.10 - .15
Low	.05 - .10
Very low	Less than .05

Soil reaction is the degree of acidity or alkalinity of a soil, expressed in pH values. The pH values and terms used to describe soil reaction are as follows:

<u>Reaction description</u>	<u>pH range</u>
Extremely acid	Below 4.5
Very strongly acid	4.5 - 5.0
Strongly acid	5.1 - 5.5
Medium acid	5.6 - 6.0
Slightly acid	6.1 - 6.5
Neutral	6.6 - 7.3
Mildly alkaline	7.4 - 7.8
Moderately alkaline	7.9 - 8.4
Strongly alkaline	8.5 - 9.0
Very strongly alkaline	Above 9.0



Salinity of soils is based on the electrical conductivity of the saturation extract as expressed in millimhos per centimeter at 25°C. Electrical conductivity is related to the amount of salts more soluble than gypsum in the soil. High amounts of soluble salts in the soil affect plant growth and the corrosion of uncoated steel. A value of 2.0 or less would indicate a very slight limitation for crop production whereas a value of more than 16.0 would indicate a severe salinity problem for crop production. A dash is shown if salinity is no problem for growing plants.

<u>Class</u>	<u>Salinity</u> <u>(MMHOS/CM)</u>
1. Very slightly saline	0-4
2. Slightly saline	4-8
3. Moderately saline	8-16
4. Strongly saline	> 16

Shrink-swell potential is the relative change in volume to be expected of soil material with changes in moisture content, that is, the extent to which the soil shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads, and other structures. A high shrink-swell potential indicates a hazard to maintenance of structures built in, on, or with material having this rating.

The soil erodibility factor (K) used in the universal soil loss equation is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties affecting soil erodibility are: soil texture (especially the percent of silt plus very fine sand), percent of sand greater than 0.10 mm, organic matter content, soil structure (type, grade), soil permeability, clay mineralogy, and rock fragments.

K values and classes used are as follows:

Low .00, .02, .05, .10, .15, .17, .20

Moderate .24, .28, .32, .37

High .43, .49, .55, .64

Soil loss tolerance (T), sometimes called permissible soil loss, is the maximum rate of soil erosion that will permit a high level of crop productivity to be sustained economically and indefinitely. T values of 1 through 5 are used. The numbers represent the permissible tons of soil loss per acre per year where food, feed, and fiber plants are grown. T values are not applicable to construction sites or to other nonfarm uses of the erosion equation.

A wind erodibility group consists of soils having the same potential for soil blowing. The properties that affect soil blowing are those that affect the stability of the aggregates against breakdown by tillage and abrasion from wind. These properties are texture, organic matter, calcium carbonate content, mineralogy and perhaps others such as freezing and thawing, or wetting and drying. Texture of the surface inch of soil has the greatest single influence on soil erodibility and is used as a guide for estimating wind erodibility groups. There are seven groups with group 1 being the most susceptible to soil blowing and group 7 being the least susceptible.

In parts of the state where wind erosion is not considered to be a problem, a dash is entered for the surface layer.

Organic matter percentage is shown in the surface layer. Whole numbers are used from 1 and above, tenths from 1 to .5, and <.5 below .5, e.g., <.5-1, 2-5.

Corrosivity pertains to potential soil-induced chemical action that dissolves or weakens uncoated steel or concrete. Rate of corrosion of uncoated steel is related to soil properties such as drainage, texture, total acidity, electrical resistivity, and electrical conductivity of the soil material. Corrosivity for concrete is influenced mainly by the content of sodium or magnesium sulfate but also by soil texture and acidity. Installations of uncoated steel that intersect soil boundaries or soil horizons are more susceptible to corrosion than installations entirely in one kind of soil or in one soil horizon. Corrosivity is rated for the whole soil rather than for each horizon. A corrosivity rating of low means that there is a low probability of soil-induced corrosion damage. A rating of high means that there is a high probability of damage, so that protective measures for steel and more resistant concrete should be used to avoid or minimize damage.

Flooding is given in terms of frequency, duration, and months. Duration and months that floods are likely to occur are given only for soils that flood more frequently than rare. Following is a brief explanation.

Frequency:	None	(No reasonable possibility of flooding)
	Rare	(Flooding unlikely but possible under abnormal conditions)
	Common	(Flooding likely under normal conditions)
		Occasional (Less often than once in 2 years)
		Frequent (More often than once in 2 years)
Duration:	Very brief	(Less than 2 days)
	Brief	(2 days to 7 days)
	Long	(7 days to 1 month)
	Very long	(More than 1 month)
Months:	These are the months of probable flooding.	



Water table is given in terms of depth, kind, and months. The depth range of a seasonally high water table is given to the nearest half foot. If the water table is below 6 feet or if the water table exists for less than 1 month, the value greater than 6 (6.0) is used. Kinds of water table listed are: apparent, perched, or artesian. The months shown are those within which the water table is likely to be within the ranges given in the depth column.

A cemented pan prevents or restricts root and water penetration. These include duripan, petrocalcic, orstein and other cemented layers. "Thin" indicates the layer is thin enough that excavation can be made with common construction equipment for pipelines and other excavations. "Thick" indicates that special equipment or blasting can be expected to be necessary. A dash indicates a pan does not occur above a 60-inch depth.

Bedrock prevents or restricts root and water penetration. "Soft" rock can be excavated using trenching machines, backhoes, and other equipment common to making excavations. "Hard" rock requires blasting or use of special equipment above what is considered normal. The normal depth of observation is about 60 inches.

Subsidence is induced when organic soils or other wet soils are drained and is expressed in inches.

Hydrologic soil groups are used to estimate runoff from rainfall. Soil properties are considered that influence the minimum rate of infiltration obtained for a bare soil after prolonged wetting. These properties are: depth of seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The influence of ground cover is treated independently--not in hydrologic soil groups.

The soils are classified into four groups, A, B, C, and D with Group A having the lowest runoff potential and Group D having the highest runoff potential.

Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravel. These soils have a high rate of water transmission.

Group B soils have moderately low runoff potential and moderate infiltration rates when thoroughly wetted. They consist chiefly of moderately deep to deep, moderately to well drained soils with moderately fine to moderately coarse textures and moderately slow to moderately rapid permeability. These soils have a moderate rate of water transmission.

Group C soils have moderately high runoff potential and slow infiltration rates when thoroughly wetted. They consist chiefly of soils with a layer that impedes downward movement of water, soils with moderately fine to fine texture, soils with slow infiltration due to salts or alkali, or soils with moderate seasonal water tables.

These soils may be somewhat poorly drained. They include well and moderately well drained soils with slowly and very slowly permeable layers such as fragipans, hardpans, hard bedrock and the like at depths of 20 to 40 inches. These soils have a slow rate of water transmission.

Group D soils have high runoff potential and very slow infiltration rates when thoroughly wetted. They consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, soils with very slow infiltration due to salts or alkali, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Potential frost action is the likelihood of upward or lateral expansion of soil (frost heave) because of the formation of segregated ice lenses and the subsequent loss of strength and collapse on thawing. Daily freezing and thawing that tends to lift the crowns of plants out of the group is not included because it does not contribute to the large movement produced by formation of ice lenses.

In areas where potential frost action is not common, such as west of the Cascade Mountains, no interpretations for potential frost action are made.

Where frost action is a potential problem, three classes are used as follows:

- |          |  |
|----------|--|
| Low      | Soils rarely subject to the formation of ice lenses.   |
| Moderate | Soils susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength.        |
| High     | Soils highly susceptible to the formation of ice lenses, resulting in frost heave and subsequent loss of strength. |

### III. EXPLANATION OF RATING TERMS

The soil is also rated for selected uses expected to be important or potentially important to the user. Ratings are given in terms of limitations and suitability. Up to three of the most restrictive features are listed. There may be other features that need to be treated to overcome soil limitations for a specific purpose.

For some uses, degrees of soil limitations are used. The rating terms used are SLIGHT, MODERATE, and SEVERE. For other uses, degrees of soil suitability are used. The rating terms used are GOOD, FAIR, and POOR. Up to three restrictive features are listed if the degree of limitation is more than SLIGHT or if the degree of suitability is less than GOOD.



#### Limitation Ratings:

Slight soil limitation is the rating given soils that have properties favorable for the rated use. This degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate soil limitation is the rating given soils that have properties moderately favorable for the rated use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the performance of the structure or other planned use is somewhat less desirable than for soils rated slight. Some soils rated moderate require treatment such as artificial drainage, runoff control to reduce erosion, extended sewage absorption fields, extra excavation, or some modification of certain features through manipulation of the soil. For these soils, modification is needed for those construction plans generally used for soils of slight limitation. Modification may include special foundations, extra reinforcements, sump pumps, and the like.

Severe soil limitation is the rating given soils that have one or more properties unfavorable for the rate used, such as steep slopes, bedrock near the surface, flooding hazard, high shrink-swell potential, a seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these soils, however, can be improved by reducing or removing the soil feature that limits use; but, in many situations, it is difficult and costly to alter the soil or to design a structure to compensate for a severe degree of limitation.

#### Suitability Ratings:

A rating of good means the soils have properties favorable for the use. Good performance and low maintenance can be expected.

A rating of fair means the soil is generally favorable for the use. One or more soil properties make these soils less desirable than those rated good.

A rating of poor means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration.

#### IV. INTERPRETATIONS FOR SANITARY FACILITIES

Septic tank absorption fields. A septic tank absorption field is a soil absorption system for sewage disposal. It is a subsurface tile or perforated pipe system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.

Criteria used for rating soils (slight, moderate, and severe) for use as absorption fields are based on the limitations of the soil to absorb effluent. Important features affecting this use are permeability, depth to a seasonal water table, flooding, slope, depth to bedrock or hardpan, stoniness, and rockiness.

Sewage lagoons. A sewage lagoon (aerobic) is a shallow lake used to hold sewage for the time required for bacterial decomposition. The requirements for this embankment are the same as for other embankments designed to impound water. (See embankments, dikes, and levees.)

Soil requirements for basin floors of lagoons are slow rate of seepage, even surface of low gradient and low relief, and little or no organic matter.

Sanitary landfill. Because trenches as deep as 15 feet or more are used for many landfills, geologic investigation is needed to determine the potential for pollution of ground water by leachates as well as to ascertain the design needed. Soil survey borings commonly are limited to depths of 5 or 6 feet; however, for some soils, properties can be predicted with reasonable confidence below such depths. Predictions relative to probable depth to a seasonal high water table or to bedrock can be useful in planning for detailed investigation.

Sanitary landfill (trench-type). This type of landfill is a dug trench in which refuse is buried daily and the refuse is covered with a layer of soil material at least 6 inches thick. The material used for covering is the soil excavated in digging the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Important features affecting trench-type sanitary landfills are depth to a seasonal high water table, flooding, permeability, slope, texture, depth to bedrock or hardpan, stoniness and rockiness.

Sanitary landfill (area-type). In this type of landfill, refuse is placed on the surface of the soil in successive layers. The soil used for daily and final cover generally must be hauled in from elsewhere. A final cover of soil material at least 2 feet thick is placed over the fill when it is completed. Important features affecting this type of landfill are depth to a seasonal high water table, flooding, permeability, and slope.

Daily cover for area-type landfill generally must be obtained from a source away from the site. Suitability of a soil for use as daily cover is based on properties that reflect workability such as slope, wetness, ease of digging, moving, and spreading the soil during both wet and dry periods. Thickness of suitable soil material will determine the supply. Some damage to borrow area is expected, but if revegetation and erosion control could become serious problems in that area, the soil is rated as poor for use as cover material for fills.



## V. BUILDING SITE DEVELOPMENT

Shallow excavations are those that require digging or trenching to a depth of less than 6 feet. Important features affecting excavations are a seasonally high water table, flooding, slope, soil texture, depth to bedrock or other cemented layer, stoniness, and rockiness.

Dwellings with and without basements, as considered here, are for structures not more than 3 stories high that are supported by foundation footings placed in undisturbed soil. The features that affect the rating of a soil for dwellings are those that relate to capacity to support load and resist settlement under load, and those that relate to ease of excavation. Soil properties that affect capacity to support load are wetness, susceptibility to flooding, density, plasticity, texture, and shrink-swell potential. Those that affect excavation are wetness, slope, depth to bedrock, and content of stones and rocks.

Small commercial buildings, as considered here, have the same requirements and features as described for dwellings. The main difference for commercial buildings is a reduction of slope limits for each limitation class. Canneries, foundries, and the like are not considered here because foundation requirements generally would exceed those of ordinary 3-story dwellings.

Local roads and streets, as rated here, have an allweather surface expected to carry automobile traffic all year. They have a subgrade of underlying material; a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement; and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are built mainly from soil at hand, and most cuts and fills are less than 6 feet deep.

Soil properties that most affect design and construction of roads and streets are load-supporting capacity and stability of the subgrade, and the workability and quantity of cut and fill material available. The AASHTO and Unified classifications of the soil material, and also the shrink-swell potential, indicate traffic-supporting capacity. Wetness and flooding affect stability of the material. Slope, depth to hard rock or cemented layers, content of stones and rocks, and wetness affect ease of excavation and amount of cut and fill needed to reach an even grade.

Lawns, Landscaping, and Golf Fairways. The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways, and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criteria for rating. Traps, trees, roughs, or greens are not considered as part of the golf fairway.

The properties considered are those that affect plant growth and trafficability after establishing vegetation. The properties that affect plant growth are the content of salt, sodium and sulfidic materials, soil reaction, depth to water table, depth to bedrock or cemented pan, and the available water capacity of the upper 40 inches of soil. The properties that affect trafficability after vegetation is established are flooding, wetness, slope, stoniness, and the amount of clay, sand or organic matter in the surface layer.

## VI. CONSTRUCTION MATERIAL

This section gives the suitability of the soil as source material for construction purposes.

Suitability ratings of good, fair, or poor are given for soils used as a source of roadfill and topsoil. Ratings of probable and improbable are given for sand and gravel.

A rating of probable means that on the basis of the available evidence, the source material is likely to occur in or below the soil. A rating of improbable means that the source material is unlikely to occur within or below the soil. This rating does not consider the quality of the source material because quality depends on how the source material will be used.

Roadfill is soil material used in embankments for roads. The suitability ratings reflect (1) the predicted performance of soil after it has been placed in an embankment that has been properly compacted and provided with adequate drainage, and (2) the relative ease of excavating the material at borrow areas.

Good or fair roadfill material is rated poor where the depth to bedrock or hardpan is less than about 3 feet.

Sand. Sand as a construction material is usually defined as the size of particles ranging from .074 mm (sieve #200) to 4.76 mm (sieve #4) in diameter. Sand is used in greater quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated.

The properties used to evaluate the soils as a probable source for sand are the grain size as indicated by the Unified Soil Classification, the thickness of the sand layer, and the amount of rock fragments in the soil material.

If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.



Gravel. Gravel as a construction material is defined as the size of particles ranging from 4.76 mm (sieve #4) to 76 mm (3 inches) in diameter. Gravel is used in great quantities in many kinds of construction. Specifications for each purpose vary widely. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the gravel for specific purposes is not evaluated.

The properties used to evaluate the soil as a probable source for gravel are grain size as indicated by the Unified Soil Classification, the thickness of the gravel layer and the amount of rock fragments in the soil material. If the lowest layer of the soil contains gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used for topdressing an area where vegetation is to be established and maintained. Suitability is affected mainly by ease of working and spreading the soil material, as for preparing a seedbed; response of plants when fertilizer is applied; absence of substances toxic to plants; and absence of high amounts of soluble salts or alkali.

Texture of the soil material and its content of stone fragments are characteristics that affect suitability, but also considered in the ratings is damage that will result at the area from which topsoil is taken.

## VII. WATER MANAGEMENT

Pond reservoir areas hold water behind a dam or embankment. Features affecting this use are permeability, depth to bedrock, and depth to cemented pan.

Embankments, dikes, and levees are earthfills designed to hold back water. Features affecting these uses are shear strength, compressibility, permeability of the compacted soil, susceptibility to piping, compaction characteristics, shrink-swell potential, and stoniness. Ratings given apply only to small, homogeneous embankments.

Excavated ponds aquifer fed are bodies of water created by excavating a pit or dugout. Excavated ponds may be divided into two types: those fed by ground water aquifers and those fed by surface runoff. Rated here are those fed by aquifers. Excluded are ponds fed by runoff and also embankment-type ponds where the depth of water impounded against the embankment exceeds 3 feet. The assumption is made that the pond is properly designed, located, and constructed, and that the water is of good quality.

Soil properties affecting aquifer-fed ponds are the existence of a permanent water table, permeability of the aquifer, and properties that interfere with excavation--stoniness and rockiness.

Drainage of cropland and pasture is affected by such soil features as permeability; depth to bedrock, cemented pan, fragipan, claypan, or other layers that influence rate of water movement; depth to seasonal water table; slope; stability of ditchbanks; susceptibility to flooding or ponding; salinity or alkalinity; and availability of outlets for drainage.

Irrigation suitability of a soil is affected by such features as slope; susceptibility to stream overflow; water erosion or soil blowing; soil texture; content of stones; accumulations of salts and alkali; depth of root zone; rate of water intake at the surface; permeability of soil layers below the surface layer and in fragipans or other layers that restrict movement of water; amount of water held available to plants; and need for drainage, or depth to water table.

Terraces and diversions are embankments or ridges constructed across the slope to intercept runoff so that it soaks into the soil or flows slowly into a prepared outlet. Features affecting these uses are percent, length, and shape of slope; depth to bedrock or other unfavorable material; presence of stones; permeability; hazards to water erosion, soil blowing, and soil slipping; availability of outlets; and ease or difficulty in the establishment of vegetation.

Grassed waterways are constructed waterways or outlets shaped or graded and established in suitable vegetation as needed for the safe disposal of runoff from a field, diversion, terrace, or other structure. Soil features affecting this use are slope, susceptibility to erosion, drouthiness, excess alkali and salt, permeability, rooting depth, rock outcrops, stoniness, wetness, and ease or difficulty in the establishment of vegetation.

#### VIII. RECREATIONAL DEVELOPMENT

Knowledge of soils is necessary in planning, developing, and maintaining areas used for recreation. In this section the soils are rated according to limitations that affect their suitability for camp areas, playgrounds, picnic areas, and paths and trails.

Camp areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little preparation of the site is required other than shaping and leveling for tent and parking areas. Camp areas are subject to heavy foot traffic and limited vehicular traffic. Soil features affecting this use are wetness, flooding during the season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.



Playgrounds are areas used intensively for baseball, football, badminton, and similar organized games. Soils suitable for this use need to withstand intensive foot traffic. Soil features affecting this use are wetness, flooding during season of use, permeability, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, dustiness, and depth to bedrock.

Picnic areas are attractive natural or landscaped tracts used primarily for preparing meals and eating outdoors. These areas are subject to heavy foot traffic. Most of the vehicular traffic, however, is confined to access roads. Soil features affecting this use are wetness, flooding during the season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

Paths and trails are used for local and cross country travel by foot or horseback. Design and layout should require little or no cutting or filling. Soil features affecting these uses are wetness, flooding during season of use, slope, surface soil texture, amount of pebbles, cobbles, or stones on the surface, presence of rock outcrops, and dustiness.

#### IX. CAPABILITY AND PREDICTED YIELDS - CROPS AND PASTURE

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, and other characteristics of the soil; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of the soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, all kinds of soils are grouped at three levels: the capability class, subclass, and unit. The capability unit is a grouping of soils into a defined management unit which is not provided on the SPI sheet.

Capability classes - The broadest groups are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes.

Capability subclasses are soil groups with one class; they are designated by adding a small letter--e, w, s, or c--to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, drouthy, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is too hot, too cold, or too dry for production of many crops.

In Class I there are no subclasses because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by w, s, and c because the soils in Class VI are subject to little or no erosion though they have other limitations that restrict their use largely to pasture, range, woodland, or recreation.

Capability classes and subclasses are given for both nonirrigated and irrigated conditions.

Yields are given for nonirrigated or irrigated conditions or both depending on the use of the particular soils. These are predicted average acre yields obtainable under a high level of management. A high level of management consists of farming practices that research, field trials, and experience indicate produce the highest net returns.



## X. WOODLAND SUITABILITY

This section deals with the potential productivity and management problems in the use of the soils for woodland production.

The species listed in the column for potential productivity of common trees is the one for which site index is given. Site index is an indication of potential productivity and is based on the average total height of the dominant and codominant trees in the stand at the age of 100 years.

Dominant and codominant Douglas-fir (coast) trees growing in a well-stocked stand on site class 1 soils will reach a height of 186 feet or more at the age of 100 years; those on site class 2 soils will reach heights of 156 to 185 feet; those on site class 3 soils, heights of 126 to 155 feet; those on site class 4 soils, heights of 96 to 125 feet; and those on site class 5 soils, heights of 95 feet or less.

Seven site classes are used for ponderosa pine. Site class 1 soils will reach a height of 113 feet or more at age of 100 years; those on site class 2 soils will reach heights of 99 to 112 feet; those on site class 3 soils, heights of 85 to 98 feet; those on site class 4 soils, heights of 71 to 84 feet; those on site class 5 soils, heights of 57 to 70 feet; those on site class 6 soils, heights of 43 to 56 feet; and those on site class 7 soils, heights of less than 43.

Douglas-fir (interior) growing on site class 1 soils will reach a height of 86 feet or more at the age of 50 years; those on site class 2 soils will reach heights of 76 to 85 feet; those on site class 3 soils, heights of 66 to 75 feet; those on site class 4 soils, heights of 56 to 65 feet; those on site class 5 soils, heights of 46 to 55 feet; those on site class 6 soils, heights of 36 to 45 feet; and those on site class 7 soils, heights less than 36 feet.<sup>1/</sup>

The mean site index is given for the listed species. It is based on field sampling.

The ordination symbol column gives a connotative symbol representing class and subclass. The first element in the ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the common tree species listed.<sup>2/</sup> Therefore, 16 means 16 cubic meters per hectare per year of wood is produced at the point where mean annual increment culminates. One cubic meter per hectare equals 14.3 cubic feet per acre. The second element is a letter expressing

<sup>1/</sup> Douglas-fir (interior) site index may also be given using the ponderosa pine growth curves.

<sup>2/</sup> Before March 31, 1982, this number was the site class as determined by site index.

selected soil properties associated with moderate or severe hazards or limitations in woodland use or management. Subclass R represents relief or slope steepness, subclass X represents stoniness or rockiness, subclass W represents excessive wetness, subclass T represents toxic substances, subclass D represents restricted rooting depth, subclass C represents clayey soils, subclass S represents sandy soils, subclass F represents fragmental or skeletal soils, and subclass A represents slight or no limitations. Subclass priorities are in the order listed above.

In the columns below management problems, the ratings used are slight, moderate, and severe.

The erosion hazard is based on the condition of the woodland following cutting or logging operations, or where the soil is exposed along roads, trails, or log-yarding areas.

Equipment limitations are a reflection of limitations in the use of equipment commonly employed in managing or harvesting of the tree crop. Major criteria are slope, rockiness, wetness, and texture.

Seedling mortality is the degree of expected loss of natural or planted tree seedlings as influenced by soil and topography.

Windthrow hazard is the degree of expected blowdown during periods of high wind and excessive soil wetness. It considers the soil characteristics that affect the development of tree roots and the ability of the soil to hold trees firmly.

Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover.

The woodland suitability section usually is not completed for soils primarily in cropland and those that do not produce commercial trees.

## XI. WINDBREAKS

This section deals with windbreak and shelterbelt plantings. The intent is to provide information on the tree species that are best suited for the particular soils. The height expected at 20 years of age is indicated for each species shown. In areas, where windbreaks are not normally needed, an entry of "none" is shown.

## XII. WILDLIFE HABITAT SUITABILITY

This section rates soils on their potential for producing various kinds of wildlife habitat. Soil suitability is one of the important factors necessary to produce desired populations of wildlife. Other



important factors, such as present land use and existing wildlife populations, require onsite investigation for their evaluation and are not considered here.

Each soil is rated for those habitat elements listed by columns, and from these ratings, each soil is rated for its suitability to produce various kinds of wildlife habitat--openland habitat, woodland wildlife habitat, wetland wildlife habitat, and rangeland wildlife habitat. Soils are rated for rangeland wildlife habitat only if native range plants are a dominant part of the natural plant community. They are rated for woodland wildlife habitat if trees are a dominant part of the natural plant community. Soils rated for woodland wildlife habitat usually are not rated for rangeland wildlife habitat and vice versa. Openland wildlife habitat includes cropland and pasture.

Levels of suitability are expressed in terms of good, fair, poor, and very poor.

The grain and seed and grass and legume columns have a close relationship to the Capability and Predicted Yields section. Wild herbaceous plants and shrubs columns have a close relationship to the Rangeland and Woodland Suitability sections. The hardwood trees and conifer plants columns have a close relationship to the Woodland Suitability section. However, dry soils in eastern Oregon that do not produce trees other than juniper may have no relationship to the Woodland Suitability section where these soils are irrigated.

#### XIII. POTENTIAL NATIVE PLANT COMMUNITY (Rangeland or Forest Understory Vegetation)

Common plant name. Common names of the major plants (usually those that contribute more than 5 percent of the composition) in the potential (climax) plant community are listed.

Percentage composition is an approximate percentage or percentage range of total annual production, dry weight, that each plant contributes to the total potential (climax) production.

The potential production in pounds per acre dry weight is the approximate total annual production of all plants normally growing on the soil in climax condition. In favorable years production is significantly greater than average; in normal years production is a long-term average; and in unfavorable years production is below average.

XIV. TERMS AND DEFINITIONS OF RESTRICTIVE FEATURES  
USED ON "SPI" SHEETS

AREA RECLAIM	Borrow areas are difficult to reclaim, and revegetation and erosion control on these areas are extremely difficult.
CEMENTED PAN	Cemented pan too close to surface.
COMPLEX SLOPE	Short and irregular slopes. Planning and construction of terraces, diversions, and other water-control measures are difficult.
CUTBANKS CAVE	Walls of cuts are not stable. The soil sloughs easily.
DEEP TO WATER	Deep to permanent water table during dry season.
DEPTH TO ROCK	Bedrock is so near the surface that it affects specified use of the soil.
DROUGHTY	Soil holds too little water for plants during dry periods.
DUSTY	Soil particles detach easily and cause dust.
ERODES EASILY	Water erodes soil easily.
EXCESS FINES	The soil contains too much silt and clay for use as gravel or sand in construction.
EXCESS HUMUS	Too much organic matter.
EXCESS LIME	The amount of carbonates in the soil is so high that it restricts the growth of some plants.
EXCESS SALT	The amount of soluble salt in the soil is so high that it restricts the growth of most plants.
EXCESS SODIUM	Exchangeable sodium imparts poor physical properties that restrict the growth of plants.
FAST INTAKE	Water infiltrates rapidly into the soil.
FAVORABLE	Features of the soil are favorable for the intended use.
FLOODS	Soil flooded by moving water from stream overflow, runoff, or high tides.



FRAGILE	Soil easily damaged by use or disturbance.
FROST ACTION	Freezing and thawing may damage structures.
HARD TO PACK	Difficult to compact.
LARGE STONES	Rock fragments greater than 3 inches across affect the specified use.
LOW STRENGTH	The soil has inadequate strength to support loads.
NO WATER	Too deep to ground water.
NOT NEEDED	Practice not applicable.
PERCS SLOWLY	Water moves through the soil slowly, affecting the specified use.
PERMAFROST	The soil contains frozen layers throughout the year.
PIPING	The soil is susceptible to the formation of tunnels or pipelike cavities by moving water.
PITTING	The soil is susceptible to the formation of pits caused by the melting of ground ice when the plant cover is removed.
PONDING	Soil in closed depressions inundated by standing water that is removed only by percolation or evapotranspiration.
POOR OUTLETS	Surface or subsurface drainage outlets are difficult or expensive to install.
ROOTING DEPTH	A layer that greatly restricts the downward rooting of plants -- occurs at a shallow depth.
SALTY WATER	Water too salty for livestock consumption.
SEEPAGE	Water moves through the soil so quickly that it affects the specified use.
SHRINK-SWELL	The soil expands on wetting and shrinks on drying, which may cause damage to roads, dams, building foundations, or other structures.
SLIPPAGE	Soil mass is susceptible to movement downslope when loaded, excavated, or wet.
SLOPE	Slope too great.

SLOW INTAKE	Water infiltrates slowly into the soil.
SLOW REFILL	Ponds fill slowly because the permeability of the soil is restricted.
SMALL STONES	Rock fragments that are 3 inches or less across may affect the specified use.
SOIL BLOWING	Soil easily moved and deposited by wind.
SUBSIDES	Settlement of organic soils or of soils containing semifluid layers.
THIN LAYER	Suitable soil material is not thick enough for use as borrow material or topsoil.
TOO ACID	The soil is so acid that growth of plants is restricted.
TOO CLAYEY	Soil slippery and sticky when wet and slow to dry.
TOO SANDY	Soil soft and loose; droughty and low in fertility.
UNSTABLE FILL	Banks of fill are likely to cave in or slough or uneven settlement is likely.
WETNESS	Soil wet during period of use.

## XV. GLOSSARY

- AEROBIC -- Living or active only in the presence of oxygen. Pertaining to aerobic decomposition by aerobic microbes.
- ANIMAL UNIT MONTH -- The amount of forage it takes to support an animal unit (basically a cow with calf or the equivalent) for one month.
- CLIMAX PLANT COMMUNITY -- The one best adapted to the particular environment of the site.
- CODOMINANT TREES -- Trees with crowns forming the general level of the forest canopy and receiving full light from above but comparatively little from the sides; usually with medium-sized crowns more or less crowded on the sides.
- DOMINANT TREES -- Trees with crowns extending above the general level of the forest canopy and receiving full light from above and partly from the sides; larger than average trees in the stand, with crowns well-developed, possibly somewhat crowded on the sides.
- EVAPOTRANSPIRATION -- The sum of water removed by vegetation and that lost by evaporation for a particular area during a specified time.
- FIELD CAPACITY -- The moisture content of soil in the field 2 or 3 days after a thorough wetting of the soil profile by rain or irrigation water. Field capacity is expressed as moisture percentage, dry-weight basis.
- FRAGIPAN -- A dense, brittle subsurface horizon that restricts water movement and root penetration.
- FRAGMENTAL SOILS -- Soils with so many stones, cobbles, pebbles, or coarse sands that there are voids greater than 1 mm.
- HARDPAN -- A subsoil layer cemented by silica and/or carbonates that is very difficult to excavate and makes a nearly impenetrable barrier to roots and water.
- HORIZON--SOIL -- A layer of soil, approximately parallel to the land surface, that has distinct characteristics produced by soil-forming processes.
- INFILTRATION (RATE) -- The rate at which surface soil absorbs water.
- INORGANIC SILTS -- Silts formed from parent material of a mineral nature.



KEY SPECIES -- Those species that differentiate one range site from another.

LEACHATES -- Liquids that have percolated through a soil and that contain substances in solution or suspension.

MAJOR LAND RESOURCE AREA -- Consists of geographic areas of land with particular but broad patterns of soil, climate, water resources, land use and type of farming.

MMHO - MILLIMHO --  $\frac{1}{1000}$  of an mho which is a reciprocal ohm (ohm spelled backward). MHO is a unit of conductivity and ohm is a unit of resistivity.

MAPPING UNITS, SOIL -- Areas shown on a soil map.

ORGANIC SOIL -- A naturally wet soil that may or may not be artificially drained, with 20 to 30 percent or more of plant residues either with or without mineral soil components.

PROPERTIES, SOIL -- Any or all of the measurable physical or chemical characteristics of a soil such as color, texture, structure, reaction, or exchange capacity.

QUALITIES, SOIL -- Inferences made by interpreting soil properties, such as drainage class is inferred from soil mottling.

SATURATION EXTRACT -- The solution removed from a soil completely filled with liquid, at less than 1/3 atmosphere.

SERIES, SOIL -- Consists of soils that have profiles almost alike.

SHEAR STRENGTH -- Ability to resist sliding along internal surfaces within a mass.

SKELETAL SOILS -- Soils with 35 percent or more, by volume, of fragments greater than 2 mm.

SOIL SLIPPING -- The downhill movement of a mass of soil under wet or saturated conditions.

STANDARD DEVIATION -- This is a measure of the spread of values about their arithmetic mean. It indicates that 2/3 of the samples (values) vary this much from the mean.

STRUCTURE, SOIL -- The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles.

TEXTURE, SOIL -- The relative proportions of sand, silt, and clay particles in a mass of soil.



TOPSOIL -- A presumed fertile soil or soil material, or one that responds to fertilization, ordinarily rich in organic matter, used to topdress roadbanks, lawns, and gardens.

UNIVERSAL SOIL LOSS EQUATION -- A computed soil loss based on rainfall, soil-erodibility, slope length, slope gradient, cropping management, and erosion control practices.

WATER TABLES (SEASONAL) --

Apparent - The periodic occurrence of the water table as indicated by soil characteristics such as mottles and/or concretions.

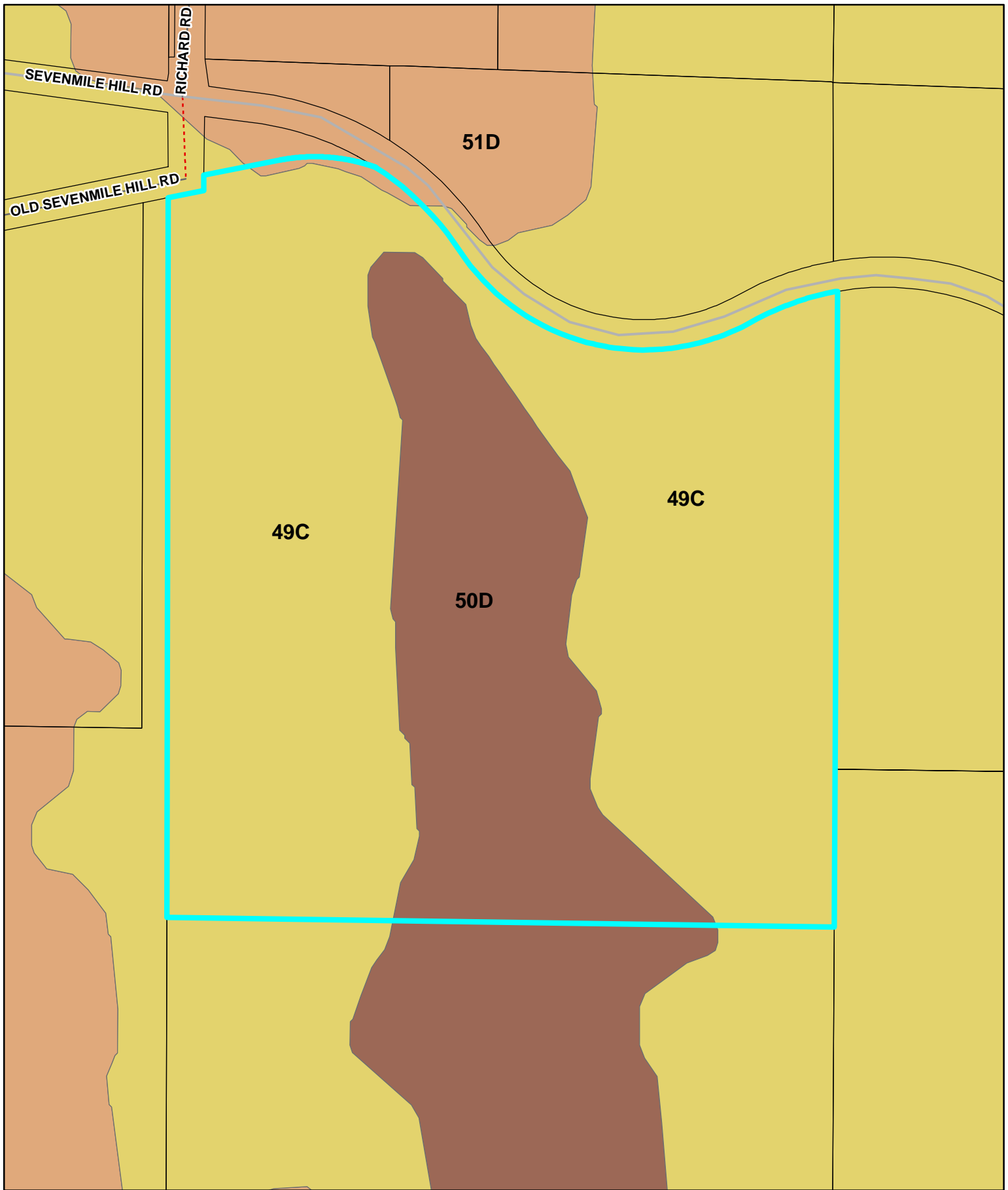
Artesian - Ground water that is confined between impermeable layers and forced toward the surface by pressure.

Perched - Water which is prevented from percolating through the soil by a restrictive layer, such as impermeable bedrock or hard pans, and is separated from the ground water by a relatively dry zone.

Rev. June 1982


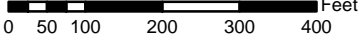
## **EXHIBIT 7**

### **Soil Map**



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property
- Taxlots

## Soil Map

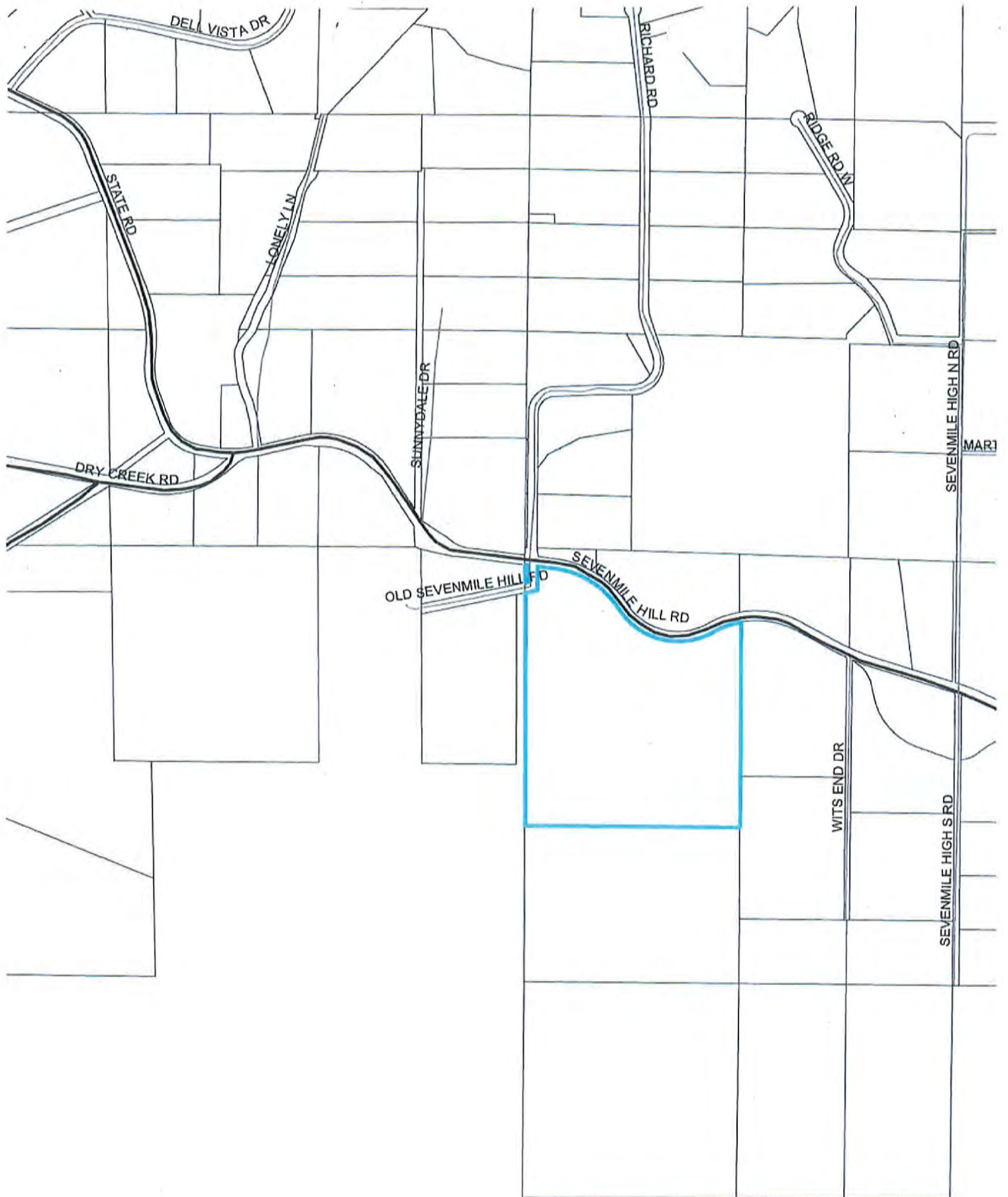



This product is for informational purposes and has not been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

## **EXHIBIT 8**

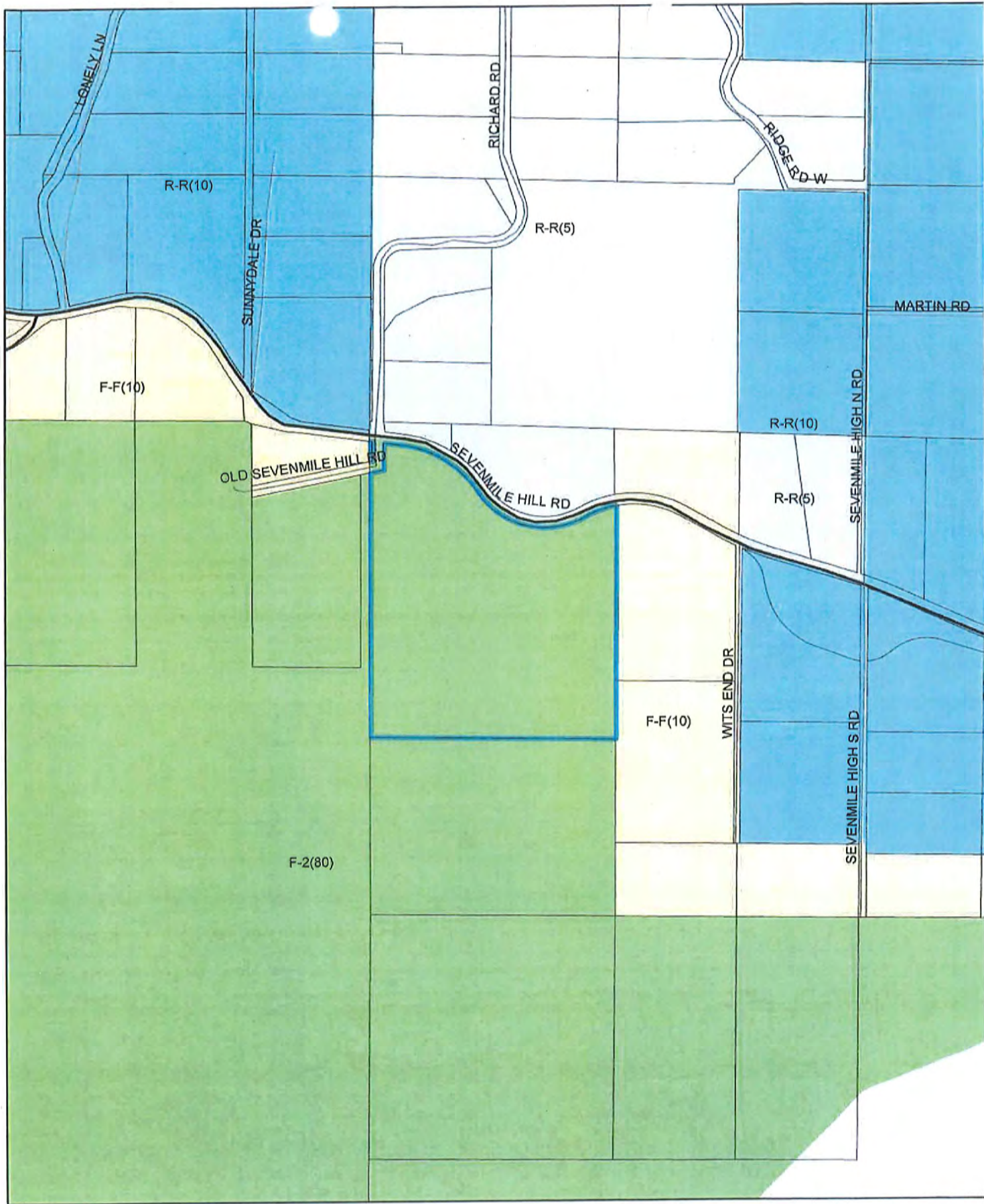
### **Submitted Maps**



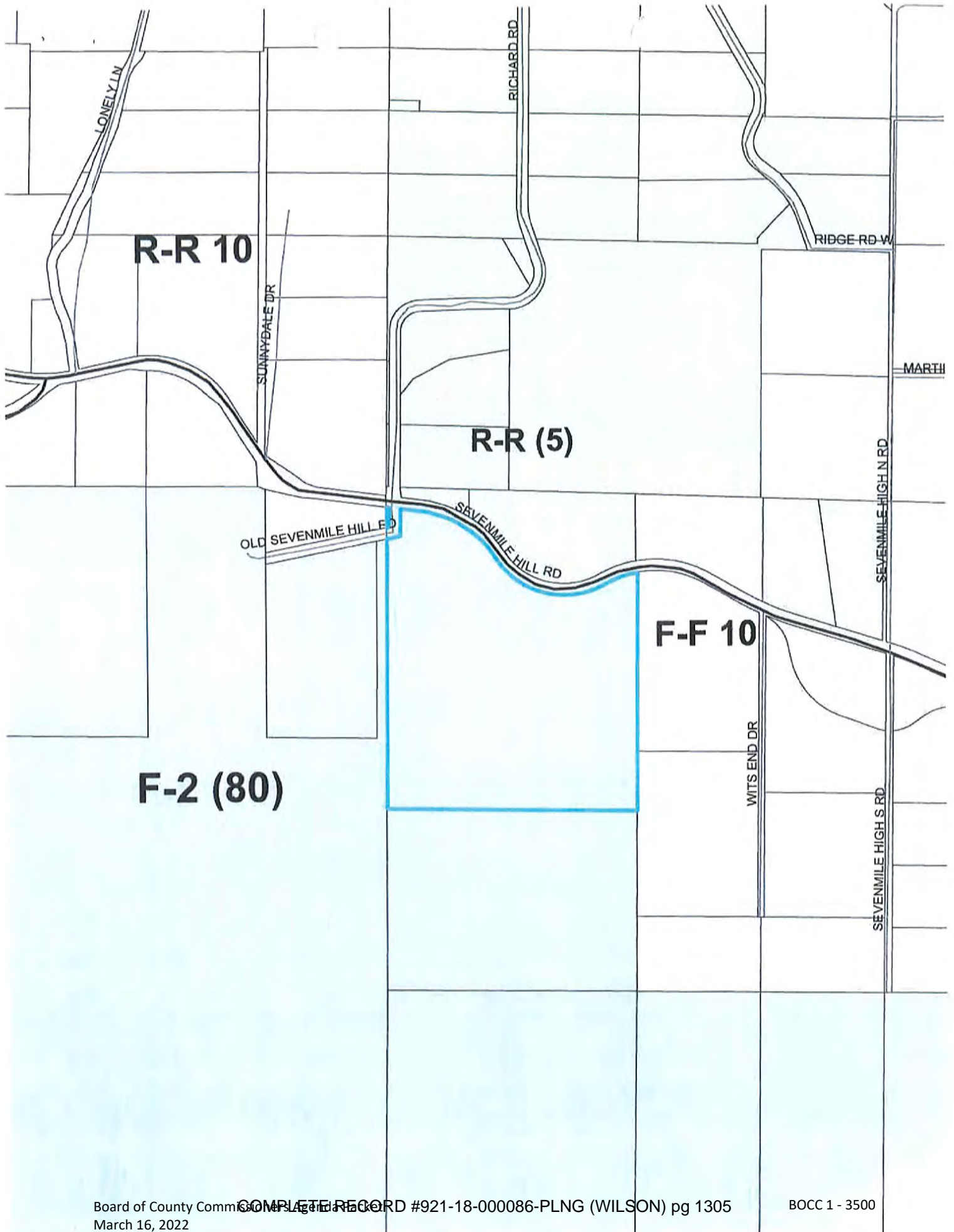








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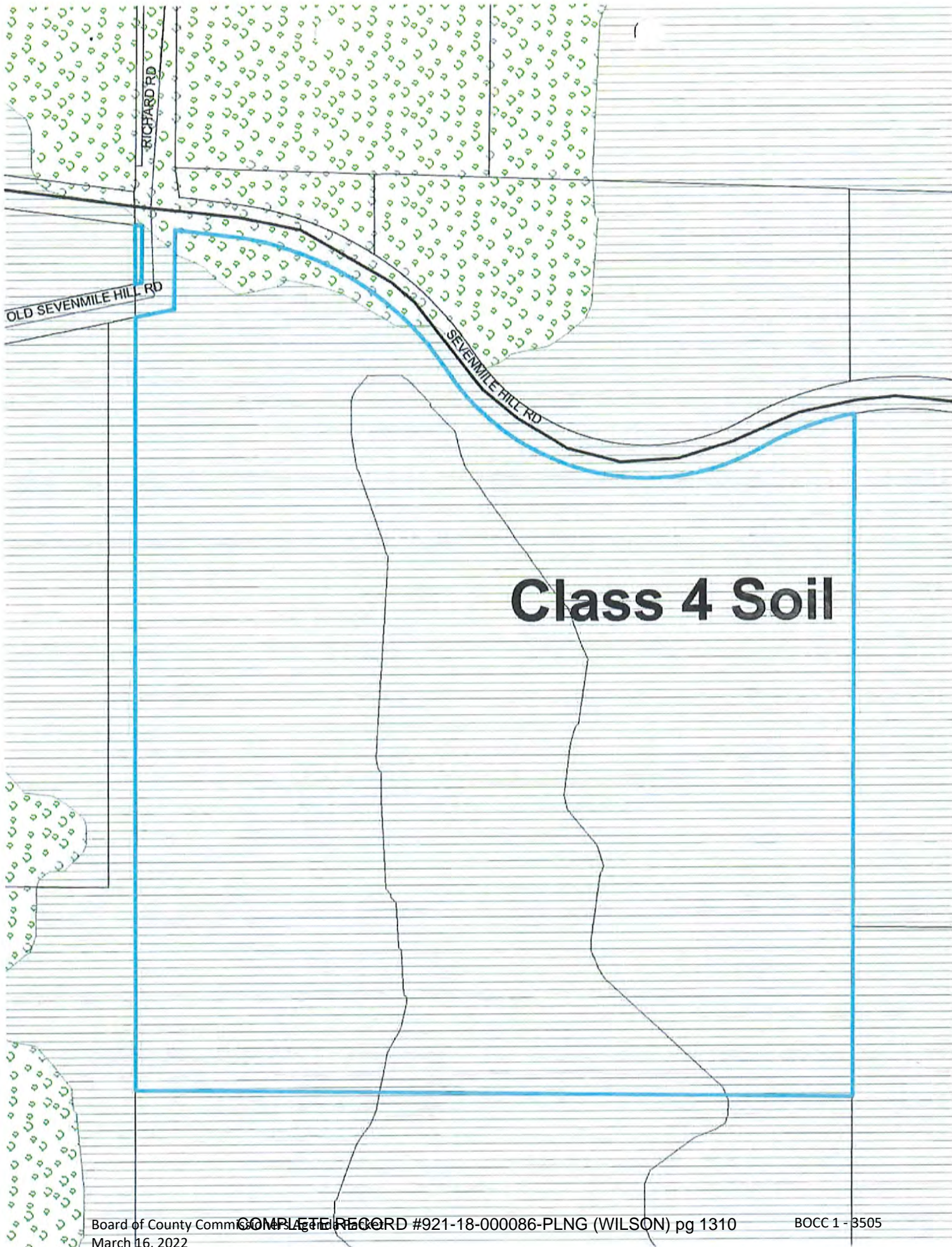




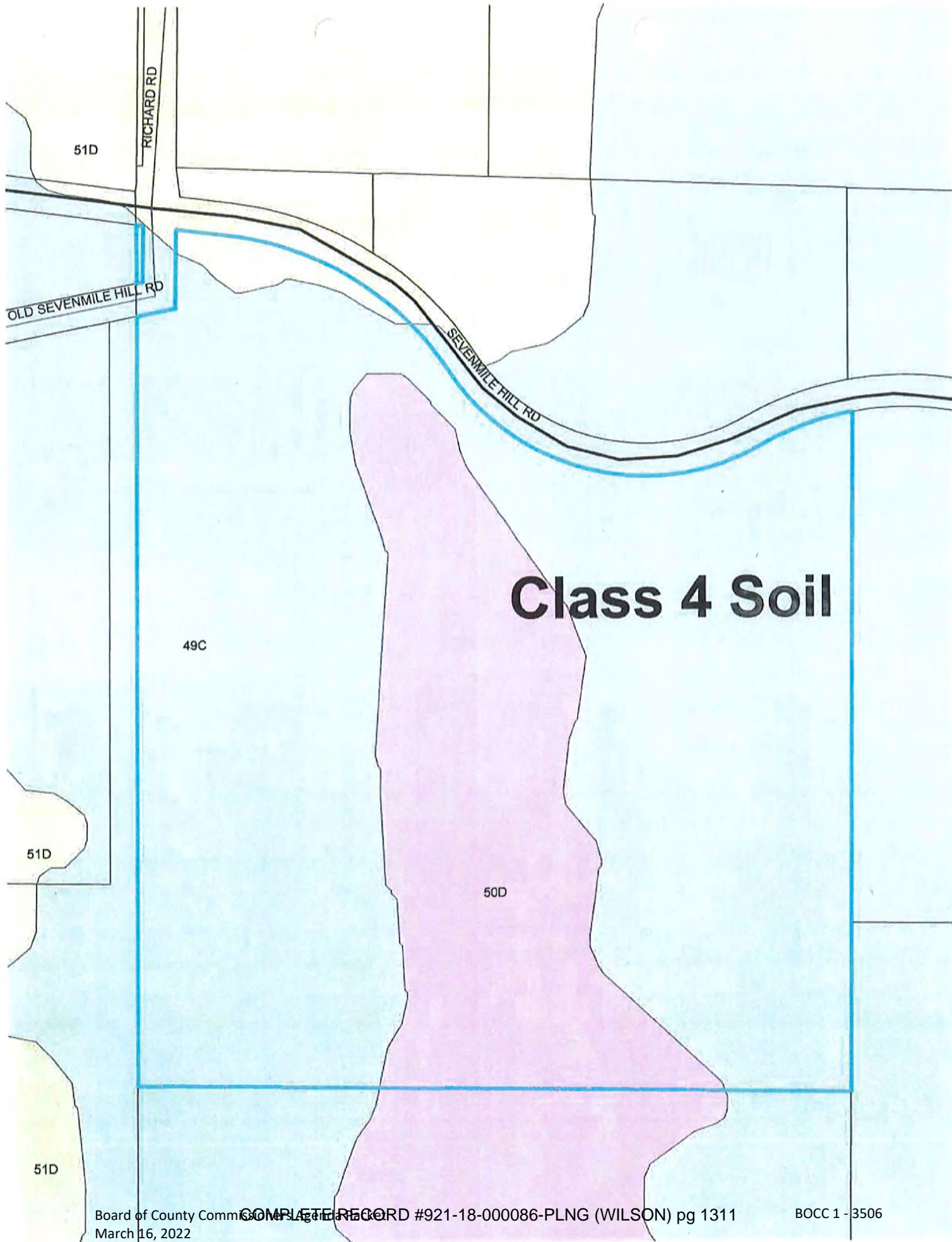




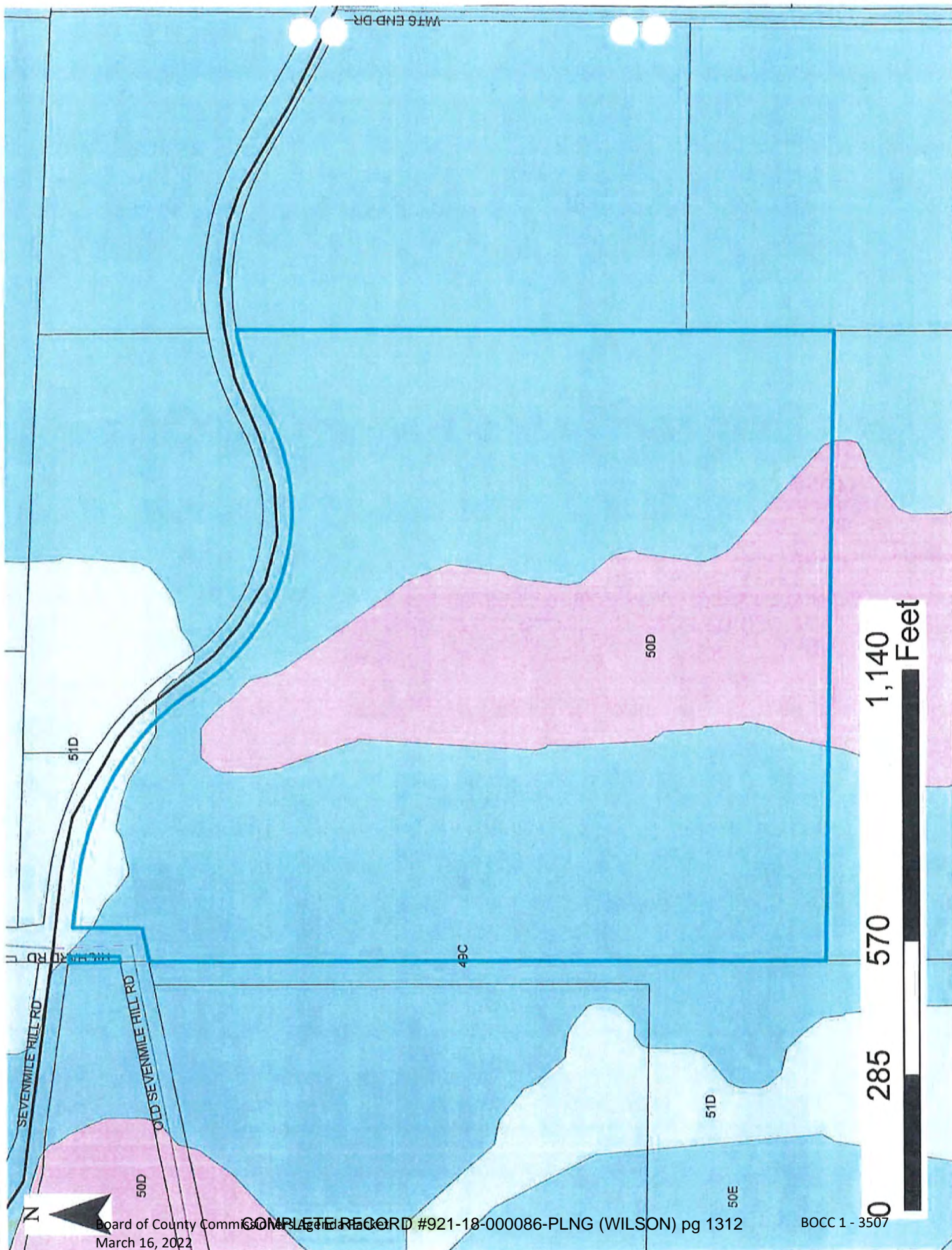












Wilson notes

Criteria and Summary

Public Facilities and Services: General overview

Land Use History: TLSA, Ken Thomas Settlement

STATE LAW

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.732: Exceptions allowed IF Physically Developed, or Irrevocably Committed. Describes process, what to look for. Actual factors addressed in OAR section

\*(1.) OAR 660-004-0025: Exception Requirements for Land Physically Developed to Other Uses: requires describing extent of development on a map, is it "Physically developed to the extent that it is no longer available for uses allowed by the applicable goal"?

- Describe management of small woodlands, soils (49C and 50D), slope, southern parcel of tract assessor information (is successfully managing to meet annual income requirements)

\*(2.) OAR 660-004-0028 (1)-(2): Irrevocably Committed: is it committed? Are existing adjacent uses making uses allowed by the applicable goal impracticable? Discuss FF and RR zones all around, use of land (development %), and relationship to southern parcel.

\*(3.) OAR 660-004-0028(3): Uses allowed by applicable goal are impracticable, specifically Goal 4 uses like forest operations, harvesting of forest products, etc. Describe how adjacent lands in residential use make it unlikely, but adjacent forest lands make it potentially possible. "just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use." Not necessary, but how would it be affected?

\*(4.) OAR 660-004-0028(4): Does the conclusion address all factors of section 6 and sufficiently explain why the facts support the impracticality?

\*(5.) OAR 660-004-0028(5): Do findings and facts discuss irrevocably committed throughout the report?

\*(6.) OAR 660-004-0028(6): Addressing the following factors: existing adjacent uses, existing public facilities and services, parcel size and ownership patterns of the area and adjacent lands, neighborhood



and regional characteristics, natural/man made features, physical development (this one has approval/denial findings)

OAR 660-004-0028(7): Does the submittal include required info? Yes

OAR 660-004-0040: Not applicable, not related to Goal 14 urbanization, not looking to allow parcels smaller than allowed by proposed new zone, any future proposals will have to comply with F-F requirements

OAR 660-004-0118: Planning and Zoning for Exception Areas, Describing area, are uses compatible with nearby resource areas, (NOTE: one semi-denial finding here – may decide to leave this in if relevant), how it relates to nearby urban areas (none) or industrial uses (none)

#### COMPREHENSIVE PLAN

Findings describe who may apply (QJR = landowner),

(factors for consideration, not specific criteria. Denials here are generally related to denials elsewhere. Are they generally satisfied? If not, could be a denial)

H 1,2: Review Goals, does this comply, and does it demonstrate substantial proof that such a change “shall not be detrimental to the spirit and intent of such goals”. \*(8.)

1. Citizen Involvement
2. Land Use Planning
3. Agricultural Lands
4. \*(9.)Forest Lands
5. Open Spaces, Scenic and Historic Areas, and Natural Resources
6. Air, Water, and Land Resources Quality
7. Areas subject to Natural Disasters and Hazards
8. Recreational Needs
9. \*(10.)Economic Development
10. Housing
11. Public Facilities and Services
12. Transportation
13. Energy Conservation
14. Urbanization

\*(11.) H 3: Mistake in original Comp plan can be demonstrated. Did TLSA resolve the mistake, or did it miss this property?

\*(12.) H 4: Factors relating to need for healthy, safe, aesthetic surrounding and conditions. Fire risk increase? Is it significant enough to matter? Does the proposal match the aesthetic of the area?

\*(13.) H 5: Proof of change in the inventories originally developed. Original inventory included this as forest, has since changed (TLSA), but not here. Stop encroachment?

\*(14.) H 6: Revisions based on special studies or other info. Has enough info been provided to justify the stated need for low density housing, for which F-F could be used?

I. Transportation Compliance. Not significant enough to trigger a Traffic Impact Analysis. 29 new ADT would not change functional class of road.

#### J. Procedures

Application, notification, hearings. Complied.

#### WC LUDO

9.010 Application presented on forms used as issued by the office.

9.020.A. "The original zoning was the product of a mistake" – No Finding, but there should be. PC should recommend adding a finding that states whether it was or was not mistake based on all discussions throughout, or at least state that this is discussed above in sections XYZ?

\*(15.) 9.020.B.1. the rezoning will comply with Comp Plan (related to earlier discussion – it will or it won't depending on what has been decided above)

\*(16.) B.2. site is suitable to proposed zone. LUDO states purpose of F-F: "The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses." But Comp Plan says: "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge." These are Class 4. Does it make sense as a residential area considering residential uses nearby?

\*(17.)B.3 consideration of public health, safety, welfare. Fire risk? Water impacts?

9.030 Transportation Planning Rule Compliance: insignificant impact

Rest of Chapter 9 = any additional conditions, recommendations, notice requirements, actions



PLANNING DEPARTMENT



Planning Commission  
Public Hearing  
April 2, 2019

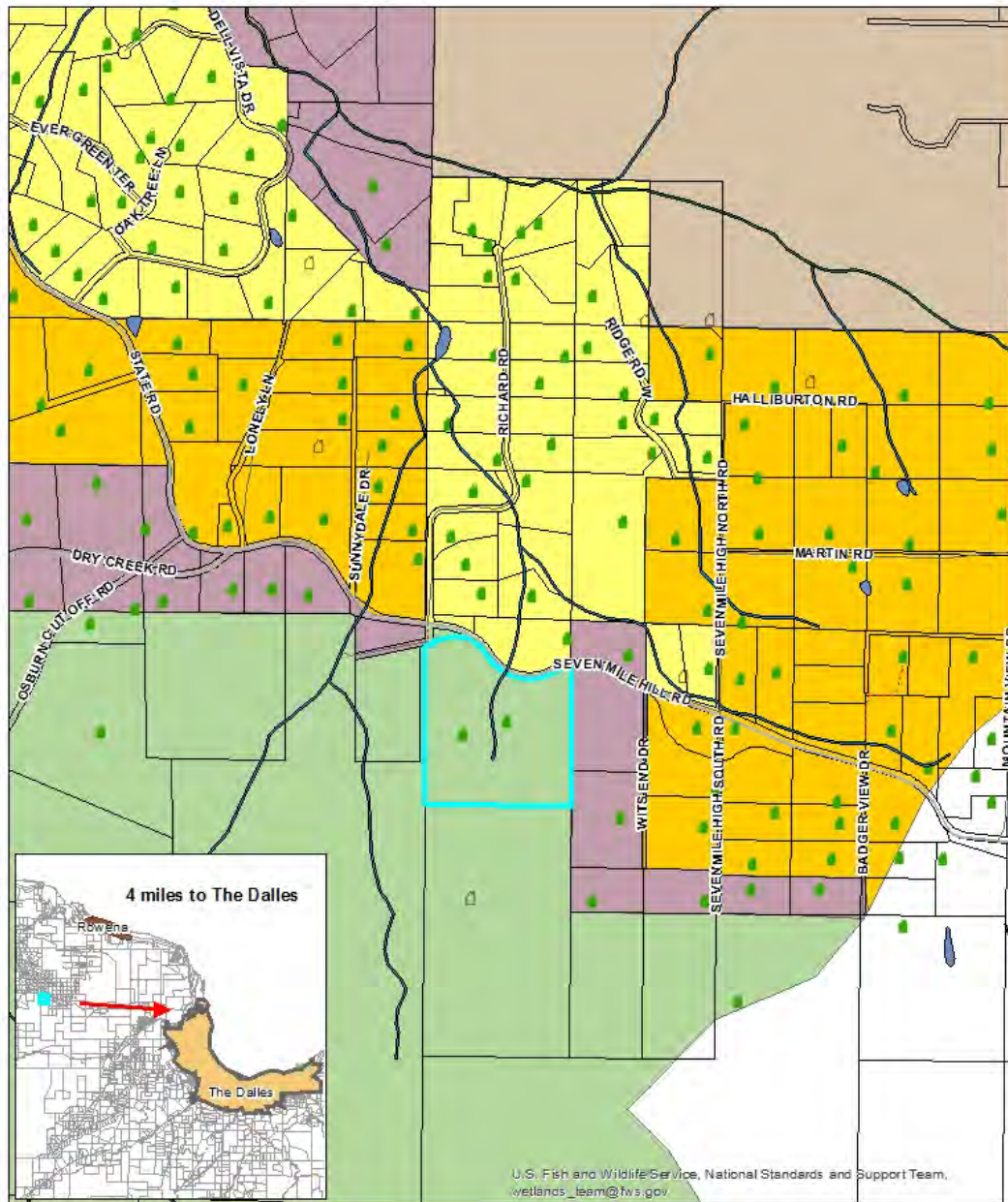
Applicant/Owner: David Wilson  
(921-18-000086-PLNG)

# Request

- Comprehensive Plan Map Amendment: Change a legal parcel designated “Forest” to “Forest Farm;
- Exception to Statewide Planning Goal 4 – Forest Lands; and
- Zone Change: Change a legal parcel tax lots zoned F-2 (80), Forest, to F-F (10), Forest-Farm
  - Applicant/Owner: David Wilson
  - Location: 7100 Seven Mile Hill Road
  - Size: @40 acres



# Vicinity Map



- A-1(160) R-R(10) Riverine Wilson Property
  - F-2(80) R-R(5) Freshwater Pond Taxlots
  - F-F(10) Addresses
- Board of County Commissioners Agenda Item COMPLETE RECORD #021-18-000086-PLNG (WILSON) pg 1318  
March 16, 2022

BOCC 1 - 3513

*Pioneering pathways to prosperity.*

# Staff Recommendation

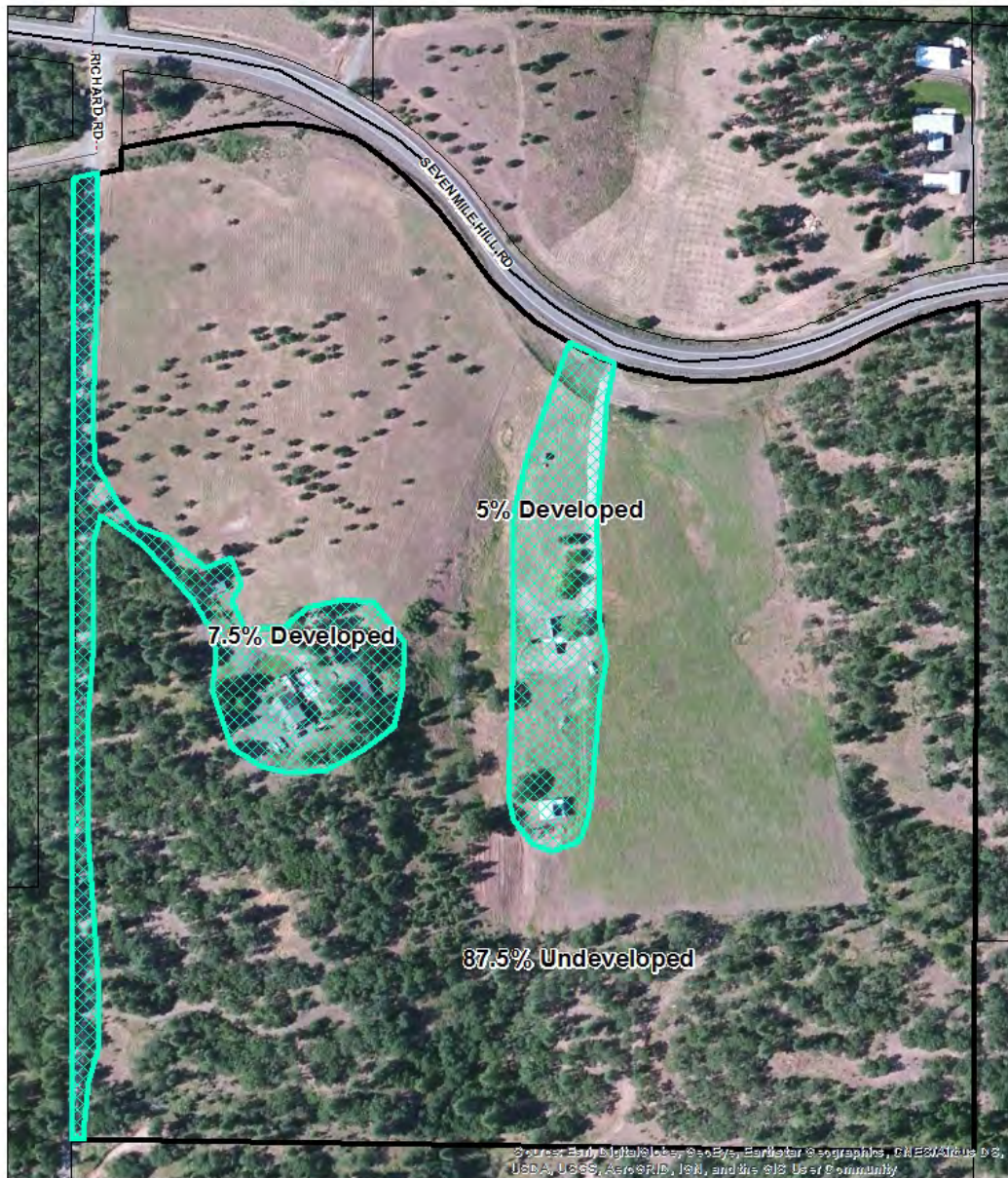
- Staff's approach is to remain neutral and objective throughout the process and garner as much input as possible.
- Staff will support the recommendation that the Planning Commission feels is appropriate to forward to the Wasco County Board of Commissioners.

# Format

- Draft Findings in Green (Approval) and Yellow (Denial)
- It only takes one Criterion not being met (Yellow) to recommend denial of the request
  - (Except in the Comp Plan section)
- Today's hearing format recommendation
  - Straw Poll, discussion, identify and focus on differences



# Site Visit Photos



Source: Earthstar Maps, Inc. © 2012, Earthstar Geographics, GNC/MapInfo DB, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Wilson Property

Total Acreage = 40 Acres  
Undeveloped Property = 35 Acres  
Developed property = 5 Acres

Total percentage undeveloped = 87.5%  
Total developed = 12.5%



0 40 80 160 240 320 Feet

 Developed Property  
 Wilson Property

Board of County Commissioners Agenda COMPLETE RECORD #921-18-000086-PLNG (WILSON) pg 1321

March 16, 2022

BOCC 1 - 3516

*Pioneering pathways to prosperity.*





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21





2018/ 6/21

# State Standards Addressed

## Oregon Administrative Rules (OAR)

- OAR 660
  - Division 4 – Interpretation of Goal 2 Exception Process
  - Division 6 – Goal 4 Forest Lands

## Oregon Revised Statute (ORS)

- 197.732 – Goal Exceptions



# County Standards Addressed

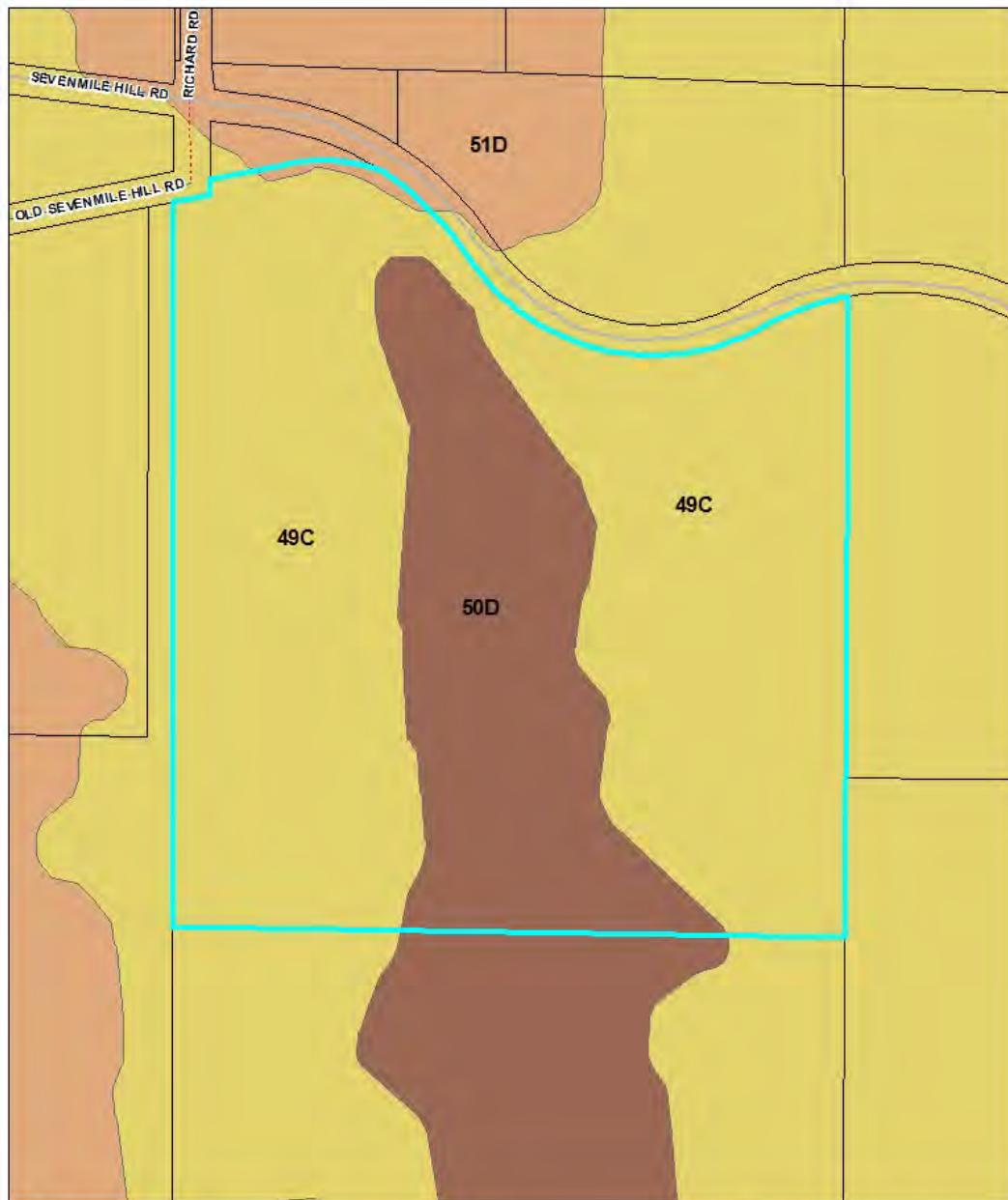
- Comprehensive Plan
  - Chapter 11 - Revisions Process
    - Section A. Intent and Purpose
    - Section B. Form of Comp Plan Amendment
    - Section C. Who May Apply for a Plan Revision
    - Section E. Quasi-Judicial Revisions
    - Section H. General Criteria
    - Section I. Transportation Planning Rule Compliance
    - Section J. Procedure for the Amendment process



# County Standards Addressed (cont.)

- Wasco County Land Use & Development Ordinance
  - Chapter 9 – Ordinance Amendments
    - Section 9.010 - Application for Zone Change
    - Section 9.020 - Criteria for Decision
    - Section 9.030 - Transportation Planning Rule Compliance
    - Section 9.040 - Conditions Relative to the Approval of a Zone Change
    - Section 9.050 - Amendments to the Zoning Ordinance
    - Section 9.070 - Notice of Planning Commission Recommendation
    - Section 9.080 - Action by County Governing Body

# Soil Map



- Soils**
- 51D
  - 50D
  - 49C
- Wilson Property**
- Taxlots**

Soil Map

This product is for informational purposes only and does not constitute a warranty. Users of this product should review or consult the primary data and information sources to ascertain the reliability of the information.

# Staff Comments

- Apprehensions

- Conducting forestry operations are not currently impracticable (Goal 4).
- More residences would result in the loss of more wildlife habitat (Goal 5).
- The proposal would create more residences, which would increase wildland-urban interface fire risk and potential impacts (Goal 7).
- The impact of potentially three new single family dwellings on available water supplies in an area with existing concerns (Goal 5, 6, 11).

- Advantages

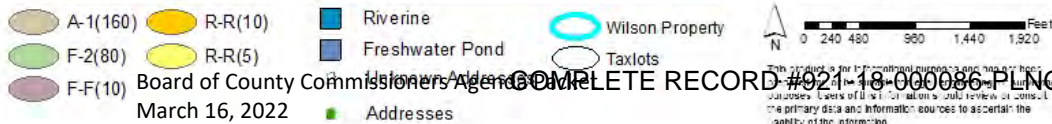
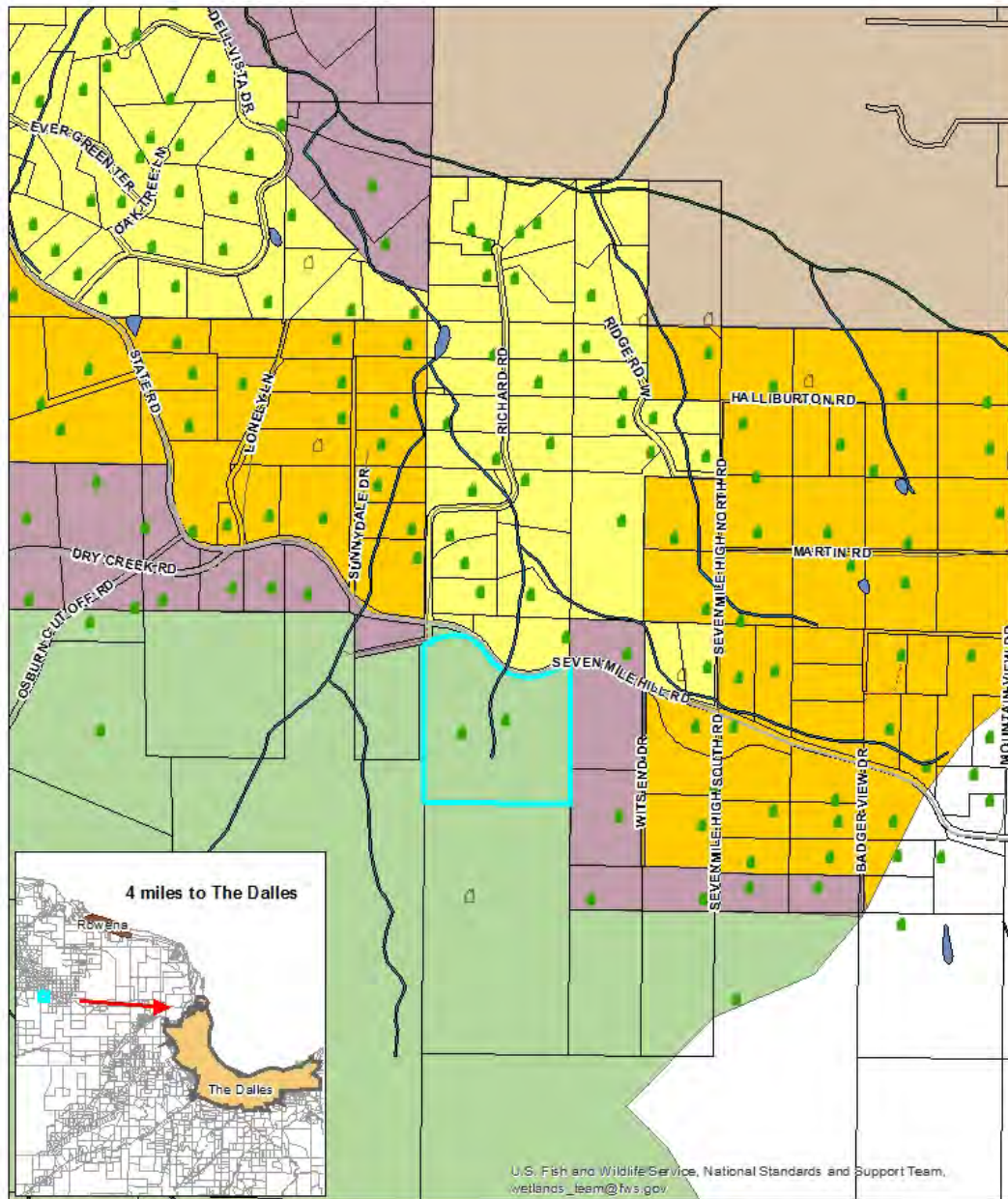
- Three new dwellings will increase rural residential housing supply (Goal 10).
- On land not currently (or in recent history) being used to harvest forest products, the transition from unused potential resource lands to probable useful residential land could result in a net positive impact economically (Goal 9).

# Questions?

- Format?
- Procedure?
- Substance?



# Vicinity Map



## Approval/Denial Findings Checklist

Packet Page Number	Agree with _____ Interpretation	Notes
1. PC 13 – PC 17	Approval Denial	
2. PC 17 – PC 18	Approval Denial	
3. PC 22 – PC 25	Approval Denial	
4. PC 25	Approval Denial	
5. PC 25	Approval Denial	
6. PC 28	Approval Denial	
7. PC 35	Approval Denial	
8. PC 38*	Approval Denial	
9. PC 38*	Approval Denial	
10. PC 39*	Approval Denial	
11. PC 41 – PC 42	Approval Denial	
12. PC 42	Approval Denial	
13. PC 42	Approval Denial	
14. PC 43	Approval Denial	
15. PC 46	Approval Denial	
16. PC 46 – PC 47	Approval Denial	
17. PC 47 – PC 48	Approval Denial	

\*Comprehensive Plan findings: Factors for consideration, not standards that must be strictly met. They must still show that they can be generally satisfied.

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

Planning Goal 2, part II, states:

A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**FINDING:** Both the goal and OAR 660-004-0005(1)(c) adopt the legislative definition of an “exception” with minor variation— the goal states “Complies with standards for an exception” and the rule states “Complies with. . . the provisions of this division.” OAR 660-004-0010(1) explains, “The exceptions process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” and includes “Goal 4 ‘Forest Lands.’”

Goal 4 provides that: “Where a ... plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

Rule definitions of “resource land” and “nonresource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be planned and zoned for forest-farm uses, a rural residential, nonresource category of uses under the County’s plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC’s rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state’s forest land base. These reasons are addressed below.

## **2. Exception Requirements for Land Physically Developed to Other Uses.**

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

(1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)



- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** To determine the extent to which the property is physically developed, staff compared where driveways and existing structures are, and identified them in the following map:



Figure 1: Development

This map demonstrates that currently approximately 12.5% is physically developed. That leaves 87.5% available for farm or forestry uses. These numbers are for discussion purposes and to estimate what is currently physically developed, and what is not (but may still be used by the landowner for farm or forest uses). Although most of the County's commercial timber use occurs in National Forests or in lands owned by large lumber companies such as Weyerhaeuser or SDS, small woodlots owned by individuals and small families play a vital role in the industry as well. These lands are often those that abut or intermingle with rural residential uses, and in many cases the tax benefits can be the only way to afford to successfully manage (for both fire safety as well as timber harvesting) several dozen acres of



woodland that may accompany that rural residential life style. Collectively across Oregon, many thousands of acres of forested lands are owned in these small parcels, and Goal 4 seeks to protect them from the effects of rural sprawl. A woodland as small as two acres qualifies for Oregon's Special Assessment Program for Forestland, allowing landowners to have a reduced property tax assessment. With 87.5% (35 Acres) of undeveloped land on the subject parcel, this land could still be useful under Goal 4 provisions. However, whether that land is capable of supporting commercial timber production depends heavily on other factors such as available soil type and slope.

#### *Soils*

Two soil types are identified on the subject parcel: 49C and 50D (Wamic Loam – see Exhibit 5). Both are Class IV soils. The "Guide for using Soil Survey Single Phase Interpretation Sheets" (also known as the Green Sheets – See Exhibit 6) states that Class IV soils "have very severe limitations that reduce the choice of plants, require very careful management, or both". The Green Sheets maintains statistics on capability and yields per acre of crops and pasture, woodland suitability, windbreaks, wildlife habitat suitability and potential native plant community. These categories and the ratings for these two soil types are relevant to how well this property may be able to fulfill the requirements of Goal 4: Forest Lands by conserving forest lands for forest uses.

- Capability and yields per acre of crops and pasture (high level management)
  - Both soil types are listed as 4e (Class 4 which has "very severe limitations that reduce the choice of plants, require very careful management, or both", Subclass e which indicates that the main limitation is risk of erosion unless close-growing plant cover is maintained). Both soil types have Winter Wheat (35 bushels/acre) and Grass Hay (1.5 tons/acre) listed.
- Woodland Suitability
  - Both soil types are listed as 4A (Class 4, discussed above, and subclass A which represents slight or no limitations). For both soil types four out of five management problem categories are listed as having 'slight' or 'moderate' problem potential with plant competition the only one rated as 'severe' in both. Plant competition indicates the potential invasion of undesirable species, usually brush, when openings are made in the tree cover. Common trees on these soil types are Ponderosa Pine and Oregon White Oak with Ponderosa Pine listed as the only tree to plant. The site index for both is 70 which is an indication of the potential productivity and is based on the average total height of the stand the age of 100 years. A site index of 70 translates to the high end of Cubic Foot Site Class 6 (20-49 cubic feet per acre potential yield category) for Ponderosa Pine.
- Windbreaks
  - For both soil types the Green Sheets indicate "none" for Windbreaks. This states that windbreaks are not normally needed.
- Wildlife Habitat Suitability
  - This section relates soils to their potential for producing various kinds of wildlife habitat. For both soil types under "potential for habitat elements", hardwood and conifer trees are both rated as Fair. Under potential as habitat for: Woodland wildlife, the rating is also Fair.
- Potential Native Plant Community
  - For both soil types the same five grass and shrubs are mentioned as common, as well as two types of trees – Oregon White Oak and Ponderosa Pine.

A soils map is attached as Exhibit 7 (soil descriptions and their guide are contained in Exhibits 5 and 6).

#### *Slope*

The property is mostly flat from the north to the center rising gradually from there to the south, east, and west. Slopes from the road to the southern property line average 6-10%. The low point of the parcel is in the northwest corner at about 1550' in elevation, 100' lower than the house at about 1650' and 210' below the high point to the southeast at 1760'. There are no slopes on the property that are too steep for either residential development or commercial forestry.

The vegetation of the subject parcel is split between open grassland in the north and center, with primarily Oregon White Oak interspersed with Ponderosa Pine, and a very few Douglas Fir around the edges of the property. Grasses and shrubs create moderately dense underbrush throughout.

The soils indicate some suitability for agriculture and there is history of such on both this parcel and the parcel to the south, also owned by the applicant (See below in b. OAR 660-004-0028 (2) for more detailed information about adjacent lands). The home on the applicant's adjacent southern parcel was approved in 1989 through the Conditional Use Permit process as a "Dwelling in conjunction with agricultural use." Additionally, an agriculture structure was placed on that southern parcel several years ago and retroactively approved through a Planning Commission action in 2017 (PLAAPL-17-10-0001). Discussions in the staff report for that decision, as well as application material including a Farm Management Plan, state that a portion of the parcel to the south is currently used for farm use, producing approximately 6 acres of alfalfa/oats, five poultry, and three cattle (seasonal), with plans upon the owners retirement to expand the farm use.

On the subject parcel itself, aerial imagery on County GIS (accessed November 8, 2018) appears to indicate several acres of crops in the western half of the open area at the center of the property. Beyond the three seasonal cows reportedly used on these parcels recently, the proposed exception area does not have a known history of commercially grazing for sheep or cattle.

The following Finding was made for the 2017 application in regards to agricultural use on the southern parcel in the tract:

*"According to Melanie Brown, Appraiser, the subject parcel is required to generate a minimum income of \$3,000 per year. She stated that the Assessor sends out a questionnaire every three years to determine what income has been generated from farm use. Assessor records indicate that the subject parcel has exceeded the income requirement for the past several years..."*

**APPROVAL FINDING:** The development pattern that exists on this property makes forestry uses impractical. These include the current home and outbuildings located halfway up the property on the western side after an approximately 1,000' driveway, the old farmhouse in the center after a 400' driveway and the old barn another 240' further south, within 450' of the rear property line. The latter two more than half bisects the property contributing to the physically developed nature of the subject parcel. Due to these physical developments, and the impracticality of conducting forestry uses around them, a physically developed exception would apply.

**DENIAL FINDING:** The clustering of the existing house on the western edge, with the 1000' driveway forming a property boundary line establishes very little physical development throughout the subject parcel. There are two old structures in the center of the property, along with another 640' driveway that runs north to south accessing them. However these are not useable in the condition they are in and the driveway would be as useful for commercial forestry uses in accordance with Goal 4 as it would



be for future residential uses in the event of an exception. Slope throughout the property is gentle, and soils are all Class 4, which, as discussed above, is conducive to forestry uses. This land has minor physical developments on it, but it is still available for forestry uses allowed by Goal 4, so a physically developed exception would not apply.

**3. Exception Requirements for Land Irrevocably Committed to Other Uses.**

*OAR 660-004-0028 contains standards for adoption of a "committed" exception.*

**a. OAR 660-004-0028(1):**

(1) *A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

(a) *A 'committed exception' is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;*

(b) *For the purposes of this rule, an 'exception area' is that area for which a 'committed exception' is taken;*

(c) *An 'applicable goal,' as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.*

**FINDING:** This applicant proposes a 'committed exception' for this property, which is the 'exception area'. The proposed goal exception applies to land in the Forest zone (F-2) and the 'applicable goal' that currently applies to these lands is Goal 4: Forest Lands.

**APPROVAL FINDING:** An exception to remove this parcel from the forest zone and transfer it to a non-resource "Farm-Forest" (FF) zone would still promote and permit many of the uses allowed in Goal 4 designated areas. More importantly, granting the request will promote economically efficient forest practices on large forested tracts south of the subject property, in a manner more consistent with sound management practices.

**DENIAL FINDING:** The map above in section OAR 660-004-0025(2) dealing with physically developed exceptions indicates that only 12.5% is developed, with only 7.5% being used for residential purposes (the other older structures and driveway are unused). Additionally, those residential uses are clustered along the western property line. The applicant claims that the 40 acre site is irrevocably committed to residential uses, when in fact only 12.5% is committed to general development, and only 7.5% committed to residential use. This leaves 87.5-92.5% remaining for forest use. As discussed above in a thorough review of the soil types on site and how they are classified, staff finds that the portion that remains uncommitted to residential use is sufficient to be used for a forestry use. Though there are portions that are grass land currently and portions that are farmed currently, there are also portions that have small amounts of merchantable timber present, as well as the soil conditions to grow more if a landowner so desired to make that investment in the future of the land. Combined with the 69 acre adjacent parcel to the south, also owned by David Wilson, this tract consists of 109 acres of land with commercial timber potential. Small woodland forests are found throughout the Pacific Northwest and are a viable means of using this land productively while meeting the applicable statewide planning goal



#4: Forest Lands. Staff does not find that the existing residential commitment of 7.5% of the property qualifies it as committed to the extent where a goal exception could apply.

- b. OAR 660-004-0028(2): “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

(a) *The characteristics of the exception area;*

**FINDING:** The characteristics of the exception area are fully discussed in the findings above in response to OAR 660-004-0025.

(b) *The characteristics of the adjacent lands;*

**FINDING:** The parcels immediately adjacent to the exception area have substantially similar characteristics for terrain and soil types (See Exhibit 7, Soils map, and Exhibit 8, Submitted Maps). North of Sevenmile Hill Road and West of the Osburn Cutoff Road, the land is at a lower elevation and has fewer trees.

The areas to the north and east of the proposed exception area have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the four subdivisions in the area, three were platted in the early part of the 20th century, and the fourth in 1979 (Fletcher Tract-1908; Fairmont Orchard Tracts-1911; Sunnysdale Orchards-1912; Flyby Night Subdivision-1979). For three of these subdivisions, the majority of the lots are approximately 5 acres in size. The county has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Between 1994 and 1997, the exception area and the lands surrounding it were included in what Wasco County collectively designated as the “Transition Lands Study Area” (TLSA). The county performed an analysis of the area, in part to determine where rural residential development would be appropriate. The final report for the TLSA was published on September 12, 1997, (Exhibit 1) and included recommendations outlining the sub-areas within the study area that were suitable for residential development. The exception area and the lands to the north and east were determined to be suitable for further rural residential development. Certain zone changes have been processed as part of the TLSA program to further the development of residential uses in the area surrounding the exception area.

The exception area is surrounded on two sides (north and east) by residential development and land zoned for rural residential development, under the three non-resource rural residential zoning designations, R-R(10), R-R(5) and F-F(10). The parcel immediately to the south is zoned for forestry uses, but is used for residential and small scale agricultural uses. Lands south of that, and immediately west of the subject parcel and proposed exception area are generally used for commercial forestry. See the map below for a visual representation of the area.



*(c) The relationship between the exception area and the lands adjacent to it;*

**FINDING:** As described in preceding sections of this submittal, the exception parcel is immediately abutted to the south and west by F-2 (80) Forest zoned property (69 and 439 acres), to the north across Seven Mile Hill Road by R-R (5) Residential zoned property (7.9 acres), and to the east by F-F (10) Farm Forest zoned property (averaging 10.8 acres). The properties to the south and west are resource zones while those to the north and east are non-resource zones.

All are in separate ownerships, except the 69 acre F-2 parcel to the south, which is also owned by the owner of the subject property of this application, David Wilson. Combined with the subject parcel that is a 109 acre tract of resource zoned Forest land. There is another home on the southern property and a shop that is utilized by the applicant for farm use (according to information from previous Land Use decisions found in PLAAPL-17-10-0001 and PLAPAR-17-05-0002) on the southern property. The southern parcel is accessed by the same driveway that accesses the existing home on the subject property, running along it's western edge.

The County GIS map shows that the western boundary of the subject parcel abuts a narrow spur of the larger 439 acre commercial forestry operation to the south west of the two parcels owned by David Wilson. That spur appears to be able to provide access to Seven Mile Hill for that forestry operation. Immediately to the west of that is the 16 acre parcel described in (b) above as being 1/3<sup>rd</sup> F-F and 2/3 F-2 zoned property. That parcel abuts Seven Mile Hill Road but current access is shared along the northern 120 feet of the subject parcel's driveway. No dwellings exist on that property.

The subject property does not have any special relationships with the other non-resource properties adjacent to it.

*(d) The other relevant factors set forth in OAR 660-004-0028(6).*

**FINDING:** These factors are discussed below.

- c. OAR 660-004-0028(3): "Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is 'impossible.' For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

*(a) Farm use as defined in ORS 215.203;*

*(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*

*(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a)."*

**FINDING:** This application seeks an exception to Goal 4: Forest Lands, where the primary goal is to “conserve forest land for forest uses”.

ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

- (a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

The “forest products” definition can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.” An examination of Farm Uses and their potential on this property are also relevant as indicated by OAR 660-004-0028(3) above. There are currently agricultural practices occurring on the subject parcel and the adjacent property to the south in the same ownership tract as described above in OAR 660-004-0028(6)(c)(B). The uses on the adjacent tract in the same ownership are relevant due to a requirement to examine “the relationship between the exception area and the lands adjacent to it” when examining a potential irrevocably committed exception as discussed above in OAR 660-004-0028(2).

OAR 660-006-0025 describes those “Uses Authorized in Forest Zones”. An exception granted to this goal may have an impact on these types of uses. This OAR describes five (5) general types:

- “(a) Uses related to and in support of forest operations;
- (b) Uses to conserve soil, air and water quality and to provide for fish and wildlife resources, agriculture and recreational opportunities appropriate in a forest environment;
- (c) Locationally-dependent uses, such as communication towers, mineral and aggregate resources, etc.

(d) Dwellings authorized by ORS 215.705 to 215.755; and

(e) Other dwellings under prescribed conditions”

In regards to (c), no aggregate sites have been identified on this property, nor is there anything about its location that makes it significant for communication towers. In regards to (d) and (e) there is currently an existing dwelling on the parcel, with no potential for further dwellings under current rules in the Forest Zone. That leaves (a) and (b) as the primary uses which must be safe guarded on this property in accordance with Goal 4: Forest Lands.

The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice,” according to Webster’s New World Dictionary (2nd College Ed., 1980). “Capable” means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (Unabridged Ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : infeasible \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice in the exception area. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

#### APPROVAL FINDING

The current level of residential development has increased to the point that commercial resource use has become impracticable. The exception area is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that competes with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable. To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the suitability of the area for farm uses. Due to the existing parcel size, climate and development in the area, it cannot be, and is not, currently employed for the primary purpose of obtaining a profit from agricultural uses, though small scale farm uses do exist on the property and that of the same tract to the south. The area can support these small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.



DENIAL FINDING: One significant conflict is the risk of fire. The increased numbers of residences increase the risk and potential severity of fires, because fires caused by humans add to the frequency of natural fires. Human occupation is always associated with quantities of flammable materials and fire accelerants, such as fuels on household products. The impact of the fire risk is magnified not just by the number of residences but also physical features, including terrain, climate and vegetation (see discussion earlier).

Based on the current composition of the subject parcel as being predominantly open space, or oak, with some areas of Ponderosa Pine and a few Douglas Fir trees, it is not currently composed of enough marketable timber to harvest in the near future. However, those open areas can be planted, and the soil types are good enough to support merchantable timber, as discussed in findings above for OAR 660-004-0025. The applicant did not sufficiently demonstrate the impracticability of utilizing the 35 undeveloped acres. On the contrary, the state of Oregon, and Wasco County, recognize the ability to have as little as 2 acres of woodlands to qualify to receive tax reductions for forestry uses. The current owner's lack of interest in forestry uses on his property does not preclude it from having potentially valuable merchantable timber in the long run. The slopes, soil types, and ability to be used for small scale agriculture demonstrate that this parcel could practicably be used for forest uses per OAR 660-004-0028(3).

- d. *OAR 660-004-0028(4): "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."*

**FINDING:** All applicable factors of section (6) are addressed below.

APPROVAL FINDING: The applicant's statement and exhibits address all applicable factors and reasons why the facts support the conclusion that uses allowed by Goal 4 are impracticable in the exception area, as described throughout this report.

DENIAL FINDING: The applicant submitted extensive statements and exhibits explaining their position on why they feel that the facts support the conclusion that uses allowed by Goal 4 are impracticable. However, staff has found these statements and exhibits to be inconclusive in that attempt, with reasons given throughout this report.

- e. *OAR 660-004-0028(5): "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands."*

**FINDING:** The proposal is for a goal exception, zone change, and comprehensive plan amendment for one parcel. This parcel makes up the entirety of the "exception area". This parcel is physically developed as described above. Findings of fact and a statement of reasons why this land is found to be irrevocably committed are discussed throughout this report.

- f. *OAR 660-004-0028(6): Findings of fact for a committed exception shall address the following factors:*



engages in forestry operations on his extensive Wasco County land holdings. The power line separates the northern 70 acres of that parcel from the southern 370 acres, all of which is in the F-2 (Forest) Zone. This impediment feature is not insurmountable or impassable to forest uses.

(f) *Physical development according to OAR 660-004-0025; OAR 660-004-0025 states the "Exception Requirements for Land Physically Developed to Other Uses" as follows:*

- (1) *A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.*
- (2) *Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception."*

**FINDING:** Part of the justification that the applicant has given for this exception is that a dwelling currently exists on the subject parcel. The exact nature and extent of this house and other structures on the property are identified in **Figure 1 above**. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is 40.6 acres. If the zone change were to be approved, this land would become F-F (10) and three additional dwellings could be built there.

**APPROVAL FINDING:** The current home, abandoned old home, and associated outbuildings are current and former residential uses on this property. Though there is open space on roughly half the eastern portion of the property, it is predominantly oak and open grassland which is not suitable for forestry uses as described and supported in Goal 4. A driveway runs along and near the western property line that connects to another residence on the property to the south of the subject parcel. This development – buildings and residential access ways – qualify as uses not allowed by the applicable goal, Goal 4 in this case.

**DENIAL FINDING:** The current home and driveway are clustered against the eastern property line. There are abandoned (potentially historical) structures near the center of the property, accessed by another driveway. However, the entire eastern and southern portions of this 40.6 acre parcel are undeveloped. Much of the center of the property is currently grassland, but the eastern edge and southern half are wooded with oak and ponderosa pine. Ponderosa Pine is a marketable forest product and the soil characteristics of the parcel demonstrate that more could be grown for harvest in this area, as described above. Though there are buildings on the subject parcel, they do not dominate the landscape, and forestry uses allowed by goal 4 could still be cultivated across much of the property. These structures do not constitute enough physical development to justify a goal exception in a forest resource zone.

(g) *Other relevant factors;*



The following information is in regards to immediately adjacent properties:

Direction	Account	Size	Zone	Use
North	1196	0.7	F-F (10)	Vacant
North	1195	7.9	R-R (5)	Residential
North East	1194	6.4	F-F (10)	Residential
East	885	13.2	F-F (10)	Vacant
South East	887	12.9	F-F (10)	Residential
South	13446	69.3	F-2 (80)	Residential/Resource
South West	399	439	F-2 (80)	Resource
West			F-2 (80)	Vacant
North West	400	16.3	F-F (10)	Vacant

The residential use of the subject property is compatible with adjacent uses. In general, lands to the south are F-2, resource lands. Lands to the east and west, immediately south of and adjacent to Seven Mile Hill Road are residential (F-F (10) or R-R (10)). Nearby lands to the north, across Seven Mile Hill Road are almost all either R-R (5) or R-R (10) and in residential use. The subject property is currently being used as both a residence and a small farm. The continued use of this land in a residential fashion would be compatible with nearby residential uses, but expanding would conflict with potential resource uses.

The BPA line that runs 1/5 mile south of the subject property is the only public facility nearby. Expanded residential use of the subject property would not affect the use and operation of this transmission line. Public services used by the nearby area include roads, police, fire, electrical, telephone, and solid waste disposal. The potential addition of a maximum of three new single family dwellings along Seven Mile Hill Road would have a negligible effect on roads, police, electrical, telephone or solid waste disposal services. There is a slight increased risk of wildfire with the increase of residential use in this wildland-urban interface area.

Sewer services in rural areas of the County are handled with individual septic systems. Nearby and adjacent residential uses on ten acre parcels of land have not encountered difficulty establishing sufficient septic systems. In a November 7, 2018 email John Zalaznik, Environmental Health Supervisor for the North Central Public Health District, stated (in reference to the subject property):

"I think in general that area could accept on site systems. The area looks like it is mostly treed so in general those sites have deeper soils than those open meadow sites. The soils can change so fast though I would not be certain until site evals are done."

Water services in rural areas of the County are handled with individual private wells. There has been widespread concern in the Seven Mile Hill area about a gradually withdrawing water table requiring deeper wells and occasionally resulting in neighboring wells drying up. The addition of three new private wells could have a slight effect on available water supplies for established residential uses in the area. According to an October 12, 2018 email between staff and Watermaster Robert Wood, "Sevenmile Hill/ Mosier groundwater levels are declining about 2 feet per year on average". The Oregon Water Resources Department is "not allowing new water rights in that area as the aquifers are either withdrawn from new appropriations or it has been determined water isn't available within the capacity of the resources." He stated that those uses that are exempt from water rights, such as "single or group



**FINDING:** The following findings demonstrate how compliance **is is not** achieved with statewide land use planning goals that may apply to the request, as required to be considered by subsections 1 and 2 of H., the plan amendment General Criteria:

Goal 1 – Citizen Involvement. The purpose of Goal 1 is to ensure the *“opportunity for citizens to be involved in all phases of the planning process.”* Wasco County has included opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures such as public notice and public hearings for the proposed changes. Compliance with Goal 1 is ensured through compliance with the applicable Plan and zoning ordinance procedural provisions. These proceedings are being conducted with notice and hearings as required by law and County ordinance. Public participation will be a feature of Planning Commission and Board of County Commissioner meetings, which – by the time of this hearing - will have been sufficiently noticed to the public according to state law. Given this information, the proposal complies with Goal 1.

Goal 2 – Land Use Planning. The purpose of Goal 2 is *“to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.”* The County’s planning process has been acknowledged by the State as being in compliance with the Statewide Planning Goals, and was followed in consideration of the proposal. The “adequate factual base” is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal complies with Goal 2, requirements for the adoption of exceptions to a statewide goal.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal. Small-scale farming activities may be possible in the area, but are not likely to be affected by the allowance of three new rural residences.

Goal 4 – Forest Lands. Goal 4 provides for the preservation of Forest Lands for forest use. The property included in the proposed exception area is currently designated Forest Land but is not in forest use, nor is it in a forest assessor class (its assessor class is 401 for residential improved tract). As indicated by the applicant’s materials, the intention of this proposal is to preserve small-scale forest and farm uses, while allowing establishment of rural residences, through a conditional use process, under the County’s F-F(10) zoning. Because the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4.

**APPROVAL FINDING:** The exception is justified in part 2, addressing LCDC’s administrative rule requirements for “built” and “committed” exceptions. The proposal complies with Goal 4.

**DENIAL FINDING:** Part 2 below outlines how this application fails to meet Goal 4 requirements and does not adequately address LCDC administrative rule requirements for “built” and/or “committed” exceptions. The proposal does not comply with Goal 4.

Goal 5 – Open Spaces, Scenic and Historic Areas, and Natural Resources. The subject parcel is located within the Low Elevation Winter Range of the Big Game Wildlife Overlay. Wasco County recognizes in its Comprehensive Plan that big game herds are a valuable natural resource. The County Zoning Ordinance contains siting and development criteria, found in Zoning Ordinance Section 3.920, for lands within designated areas in the County. Goal 5 is met by the application of these standards to any development



within the designated Big Game Winter Range. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 – Air, Water, and Land Resources Quality. Goal 6 is “*To maintain and improve the quality of the air, water and land resources of the state.*” The proposed exception area is not located in a federal air quality attainment area, and three new single family dwellings will not generate significant additional air pollution. Sewage disposal needs of all new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “*To protect people and property from natural hazards.*” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The only natural hazard listed in the rule relevant to the request is “wildfires.” Chapter 10 of the Wasco County LUDO, created in 2007, establishes standards and requirements that ensure fire safe development throughout the County, and would apply to any additional residences or land uses in this area. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “*To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*” Under the current zoning, hunting and fishing operations are allowed outright without lodging, and parks and campgrounds are allowed as conditional uses. If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. Recreational needs can be achieved under both zoning designations. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “*To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*” The subject property is currently being used for one single family dwelling. A zone change to F-F (10) would potentially increase that to a maximum of four single family dwellings, an increase in economic development. It is not currently being used for forest uses, nor is it being assessed for forest tax deferral status. Previous analysis above in OAR 660 Division 4 Section 25 of soil types, as well as the current use of the neighboring approximately 1,100 acre tract for forestry to the south show that this parcel is in an area that does have potential to be used as part of a commercial forestry operation.

**APPROVAL FINDING:** The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with Goal 9.

**DENIAL FINDING:** The proposal promotes Goal 9 by allowing residential uses. However Goal 9 would also be promoted by encouraging forestry practices on this parcel, which the County considers to be the appropriate use of the subject property in view of its established zoning and the economic potential of timber and logging that exists, as outlined above in OAR 660 Division 4. The proposal is not consistent with Goal 9.

Goal 10 – Housing. Goal 10 is “*To provide for the housing needs of citizens of the state.*” The rule is directed to lands in urban and urbanizable areas, and encourages residential development to occur in existing urban areas. However, the proposal will allow development of additional rural residences in an area that is largely committed to existing rural residential uses. Guideline A(4) of Goal 10 states: “Plans



Goal 14 – Urbanization. Goal 14 is “To provide for an orderly and efficient transition from rural to urban land use...” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No “urban” services will be required to allow the maximum amount of development contemplated by this proposal. In the TLSA Study, well water was noted as being available in the area in sufficient quantities to serve the proposed housing density that would result from a zone change to F-F (10) (see Exhibit 4, TLSA Groundwater Study). However, as discussed above in Background information, the Wasco County Watermaster, Robert Wood, and the OWRD have identified the Seven Mile Hill area as having decreasing water supplies since then. Any future application for property division or development will need to comply with their requirements regarding residential well water usage. The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 are coastal specific goals and do not apply in Wasco County.

3. *A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.*

**FINDING:** Webster’s least recriminatory definition of “mistake,” most appropriate here, is “a misunderstanding of the meaning or implication of something.” (Unabridged Ed., 1993). This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the area are more appropriate than the original designations. As noted previously, this area was evaluated as part of the TSLA – which posed a very similar question. The application materials assert that the County was incorrect in its characterization of the area as most appropriate for commercial forest uses. The materials attribute this to the fact that numerous residential lots were platted south of Sevenmile and Dry Creek roads before the designation of F-2 was made. Additionally, subsequent County land use decisions have allowed rural residential uses on both sides of Sevenmile Hill and Dry Creek roads. The applicant claims that the area now appears to be committed to residential uses, and no longer suitable for forestry uses. They argue that a change in the character of the neighborhood is evident, and justification for a Zone Change.

The TLSA study could be interpreted to support a conclusion that lands in this area are appropriate for rural residential uses. The TLSA evaluated lands in this area and recommended changes to some properties and not others. This property was evaluated but not rezoned. However, that was 20 years ago, and conditions continue to change. The County’s rezoning of several parcels south of Sevenmile Hill Road from F-F (10) to R-R (10) after completion of the TLSA Study, allowing development of nonfarm or forest dwellings as permitted uses supports this conclusion. The approval of dwellings in and immediately adjacent to the subject property also could support a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**APPROVAL FINDING:** To the extent the existing designation is a mistake, the proposal will effectively correct that mistake on the subject property by allowing development of residences in an area physically separated from actively managed commercial forest lands by a power line right-of-way/easement. The proposal also recognizes that the character of the neighborhood south of Sevenmile Hill Road has



changed from undeveloped forest and woodlot, to rural residential uses, and seeks to resolve existing conflicts between forest and residential uses.

DENIAL FINDING: The TLSA study was extensive in its evaluation of the Sevenmile Hill area, and ultimately concluded not to rezone the subject property, while rezoning others. The soils data, slope and other information available to staff indicate that the property is capable of being used for commercial forestry uses – although the current owners are not using the land for that purpose at this moment in time. The conversion of some properties south of the road to residential uses does not dismiss the need to hold the line somewhere between commercial forestry and single family dwellings. A conversion of this property would continue the mistake of allowing the encroachment of residential uses into resource zones in this area.

4. *Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.*

APPROVAL FINDING: This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses. Low intensity residential development would match the aesthetic surroundings of single family dwellings along both sides of Seven Mile Hill. Any risk of additional fire exposure is mitigated by County Fire Safety Standards that have been in place since 2007 and can be found in Chapter 10 of the WC LUDO.

DENIAL FINDING: An alteration from a forest use to a residential use increases the risk of fire in a fire prone area. This threatens the safety of adjacent forestry uses, as well as the encroaching residential uses in this area. In addition, the rural aesthetic of a country road would be further degraded by allowing additional dwelling development in an area full of wildlife and natural beauty. Staff finds that a consideration of these factors lends itself to maintaining this property in a resource zone rather than permitting a conversion to residential.

5. *Proof of change in the inventories originally developed.*

APPROVAL FINDING: The proof required by this section is provided by these findings and the attached exhibits. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed within, and in close proximity to the resource area, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed—demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small-scale farm and forest uses with limited density housing in a manner that promotes and improves protection of nearby forest resource lands south of the BPA easement.

DENIAL FINDING: This application asserts that due to adjacent uses being converted to residential uses, that the forest use of the subject parcel should also be changed to match. However, the encroachment of housing and incompatible residential uses into the forest zone should be halted and not encouraged in order to adequately accomplish Goal 4 objectives in this area. Staff does not feel that a "Proof of change in the inventories" has been established.



6. *Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.*

**FINDING:** As described throughout these findings, the proposed revisions are based on the TLSA study, County land use decisions in the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits.

**APPROVAL FINDING:** As evidenced by the discussion in this staff report, and the further supported by the Wasco County Comprehensive Plan, there is a public need for low-density rural residential uses, and for small scale farm and forest uses in the County generally as well as in the Sevenmile Hill area specifically. The justification for the particular change, addressed throughout these findings, is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. It is feasible to mitigate the potential impacts of fire in the area, by utilizing existing firebreaks, and imposing requirements for clustering dwellings; maintenance of fire breaks around dwellings; maintenance of adequate fire suppression water supplies, and similar practices in accordance with Chapter 10 Fire Safety Standards, of the LUDO. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

**DENIAL FINDING:** This application attempts to demonstrate that there is a public need for low-density rural residential uses, and for small scale farm and forest uses, in the County generally and in the Sevenmile Hill area specifically. The justification for the particular change is that the safety and viability of all of these uses is promoted through zoning designations that separate residential uses from commercial forestry uses and buffer each from the other. However, as discussed throughout the report, staff has determined that not enough information has been provided to support this change. That forestry/residential buffer is important to maintain and to establish this area as residential would erode it further in this area, which has already been impacted by excessive residential development affecting its water supply and putting forest reserves at risk of wildfire. The Commercial Forestry uses established by Goal 4 on this property under its current zoning are also an established public need in this County. Due to the existing potential for this property to still be used in that fashion, it has not been demonstrated or fully justified by this application and its exhibits that there is a public need for the requested change from a resource to a non-resource zone.

#### **I. Transportation Planning Rule Compliance**

1. *Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”). ‘Significant’ means the proposal would: (exclusive of correction of map errors in an adopted plan);*
  - a. *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
  - b. *Change standards implementing a functional classification system; or*



**FINDING:** This zone change proposal from Forest, F-2 (80), to Forest-Farm, F-F (10), was initiated by the owner of the subject property, David Wilson, on forms provided to him by the planning department, which he signed. All required information was included to address criteria. This is a quasi-judicial action.

*Section 9.020 – Criteria for Decision*

*The Approving Authority may grant a zone change only if the following circumstances are found to exist:*

*A. The original zoning was the product of a mistake; or*

*B. It is established that*

*1. The rezoning will conform with the Comprehensive Plan; and,*

**FINDING:** This zone change request includes a request for a plan amendment and an exception to Goal 4. The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by this criterion. These goals are discussed above in III.A. Wasco County Comprehensive Plan where the request was found **to be to not be** in conformance. This criterion would be met because the Comprehensive Plan would be amended specifically to support the proposed zoning designation. Following amendment of the Comprehensive Plan Map, the plan designation for the subject property would be "Forest-Farm." The zone designation, "Forest-Farm," with a minimum lot size of ten acres, (F-F (10)) is a zone that conforms with the proposed plan designation.

*2. The site is suitable to the proposed zone;*

**FINDING:** This application is for a comprehensive plan amendment and a zone change from the F-2 (Forest) Zone to the F-F (Forest-Farm) zone. The Comprehensive Plan's "Definitions—Existing Land Use Map" identifies the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield." In this section, the Forest-Farm zone purpose is stated as "To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

The proposed zone would allow farm and forest uses (permitted outright) and dwellings (conditional use permit) and land divisions down to ten acres. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

*"The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses."*



**APPROVAL FINDING:** The Forest-Farm zone is not a resource zone. In this case, it is the most suitable designation for the subject property, which has been partially built and entirely committed to non-resource use due to its location in close proximity to a major county rural residential area, and on site existing residential uses including a single family dwelling, an unused historic dwelling, and associated outbuildings. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

The history of the area is also relevant to addressing this standard. The extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of those surrounding areas to non-resource, rural residential uses. On-going development of residences south of Sevenmile Hill and Dry Creek Road has diminished the value of those roads as a firebreak for commercial timberlands to the south. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable. The subject property is less suitable for commercial forestry than the forestland south of the subject property. The subject property is better used as a buffer between low-density rural residential uses to the north, and commercial forestry uses to the south. The most appropriate design for that buffer is: 1) allow limited housing opportunities in relatively close proximity to existing roads and development and 2) promote clustering of housing generally away from commercial forest areas allowing remaining open areas to be used for small or large scale commercial forest activities, wildlife habitat and as a buffer for those activities. The subject parcel is suitable to the proposed zone as required by Criterion.B.2.

**DENIAL FINDING:** The Forest-Farm zone is not a resource zone. A change to this zone could decrease its potential to be used as part of a commercial agriculture or timber production operation. Both uses exist in the area to the south. Additionally, the soils on this parcel are all Class 4 which, as discussed above, is capable of providing for commercial timber uses. The Green Sheets have a category for "Woodland suitability" where it addresses growth. For the two soil types on the subject property, both are listed at "4A", where 4 is the number of cubic meters/hectare/year, and A is "slight or no limitation". Four cubic meters/hectare/year is equal to 57.2 cubic feet/acre/year. This significantly exceeds the Comprehensive Plan designation that calls for those lands devoted to Forestry Uses to exceed 20 cubic feet per acre per year. The Comprehensive Plan Definition of the purpose of the Forest Farm zone makes it clear that the intent was to limit that zone designation to Class 6 or 7 soils, which are not on the subject parcel at all. Additionally, there are concerns of lowering water supply and general fire risk in this area, as discussed throughout this report. A change to a zone allowing increased density in this area would have a negative impact on both factors. This site does not appear to be suitable to the proposed zone.

3. *There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations."*

**FINDING:** This application is for a goal exception and zone change from F-2 to F-F. The effective result of an approval would be a maximum of three additional single family dwellings, if this land was divided and developed. The TLSA study investigated the suitability of the area for residential needs, including "the availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area," all important factors to consider in this area when it comes to public welfare. The proposal is designed to provide an appropriate buffer between low-density rural residential, forest and farm uses on the one hand (to the north, east and west), and commercial forestry uses on the other (to the south). The "specific zoning" includes the Forest-Farm zone with a ten acre minimum lot size, clustering to a density not to exceed one dwelling for every ten acres. The potential three new dwellings would be required to comply with the fire safety standards for



development set out in Chapter 10 of the Wasco County LUDO, as well as any other applicable requirements of law pertaining to health, safety, and welfare, such as building codes or public health requirements. **The exhibits and record of this proceeding support a finding of compliance with this requirement.**

However, any addition of new residences increases fire risk due to human activity. Seven Mile Hill Road makes an excellent fire buffer, and almost all of the rural residential development in the area is to the north of it. Currently there are other residential developments south of the road to both the east and west of the Subject Parcel, but their existence does not justify approving even more risk in this area. Seven Mile Hill should remain as a buffer for fire in this area. Additionally, there has been an identified risk to ground water in the area as the water table has been gradually lowering in recent years, according to Robert Wood, Watermaster. Three additional residences and their wells would further accelerate that loss. Due to these two main concerns related to public safety and welfare in this area, this request should be denied.

#### *Section 9.030 - Transportation Planning Rule Compliance*

*A. Review of Applications for Effect on Transportation Facilities - A proposed zone change or land use regulation change, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – “TPR”).*

*“Significant” means the proposal would:*

- 1. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*
- 2. Change standards implementing a functional classification system; or*
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:*
  - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;*
  - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or*
  - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.*

**FINDING:** The application for a zone change of one 40.6 acre property with an existing dwelling from F-2 to F-F (10 acre minimum) would have the maximum potential of adding three new single family dwellings. As discussed above in the Background section, the Planning Department prepared a memorandum to the County Court (Board of Commissioners) dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing (See Exhibit 1 for full TLSA report). A 1998 TLSA memo contained the following statistics (Exhibit 2, p. 7)):

**PLANNING DEPARTMENT**

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FILE NUMBER: 921-18-000086-PLNG

FEE: 0 (paid previously)

**LAND USE APPLICATION COVERPAGE**

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>APPLICANT INFORMATION</b>		<b>OWNER INFORMATION</b>	
Name: <u>David W. Wilson</u>		Name: <u>Same</u>	
Address: <u>7100 Seven Mile Hill Road</u>		Address: _____	
City/State/Zip: <u>The Dalles, Oregon 97058</u>		City/State/Zip: _____	
Phone: <u>(541) 490-3730</u>		Phone: _____	
Email: _____		Email: _____	

**PROPERTY INFORMATION**

Township/Range/Section/Tax Lot(s)	Acct #	Acres	Zoning
2N 12E 22 4400	884	40.1	F-2

Property address (or location): 7100 Seven Mile Hill Road

Zoning Designation: F-2 Environmental Protection District: EPD 8

Proposed Use: F-F Permitted Subject to Section: \_\_\_\_\_

Water source: Well Sewage disposal method: Septic

Are there wetlands/waterways on your property? ☒ NO ☐ YES (description) \_\_\_\_\_

Name of road providing access: Seven Mile Hill Road

Current use of property: Residential Use of surrounding properties: Residential, farm

Do you own neighboring property? ☐ NO ☒ YES (description) Tax lots 4800, 2100

**DETAILED PROJECT DESCRIPTION (proposed use, structures, dimensions, etc.):** \_\_\_\_\_

Zone change from F-2 to F-F

☐ Additional description/maps/pictures attached

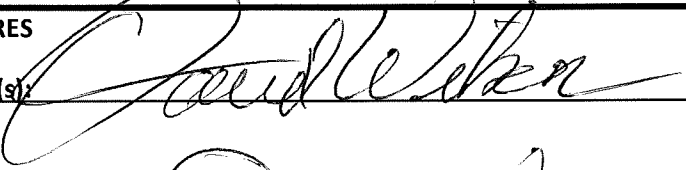
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**LEGAL PARCEL STATUS**

Partition, Subdivision, OR

Most Recent Pre-9/4/1974 Deed #: PLAPAR-17-05-0002 Date Filed: September 8, 2017

Current Deed #: \_\_\_\_\_ Date Filed: \_\_\_\_\_

*The deed and a map showing the property described in the deed(s) must accompany this application.***SIGNATURES**Applicant(s):  Date: 5/4/18Property Owner(s):  Date: 5/4/18

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**PLEASE NOTE:** Before this application will be processed, you **must** supply all requested information and forms, and address **all listed or referenced criteria**. Pursuant to ORS 215.428, this office will review the application for completeness and notify Applicant of any deficiencies within 30 days of submission. By signing this form, the property owner or property owner's agent is granting permission for Planning Staff to conduct site inspections on the property.

**ALL LAND USE APPLICATIONS MUST INCLUDE:**

- ☐ Application Fee – Cash or Check (credit cards now accepted with additional fee)
- ☐ Site Plan
- ☐ Elevation Drawing
- ☐ Fire Safety Self-Certification
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_**APPLICATIONS FOR PROPERTIES IN THE NATIONAL SCENIC AREA MUST ALSO INCLUDE:**

- ☐ Scenic Area Application/Expedited Review
- ☐ Color and Material Samples
- ☐ Landscaping Plan
- ☐ Grading Plan
- ☐ Other applicable information/application(s):

☐ \_\_\_\_\_☐ \_\_\_\_\_



**SHADED AREA TO BE COMPLETED BY PLANNING DEPARTMENT**

**Legal Parcel**

Deed/Land Use Action: \_\_\_\_\_

☐ NO

☐ YES

**Previous Map and Tax Lot:** \_\_\_\_\_

**Past Land Use Actions:** If yes, list file #(s) \_\_\_\_\_

☐ NO

☐ YES

Subject to previous conditions?

☐ NO

☐ YES

**Assessor Property Class:** \_\_\_\_\_

**Zoning:** \_\_\_\_\_

**Environmental Protection Districts – List applicable EPDs:**

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

☐ EPD # \_\_\_\_\_

**Water Resources**

Are there bodies of water or wetlands (seasonal or permanent) on property or adjacent properties? ☐ NO ☐ YES

Describe (include setback distances): \_\_\_\_\_

☐ Fish bearing ☐ Non fish bearing ☐ Seasonal Creek

☐ Irrigation ditch ☐ Wetland ☐ Pond/Lake ☐ Not identified

*(Note: Check buffers. Different zones have different setback requirements that may require a more extensive permitting process.)*

**Access:**

County or ODOT approach permit on file? ☐ NO ☐ YES, # \_\_\_\_\_

**Address:**

Address exists and has been verified to be correct?

☐ NO

☐ YES

Address needs to be assigned after approval?

☐ NO

☐ YES

**Fire District:** \_\_\_\_\_

**Fees (List Review Type and Cost):** \_\_\_\_\_



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FILE NUMBER: PLAZNC

FEE: \_\_\_\_\_

## ZONE CHANGE APPLICATION

Date Received: \_\_\_\_\_ Planner Initials: \_\_\_\_\_ Date Complete: \_\_\_\_\_ Planner Initials: \_\_\_\_\_

### Current Zoning

Comprehensive Plan Map Designation: FOREST

Zoning Designation: F.2 (80)

### Proposed Zoning

Comprehensive Plan Map Designation: FOREST- FARM

Zoning Designation: F.F (10)

Total Acreage to be Rezoned: 40.10

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. Describe how the original zoning was the product of a mistake; or
3. Establish that:
  - a. The rezoning will conform with the Comprehensive Plan (including but not limited to all applicable goals and policies); and,
    - Goal 1: Citizen Involvement
    - Goal 2: Land Use Planning
    - Goal 3: Agricultural Lands
    - Goal 4: Forest Lands
    - Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources
    - Goal 6: Air, Water and Land Resources Quality
    - Goal 7: Areas Subject to Natural Disasters and Hazards
    - Goal 8: Recreational Needs
    - Goal 9: Economy of the State
    - Goal 10: Housing
    - Goal 11: Public Facilities and Services
    - Goal 12: Transportation
    - Goal 13: Energy Conservation
    - Goal 14: Urbanization

- b. The site is suitable to the proposed zone (taking into consideration among other things slope, access, flooding, traffic, availability of public facilities and services, and impact to adjacent properties); and
  - c. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.
4. What effect would the proposed change have on surrounding properties? Include a description of the existing land uses within 1,000 feet of the proposed zone change.
  5. Is there a public need or demand to support this requested zone change? ☐ No ☐ Yes. If YES, please describe.
  6. Fire Safety. If converting Farm or Forest zoned land to a non-resource zone, include an analysis of how future division and residential development could meet fire safety standards.
  7. Any other information which may add to the viability of the request.

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#### SITE INFORMATION

The following maps shall be required for a complete application:

**Zoning Map:** Show area of proposed re-zoning.

**Soils Map:** If converting Forest or Farm zoned land to a non-resource zone include a soils map. These are available at the Wasco County GIS Department or the Farm Services Agency.

**Site Plan Map for the area to be rezoned and lands within at least 1000' that includes the following:**

- ☐ North Arrow
- ☐ Scale
- ☐ Boundaries or properties proposed to be rezoned (dimensions)
- ☐ All waterways, wetlands, noticeable landforms and drainage of property
- ☐ Structures (including dwelling, accessory buildings, barns, walls and fences) with location and size
- ☐ Utilities (existing)
  - Electric/Communication corridors including poles
  - Septic tanks & drain fields (primary and reserve)/Wells and supply lines
- ☐ All points of ingress and egress (roads and driveways) and whether they are public or private with their length, width and surface type
- ☐ Significant terrain features and land forms including slopes over 20%

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Zone Change will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set. A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

In case of Appeal: Written notice of the appeal must be filed with the Planning Director, within twelve (12) days of the subject decision. Forms are available at the Wasco County Planning Department.



**PLANNING DEPARTMENT**

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FILE NUMBER: **PLACPA-**\_\_\_\_\_

FEE: \_\_\_\_\_

## COMPREHENSIVE PLAN AMENDMENT

Date Received:	Planner Initials:	Date Complete:	Planner Initials:
<b>PROPOSED CHANGE</b>			

Indicate specific Comprehensive Plan section(s) or element(s) proposed to be amended or added:

Amend Comprehensive Plan to re-zone tax lot 2N 12E 22 4400 from F-2(80) to F-F(10)

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### FINDS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed change?
2. A landowner or their representative may only initiate a quasi-judicial plan amendment. Describe how the proposal meets the standard of a quasi-judicial amendment and not a legislative amendment.

Quasi-Judicial revisions are those which do not have significant effect beyond the immediate area of the change, i.e., narrow in scope and focusing on specific situations.

Legislative revisions include land use changes that have widespread and significant impact beyond the immediate area such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or much different ownership.

3. The amendment will be in compliance with the statewide land use goals as provided by the Land Conservation and Development Commission, where applicable and substantial proof that such change shall not be detrimental to the spirit and intent of such goals. These goals include:

Goal 1: Citizen Involvement  
Goal 2: Land Use Planning  
Goal 3: Agricultural Lands  
Goal 4: Forest Lands  
Goal 5: Open Spaces, Scenic and Historic Areas  
and Natural Resources  
Goal 6: Air, Water and Land Resources Quality  
Goal 7: Areas Subject to Natural Disasters and Hazards

Goal 8: Recreational Needs  
Goal 9: Economy of the State  
Goal 10: Housing  
Goal 11: Public Facilities and Services  
Goal 12: Transportation  
Goal 13: Energy Conservation  
Goal 14: Urbanization



4. Demonstrate there was a mistake in the original comprehensive plan or change in the character of the neighborhood.
  5. Address factors which relate to the public need for healthful, safe and aesthetic surrounding and conditions.
  6. Include proof of change in the inventories originally developed.
  7. Amendment shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established. Provide additional studies and established need to justify the amendment.
- A response (findings of fact) to each of the questions above has been submitted? ☐ No ☒ YES

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Comprehensive Plan Amendment will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

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FILE NUMBER: PLAEXC

FEE: \_\_\_\_\_

## GOAL EXCEPTION APPLICATION

Date Received:

Planner Initials:

Date Complete:

Planner Initials:

### PROPOSED EXCEPTION

Indicate the Goal(s) for which the exception is requested:

Goal 4 - Forest Lands

### FINDINGS OF FACT

The following shall be addressed by the applicant. Response (findings of fact) to the following questions shall be typewritten and attached to the application.

1. What is the purpose of the proposed goal exception?
2. Is there a public need or demand to support this requested Goal Exception? ☐ No ☐ Yes. If YES, please describe.
3. An exception is a decision to exclude certain land from the requirements of one or more applicable statewide goals. Goal Exceptions fall into three categories: Physically Developed; Irrevocably Committed; and Reasons.

Indicate which type of goal exception is being proposed and include findings for the review criteria listed below and any additional referenced criteria. These are directly from Oregon Administrative Rule and are available at [http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_004.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_004.html). Oregon Revised Statute criteria are available at <http://landru.leg.state.or.us/ors/>

a. Exception Requirements for Land Physically Developed to Other Uses

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**b. Exception Requirements for Land Irrevocably Committed to Other Uses**

- (1)** A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a)** A "committed exception" is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b)** For the purposes of this rule, an "exception area" is that area of land for which a "committed exception" is taken;
  - (c)** An "applicable goal," as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.
- (2)** Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:
  - (a)** The characteristics of the exception area;
  - (b)** The characteristics of the adjacent lands;
  - (c)** The relationship between the exception area and the lands adjacent to it; and
  - (d)** The other relevant factors set forth in OAR 660-004-0028(6).
- (3)** Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(1)(b), in Goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is "impossible." For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable:
  - (a)** Farm use as defined in ORS 215.203;
  - (b)** Propagation or harvesting of a forest product as specified in OAR 660-033-0120; and
  - (c)** Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).
- (4)** A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.
- (5)** Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.
- (6)** Findings of fact for a committed exception shall address the following factors:
  - (a)** Existing adjacent uses;
  - (b)** Existing public facilities and services (water and sewer lines, etc.);
  - (c)** Parcel size and ownership patterns of the exception area and adjacent lands:
    - (i)** Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities) on the resulting parcels or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive commercial agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels;

- (ii) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownerships are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.
  - (d) Neighborhood and regional characteristics;
  - (e) Natural or man-made features or other impediments separating the exception area from adjacent resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;
  - (f) Physical development according to OAR 660-004-0025; and
  - (g) Other relevant factors.
- (7) The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.
- (8) The requirement for a map or aerial photograph in section (7) of this rule only applies to the following committed exceptions:
  - (a) Those adopted or amended as required by a Continuance Order dated after the effective date of section (7) of this rule; and
  - (b) Those adopted or amended after the effective date of section (7) of this rule by a jurisdiction with an acknowledged comprehensive plan and land use regulations.
- c. Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)  
 An exception Under Goal 2, Part II(c) can be taken for any use not allowed by the applicable goal(s). The types of reasons that may or may not be used to justify certain types of uses not allowed on resource lands are set forth in the following sections of this rule:
  - (1) For uses not specifically provided for in subsequent sections of this rule or in OAR 660-012-0070 or chapter 660, division 14, the reasons shall justify why the state policy embodied in the applicable goals should not apply. Such reasons include but are not limited to the following:
    - (a) There is a demonstrated need for the proposed use or activity, based on one or more of the requirements of Goals 3 to 19; and either
    - (b) A resource upon which the proposed use or activity is dependent can be reasonably obtained only at the proposed exception site and the use or activity requires a location near the resource. An exception based on this subsection must include an analysis of the market area to be served by the proposed use or activity. That analysis must demonstrate that the proposed exception site is the only one within that market area at which the resource depended upon can reasonably be obtained; or
    - (c) The proposed use or activity has special features or qualities that necessitate its location on or near the proposed exception site.
  - (2) Rural Residential Development: For rural residential development the reasons cannot be based on market demand for housing, except as provided for in this section of this rule, assumed continuation of past urban and rural population distributions, or housing types and cost characteristics. A county must show why, based on the economic analysis in the plan, there are reasons for the type and density of housing planned which require this particular location on resource lands. A jurisdiction could justify an exception to allow residential development on resource land outside an urban growth boundary by determining that the rural



location of the proposed residential development is necessary to satisfy the market demand for housing generated by existing or planned rural industrial, commercial, or other economic activity in the area.

- (3) Rural Industrial Development: For the siting of industrial development on resource land outside an urban growth boundary, appropriate reasons and facts include, but are not limited to, the following:
- (a) The use is significantly dependent upon a unique resource located on agricultural or forest land. Examples of such resources and resource sites include geothermal wells, mineral or aggregate deposits, water reservoirs, natural features, or river or ocean ports; or
  - (b) The use cannot be located inside an urban growth boundary due to impacts that are hazardous or incompatible in densely populated areas; or
  - (c) The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.
- (4) Expansion of Unincorporated Communities: For the expansion of an Unincorporated Community defined under OAR 660-022-0010(10), appropriate reasons and facts include but are not limited to the following:
- (a) A demonstrated need for additional land in the community to accommodate a specific rural use based on Goals 3-19 and a demonstration that either:
    - (i) The use requires a location near a resource located on rural land; or
    - (ii) The use has special features necessitating its location in an expanded area of an existing unincorporated community, including:
      - (a) For industrial use, it would have a significant comparative advantage due to its location (i.e., near a rural energy facility, or near products available from other activities only in the surrounding area; or it is reliant on an existing work force in an existing unincorporated community);
      - (b) For residential use, the additional land is necessary to satisfy the need for additional housing in the community generated by existing industrial, commercial, or other economic activity in the surrounding area. The plan must include an economic analysis showing why the type and density of planned housing cannot be accommodated in an existing exception area or UGB, and is most appropriate at the particular proposed location. The reasons cannot be based on market demand for housing, nor on a projected continuation of past rural population distributions.
  - (b) Need must be coordinated and consistent with the comprehensive plan for other exception areas, unincorporated communities, and UGBs in the area. Area encompasses those communities, exception areas, and UGBs which may be affected by an expansion of a community boundary, taking into account market, economic, and other relevant factors;
  - (c) Expansion requires demonstrated ability to serve both the expanded area and any remaining infill development potential in the community at time of development with the level of facilities determined to be appropriate for the existing unincorporated community.
- (5) Expansion of Urban Unincorporated Communities: Expansion of an urban unincorporated community defined under OAR 660-022-0010(9) shall comply with OAR 660-022-0040.

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#### REVIEW PROCESS

Before this application will be processed, you must supply all the requested information pursuant to the attached instructions. Pursuant to ORS 215.427 this office will review the application for completeness and notify the applicant of any deficiencies within 30 days of submission. If you have questions, the following pages provide directions and helpful information in order to complete the application. Other questions can be addressed in the pre-application conference.

A request for a Goal Exception will be reviewed by the Wasco County Planning Commission at a public hearing. Upon receipt of a completed application, hearing dates will be set.

A recommendation on the proposal will be made by the Planning Commission and forwarded to the Wasco County Board of Commissioners where a final decision will be issued.

The decision of the Board of Commissioners may be appealed to the Land Use Board of Appeals (LUBA). Information regarding appeals to LUBA is available at the Wasco County Planning Department.

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P:\Development Applications\GoalException.docx

Last Updated 7/13/2017

**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## **BACKGROUND INFORMATION**

### **PROPERTY OWNERS:**

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### **COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:**

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### **PUBLIC FACILITIES AND SERVICES:**

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A



Geologic Survey was published in 1996 as part of the TLSA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLSA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells, and there is a well on the subject property serving the existing residence and associated accessory buildings. The general conclusion of the Groundwater Study is that this area has capacity to support additional residential development. See additional findings below regarding the TLSA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLSA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the

TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

- 1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."
- 1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge."

1.3. The following provisions apply and are addressed in the following sections.

1.4. Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

1.5. Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

1.6. The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_)

### **1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.
6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.



Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is "To maintain and improve the quality of the air, water and land resources of the state." The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is "To protect people and property from natural hazards." Goal 7 calls for local governments to adopt measures "to reduce risk to people and property from natural hazards." The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 –Recreational Needs. Goal 8 is "To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts." If the zoning is changed to F-F(10), "Parks, playgrounds, hunting and fishing preserves and campgrounds" would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is "To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens." The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is "To provide for the housing needs of citizens of the state." The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid- Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.

Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the

area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

"1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - "TPR"). 'Significant' means the proposal would:



a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).

## 1.9 Procedures for a Plan Amendment.

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197.932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 Forest Lands.”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.



## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 north south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.

The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## 2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### 2.3.1 OAR 660-004-0028(1) provides:

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### 2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### 2.3.3 (b) “the characteristics of the adjacent lands;”

#### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911;

Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.



The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the area. The subject property has never produced merchantable timber or been logged commercially.

#### 2.3.4 (c) The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of

these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

- (a) Farm use as defined in ORS 215.203;
- (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;
- (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other

agricultural or horticultural use or animal husbandry or any combination thereof. "Farm use" includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. "Farm use" also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. "Farm use" also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. "Farm use" includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. "Farm use" does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including "farm use" and "propagation or harvesting of a forest product," and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means "not capable of being carried out in practice." Webster's New World Dictionary, 2nd College Edition, 1980. Capable means "having ability" or "able to do things well." Id. Finally, "in practice" means by the usual method, custom or convention. Id. Webster's Third New International Dictionary, (unabridged ed., 1993) defines "impracticable" as "1a : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* c : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*"

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of "forest products" can be found in ORS 532.010(4), which states that forest products are "any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores."

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, "peripheral" farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: "A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area."

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

- 2.3.8** OAR 660-004-0028(5) provides: "Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared



for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1 (a)** Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2 (b)** Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3 “(c)** Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject

property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas

to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

**2.3.9.6** (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

**2.3.9.7** “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.



(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3 OAR 660-004-0040(6) and (7) provide:**

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.

**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

\*\*\*\*\*

**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

"Application for a zone change may be initiated as follows:

\*\*\*\*\*

C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);"

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<sup>1</sup> Missing text in published version of Section 9.010.

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  1. The rezoning will conform with the Comprehensive Plan; and,
  2. The site is suitable to the proposed zone;
  3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable



plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

### Goal 8 -Recreational Needs.

Goal 8 is “To satisfy the recreational needs of the citizens of Wasco County and visitors.” None of the policies of Goal 8 apply to the proposal.

### Goal 9 -- Economy of the State.

Goal 9 is “To diversify and improve the economy of Wasco County.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

### Goal 10 -- Housing.

Goal 10 is “To provide for the housing needs of the citizens of Wasco County.” There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

### Goal 11 -- Public Facilities and Services.

Goal 11 is to “plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development.” The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff s office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

### Goal 12-Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road

is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property, which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and

increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## **CONCLUSION**

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.







## SOIL INTERPRETATIONS RECORD

49C WAMIC LOAM 5 TO 12 PERCENT NORTH SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES														
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.
0-7 IL		ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100	95-100	90-95	55-75	20-25	NP-5				
28-44 IL, SCL		ML	A-4	0	95-100	95-100	90-95	55-75	30-35	5-10				
44 UUB														
DEPTH (IN.)	CLAY (PCT)	MOIST DENSITY (G/CM <sup>3</sup> )	BULK DENSITY (G/CM <sup>3</sup> )	PERME- ABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL (IN)	EROSION FACTORS (K, T, G)	WIND ERODIBLE MATTER (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE		
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	-	LOW	1.49	4	-	1-2	MODERATE	LGW
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	-	LOW	1.43					
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	-	LOW	1.43					
44														
FLOODING														
HIGH WATER TABLE														
CEMENTED PAN														
BEDROCK														
SUBSIDENCE														
HYDROLYZABLE NITROGEN														
FREQUENCY	DURATION	MONTHS	(FT)	DEPTH	KIND	MONTHS	DEPTH	HARDNESS	DEPTH	HARDNESS	INIT.	TOTAL	GRP.	FROST
NONE			26.0						140-60	HARD	-	-	-	MODERATE
SANITARY FACILITIES														
CONSTRUCTION MATERIAL														
SEPTIC TANK	SEVERE-PERCS SLOWLY				ROADFILL				FAIR-AREA RECLAIM, THIN LAYER					
ABSORPTION FIELDS														
SEWAGE LAGOON AREAS	SEVERE-SLOPE				SAND				IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK				GRAVEL				IMPROBABLE-EXCESS FINES					
SANITARY LANDFILL (AREA)	MODERATE-DEPTH TO ROCK, SLOPE				TOPSOIL				FAIR-SLOPE					
DAILY COVER FOR LANDFILL	FAIR-AREA RECLAIM, SLOPE, THIN LAYER				POND RESERVOIR AREA				WATER MANAGEMENT					
									SEVERE-SLOPE					
BUILDING SITE DEVELOPMENT	MODERATE-DEPTH TO ROCK, SLOPE				EMBANKMENTS				SEVERE-PIPING					
SHALLOW EXCAVATIONS					DIKES AND LEVEES									
DWELLINGS WITHOUT BASEMENTS	MODERATE-SLOPE				EXCAVATED PONDS				SEVERE-NO WATER					
					AQUIFER FED									
DWELLINGS WITH BASEMENTS	MODERATE-DEPTH TO ROCK, SLOPE				DRAINAGE				DEEP TO WATER					
SHALL COMMERCIAL BUILDINGS	SEVERE-SLOPE				IRRIGATION				SLOPE, ERODES EASILY					
LOCAL ROADS AND STREETS	MODERATE-SLOPE, FROST ACTION				TERRACES AND DIVERSIONS				SLOPE, ERODES EASILY					
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	MODERATE-SLOPE				GRASSED WATERWAYS				SLOPE, ERODES EASILY					

RECREATIONAL DEVELOPMENT												
CAMP AREAS	MODERATE-SLOPE, DUSTY					PLAYGROUNDS		SEVERE-SLOPE				
PICNIC AREAS	MODERATE-SLOPE, DUSTY					PATHS AND TRAILS		SEVERE-ERODES EASILY				
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)												
	CAPABILITY	WHEAT WINTER (BU)	GRASS HAY (TONS)									
	NI	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	
	4E	35	1.5									
<i>Severe limitations (e) erosion</i>												
WOODLAND SUITABILITY												
ORD SYM	MANAGEMENT PROBLEMS					POTENTIAL PRODUCTIVITY						
	EROSION	EQUIP.	SEEDLING	WINDTH.	PLANT	COMMON TREES			TREES TO PLANT			
	HAZARD	LIMIT	MORTY.	HAZARD	COMPET.	SITE INDEX						
4A	MODERATE	SLIGHT	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK			170. PONDEROSA PINE			
<i>4 cubic yds / 1000 lbs / 1000 ft</i>												
WINDBREAKS												
SPECIES		HT	SPECIES		HT	SPECIES		HT	SPECIES		HT	
NONE												
WILDLIFE HABITAT SUITABILITY												
POTENTIAL FOR HABITAT ELEMENTS						POTENTIAL AS HABITAT FOR:						
GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWOOD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPEN WETLAND	WOODLAND	WETLAND	RANGELAND	
FAIR	GOOD	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR	-	
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)												
COMMON PLANT NAME	PLANT SYMBOL (NLSPN)	PERCENTAGE COMPOSITION (DRY WEIGHT)										
IDAHO FESCUE	FE10	45										
BLUEBUNCH WHEATGRASS	AGSP	10										
SANDBERG BLUEGRASS	POSE	5										
NARROWLEAF BALSAMROOT	BASA3	2										
ANTELOPE BITTERBRUSH	PUTR2	10										
OREGON WHITE OAK	QUGA4	5										
PONDEROSA PINE	PIPO	5										
POTENTIAL PRODUCTION (LBS./AC. DRY WT):												
FAVORABLE YEARS		950										
NORMAL YEARS		800										
UNFAVORABLE YEARS		450										

## FOOTNOTES

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.



## SOIL INTERPRETATIONS RECORD

500 WAMIC LOAM, 12 TO 20 PERCENT SLOPES

THE WAMIC SERIES CONSISTS OF DEEP WELL DRAINED SOILS FORMED IN AEOLIAN MATERIALS ON RIDGETOPS AND PLATEAUS. TYPICALLY, THE SURFACE LAYER IS VERY DARK GRAYISH BROWN LOAM ABOUT 7 INCHES THICK. THE SUBSOIL IS DARK BROWN LOAM ABOUT 21 INCHES THICK. THE SUBSTRATUM IS DARK BROWN LOAM ABOUT 16 INCHES THICK. DEPTH TO BEDROCK IS 40 TO 60 INCHES OR MORE. ELEVATION IS 1000 TO 3600 FEET. MEAN ANNUAL PRECIP. IS 14 TO 20 INCHES. MEAN ANNUAL AIR TEMP. IS 46 TO 50 DEGREES F. THE FROST-FREE PERIOD IS 100 TO 150 DAYS.

ESTIMATED SOIL PROPERTIES													
DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACTURE (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.	LIQUID LIMIT	PLAS- TICITY INDEX						
0-7 IL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5						
7-28 IL, SIL		ML, CL-ML	A-4	0	95-100 95-100 90-95 55-75	20-25	NP-5						
28-44 IL, SCL		ML	A-4	0	95-100 95-100 90-95 55-75	30-35	5-10						
44 LUWB													
DEPTH (IN.)	CLAY (PCT)	MOIST BULK DENSITY (G/CM <sup>3</sup> )	PERMEA- BILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SHRINK- SWELL POTENTIAL K I T GROUP	EROSION WIND FACTOR (PCT)	ORGANIC MATTER (PCT)	CORROSIVITY STEEL CONCRETE			
0-7	15-25	1.10-1.30	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW 1.49	4	-	1-2	MODERATE	LOW	
7-28	18-27	1.20-1.35	0.6-2.0	0.19-0.22	6.6-7.3	-	LOW 1.43						
28-44	20-30	1.30-1.45	0.2-0.6	0.13-0.15	6.6-7.3	-	LOW 1.43						
44													
FLOODING													
HIGH WATER TABLE				CEMENTED PAV.				BEDROCK				SUBSIDENCE	
FREQUENCY	DURATION	MONTHS	DEPTH (FT)	DEPTH (IN)	HARNESS (IN)	DEPTH (IN)	HARNESS (IN)	DEPTH (IN)	HARNESS (IN)	DEPTH (IN)	HARNESS (IN)	TOTAL (IN)	ACTION
NONE			>6.0					10-50	HARD				MODERATE

SANITARY FACILITIES				CONSTRUCTION MATERIAL			
SEPTIC TANK ABSORPTION FIELDS	SEVERE-PERCS SLOWLY, SLOPE		ROADFILL	FAIR-AREA RECLAIM, THIN LAYER, SLOPE			
SEWAGE LAGOON AREAS	SEVERE-SLOPE		SAND	IMPROBABLE-EXCESS FINES			
SANITARY LANDFILL (TRENCH)	SEVERE-DEPTH TO ROCK, SLOPE		GRAVEL	IMPROBABLE-EXCESS FINES			
SANITARY LANDFILL (AREA)	SEVERE-SLOPE		TOPSOIL	POOR-SLOPE			
DAILY COVER FOR LANDFILL	POOR-SLOPE		POND RESERVOIR AREA	SEVERE-SLOPE			
BUILDING SITE DEVELOPMENT				WATER MANAGEMENT			
SHALLOW EXCAVATIONS	SEVERE-SLOPE		EMBANKMENTS DIKES AND LEVEES	SEVERE-PIPING			
DWELLINGS WITHOUT BASEMENTS	SEVERE-SLOPE		EXCAVATED PONDS	SEVERE-NO WATER			
DWELLINGS WITH BASEMENTS	SEVERE-SLOPE		AQUIFER FED	DEEP TO WATER			
SMALL COMMERCIAL BUILDINGS	SEVERE-SLOPE		DRAINAGE	SLOPE, ERODES EASILY			
LOCAL ROADS AND STREETS	SEVERE-SLOPE		IRRIGATION	SLOPE, ERODES EASILY			
LAWNS, LANDSCAPING AND GOLF FAIRWAYS	SEVERE-SLOPE		TERRACES AND DIVERSIONS	SLOPE, ERODES EASILY			
			GRASSED WATERWAYS	SLOPE, ERODES EASILY			

RECREATIONAL DEVELOPMENT													
CAMP AREAS	SEVERE-SLOPE					PLAYGROUNDS				SEVERE-SLOPE			
PICNIC AREAS	SEVERE-SLOPE					PATHS AND TRAILS				SEVERE-ERODES EASILY			
CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE (HIGH LEVEL MANAGEMENT)													
	CAPA-BILITY	WHEAT, WINTER (BU)	GRASS HAY (TONS)										
	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR	IRR	NIIRR
	4E	35	1.5										
WOODLAND SUITABILITY													
ORD SYM	MANAGEMENT PROBLEMS				POTENTIAL PRODUCTIVITY								
	EROSION HAZARD	EQUIP. LIMIT	SEEDLING MORT.Y.	WINDTH. HAZARD	PLANT COMPET.	COMMON TREES				TREES TO PLANT			
4A	MODERATE	MODERATE	MODERATE	SLIGHT	SEVERE	PONDEROSA PINE OREGON WHITE OAK				70 * PONDEROSA PINE			
WINDBREAKS													
	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT	SPECIES	INT	
	NONE												
WILDLIFE HABITAT SUITABILITY													
	POTENTIAL FOR HABITAT ELEMENTS				POTENTIAL AS HABITAT FOR:								
	GRAIN & SEED	GRASS & LEGUME	WILD HERB.	HARDWD TREES	CONIFER PLANTS	SHRUBS	WETLAND PLANTS	SHALLOW WATER	OPENLD WILDLF	WOODLD WILDLF	WETLAND WILDLF	RANGELD WILDLF	
	POOR	FAIR	GOOD	FAIR	FAIR	FAIR	IV. POOR	IV. POOR	FAIR	FAIR	IV. POOR		
POTENTIAL NATIVE PLANT COMMUNITY (RANGELAND OR FOREST UNDERSTORY VEGETATION)													
COMMON PLANT NAME	PLANT SYMBOL (NLSN)	PERCENTAGE COMPOSITION (DRY WEIGHT)											
IDAHO FESCUE	FEID	45											
SANDBERG BLUEGRASS	POSE	5											
BLUEBUNCH WHEATGRASS	AGSP	10											
NARROWLEAF BALSAMROOT	BASA3	2											
ANTELOPE BITTERBRUSH	PUTR2	10											
OREGON WHITE OAK	OUGA4	5											
PONDEROSA PINE	PIPO	5											
POTENTIAL PRODUCTION (LBS./AC. DRY WT):													
FAVORABLE YEARS		950											
NORMAL YEARS		800											
UNFAVORABLE YEARS		450											
FOOTNOTES													

\* SITE INDEX IS A SUMMARY OF 5 OR MORE MEASUREMENTS ON THIS SOIL.

RECEIVED 9-25-92  
FROM ODF

Ponderosa Pine Site Classes and Site Index Table  
Compared with Cubic Foot Site Classes

	Site Index												
	40	50	60	70	80	90	100	110	120	130	140	150	160
Site Index →													
Potential Yield Cubic Feet Per Acre Gross Cubic Foot	20	20-49			50-84		85-119		120-164		165-224		225+
Cubic Foot Site Class	7	6			5		4		3		2		1

Red Fir - Noble Fir - Pacific Silver Fir Site Index and  
Cubic Foot Site Class Table (Forest Survey)

	Site Index				
	20	30	40	50	60
Potential Yield Cubic Feet/Acre	50-84	85-119	120-164	165-224	
Cubic Foot Site Class	5	4	3	2	

Sitka Spruce Site Index and Cubic Foot  
Site Class Table (Forest Survey)

	Site Index														
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
Potential Yield Cubic Feet/Acre	20-49	50-84		85-119		120-164		165-224			225+				
Cubic Foot Site Class	6	5		4		3		2			1				





**TO:** WASCO COUNTY PLANNING COMMISSION

**FROM:** WASCO COUNTY PLANNING & ECONOMIC  
DEVELOPMENT OFFICE

**SUBJECT:** Request for Comprehensive Plan Amendment and Zone Change for a single 40  
acre parcel in the Sevenmile Hill Area Committed to Residential Use; Exception  
to Goal 4.

**HEARING DATE:**

**APPLICANT:** David Wilson

**NATURE OF REQUEST:**

The request is for:

- Amendment to the County's Comprehensive Plan and plan map establishing an exception to Goal 4, "Forest Lands," for Applicant's tax lot 4400 consisting of 40.10 acres; and
- A change in the zone designation of tax lot 4400 from F-2 (80) "Forest Use" to F-F (10) "Forest-Farm."

**RECOMMENDATION:** The Planning Office recommends that the Planning Commission approve the request for a zone change, comprehensive plan amendment, and exception as set forth below. The subject property is both physically developed and irrevocably committed to non-forest uses, because residential uses both on and surrounding the subject property make forest uses impracticable. The criteria for the requested zone and plan changes are met, as explained in this submittal and the attached Exhibits.

## BACKGROUND INFORMATION

### PROPERTY OWNERS:

This request is for tax lot 2N 12E 22 4400, owned by applicant David Wilson, as shown on the maps in Exhibit 1. Tax lot 4400 is a legally created lot of record, and is referred to in this submittal as the “subject property.”

### COMPREHENSIVE PLAN AND ZONING DESIGNATIONS:

The subject property is designated forest use on the comprehensive plan map and currently zoned F-2 (80) for forest use.

### PUBLIC FACILITIES AND SERVICES:

#### Transportation

The subject property lies south of Sevenmile Hill Road at the point where it intersects with Old Sevenmile Hill Road and Richard Road. At the point of the intersection of Sevenmile Hill Road and Dry Creek Road, and proceeding toward the northwest from the intersection, Sevenmile Hill Road becomes State Road. The primary access to the subject property is from Sevenmile Hill Road.

From the records of the Wasco County Road Department, State Road/Sevenmile Hill Road is a Functional Class RC Rural Major Collector with a 2009 ADT of 480 and a V/C Ratio of 0.01 [Data taken from Wasco County Transportation System Plan, 2009] The Planning Office prepared a memorandum to the County Court dated 2/18/98 as a staff report for the Transition Lands Study Area (TLSA) Rezoning Hearing. The TLSA memo listed a capacity for State Road/Sevenmile Hill Road of 1,500/day.

According to the latest version of the ITE Trip Generation Manual, a detached single family dwelling produces 9.57 Average Daily Trips (Land Use 210). The proposed zone change could potentially add 3 dwellings to the area's traffic load, producing 29 daily trips at maximum buildout. The addition of those trips to the existing ADT would result in 509 daily trips for the area. Based on the carrying capacity of State Road/Sevenmile Hill Road, the addition of 3 dwellings would not cause the V/C ratio to rise above 0.5. Wasco County has not established a mobility standard for Sevenmile Hill Road. However, in the 2009 Transportation System Plan the county used the ODOT mobility standard of 0.70 as a comparison figure. Using that standard, should the proposed zone change produce the maximum development allowed, it would not have a significant impact on the transportation facilities.

#### Water and Sewer

There is no public water system that would be available to serve existing or future residences on the subject property or surrounding lands, because of the rural nature of the area. A

Geologic Survey was published in 1996 as part of the TLISA study (see below under general history and prior land use actions) which included a survey of wells and groundwater levels to determine the capacity for development in the Sevenmile Hill area. The land around the subject property was found to have groundwater in relatively good quantities. The static water levels were found to be less than 50' and the depth to base of aquifer was found to be between 100' and 199.' (See Appendix 4 to the TLISA -- Ground Water Evaluation and Background Materials ("Groundwater Study") at pages 12-13.)

The predominant source of water in this area is from wells. There are two wells on the subject property (see Well Reports WASC 003131, WASC 003111, & WASC 003105). Yields are 50 & 60 GPM. There is also a well located on applicant's property to the south of the subject property yielding 35 GPM (see Well Report WASC 1609). The wells on the subject property have the capacity to support additional residential development, and the yields of all wells indicate adequate groundwater supply in the area. See additional findings below regarding the TLISA study.

There are no public sewer facilities available in the area. Each residence would be required to handle its own sewage as required by law. At the permitting stage, each residential development would have to go through the site evaluation process for an individual septic system and private well. A maximum overall density of 1 residence per 10 acres has provided the necessary land area for adequate handling of sewage for individual properties in areas surrounding the subject property.

#### Electricity

Power lines are located on Sevenmile Hill Road, in close proximity to the site. Electric power is available to serve the subject property and currently serves the residence and associated accessory buildings located on the subject property.

#### Fire Protection and Prevention

The subject property is within the Mid-Columbia Fire and Rescue District (Structural) and Oregon Department of Forestry (Wildfire). The District has cooperation agreements with the Oregon Department of Forestry and with the Mosier Fire Protection District. When an alarm is received in one agency, it is also transferred to the other two, and when necessary, there is a combined, coordinated response to fire emergencies.

### **GENERAL HISTORY AND PRIOR LAND USE ACTIONS:**

In 1993, Wasco County began work on the Transition Lands Study Area Project ("TLISA") in response to concerns about development in northern Wasco County, and particularly in the area surrounding the subject property, which area is known as the Sevenmile Hill area. The concerns included "availability of groundwater to serve domestic needs, fire hazard, conflict with wildlife, and available lands for rural residential lifestyle in this developing area."

The first phase of the project was a groundwater study. The initial study was published in December 1996 as the "TLSA Ground Water Evaluation, Wasco County, Oregon" by Jervey Geological Consulting (The Groundwater Study"). On September 12, 1997, the final report for the TLSA was published, incorporating the Groundwater Study. The TLSA report included recommendations outlining the sub-areas within the study area that were suitable for residential development, rating them with scores for resource values and development values. Referring to Figure 11 in that report, which is a map indicating the combined values of the two scales, the subject property was rated "L/H," meaning that it scored low for Resource Values and high for Development Values.

The final Recommendation of the TLSA for the Sevenmile Hill area included:

- Retain the existing R-R(5) and A-1 (80) EFU zoning
- Retain the existing R-R(5) and A-1 (80) EFU zoning .
- Retain the existing F-F(10) areas that have a higher resource value or a low development value (for instance, in areas where water availability is unknown).
- Rezone the remainder of the F-F(10) lands to R-R(10). F-F(10) areas would be able to transfer development rights to the area identified as the test area.

As a result of the TLSA study, eight parcels of F-F(10) land in the Sevenmile Hill area north of the subject property were converted to R-R(10), removing the requirement for conditional use review of proposed non-farm/forest dwellings (ZNC 99-101 ZO-L and CPA 99-103-CP-L). In recent years the County has approved single family dwellings that have subsequently been built on nearly every lot surrounding the subject property.

Additional detailed area history is contained in Section 2 of this submittal.

## **JUSTIFICATION FOR REQUEST:**

### **1. Wasco County Comprehensive Plan Revision Procedures and Standards.**

1.1. The Comprehensive Plan's "Definitions-Existing Land Use Map" identify the subject property as: "Forestry – this designation includes all commercial forest land, both publicly and privately owned. Productivity is greater than 20 cubic feet per acre per year." Page 232 of the plan lists "Purpose Definitions of Map Classifications on the Comprehensive Plan Map." The existing plan classification, "Forest," states: "Purpose: To provide for all commercial and multiple use forest activities compatible with sustained forest yield."

1.2. This request is to change the classification of the subject property on the planning map to "Forest-Farm:" "Purpose: To provide for the continuation of forest and farm



uses on soils which are predominantly class 7 and forest site class 6 and 7; and to preserve open space for forest uses (other than strictly commercial timber production) and for scenic value in the Gorge.”

**1.3.** The following provisions apply and are addressed in the following sections.

**1.4.** Chapter 11 of the Comprehensive Plan establishes procedures and standards for revision of the plan and plan map. This request requires amendment of the text of the plan, to justify an exception to Goal 4, and an amendment to the plan map to designate the subject property for Forest-Farm (non-resource) uses.

**1.5.** Chapter 11 states that a comprehensive plan revision may be initiated by the property owner or his authorized representative. This amendment has been initiated by property owner David Wilson.

**1.6.** The proposal is quasi-judicial in character, and hearings in this matter are being conducted with quasi-judicial procedures and safeguards. Notice of the hearing on this action was provided to the Department of Land Conservation and Development as specified in ORS 197.610 and 615. (See attached Exhibit \_\_\_\_\_)

**1.7. General Criteria for a Plan Amendment.**

Subsection H. of Chapter 11 of the comprehensive plan states:

“The following are general criteria which must be considered before approval of an amendment to the Comprehensive Plan is given:

1. Compliance with the statewide land use goals as provided by Chapter 15 or further amended by the Land Conservation and Development Commission, where applicable.
2. Substantial proof that such change shall not be detrimental to the spirit and intent of such goals.
3. A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.
4. Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions.
5. Proof of change in the inventories originally developed.

6. Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established.”

**1.7.1** As set forth by the County Court in Exhibit B of the Big Muddy Ranch – Young Life Youth and Family Camp Exception (September 1997), these are factors for consideration and not standards that must each be strictly met. Thus, the Planning Commission need only consider these criteria and determine whether they are generally satisfied.

**1.7.2** The following findings demonstrate compliance with statewide land use planning goals that may apply to the request, as required by subsections 1 and 2 of the plan amendment general factors:

Goal 1 - Citizen Involvement. The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities for citizen involvement in its Comprehensive Plan and zoning ordinance procedures. These proceedings are being conducted with notice and hearings with opportunity for public input as required by law and local ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable Plan and zoning ordinance provisions.

Goal 2 - Land Use Planning. The purpose of Goal 2 is “to establish a planning process and policy framework as a basis for all decisions and actions related to use of the land and to assure an adequate factual base for such decisions and actions.” The County's planning process has been acknowledged as being in compliance with the goals, and was followed in consideration of the proposal. An adequate factual base is provided by this narrative, the attached exhibits, and testimony received through the hearing process. As discussed in greater detail below, the proposal also complies with Goal 2 requirements for the adoption of exceptions to a statewide goal, in this case, Goal 4. The proposal complies with Goal 2.

Goal 3 – Agricultural Lands. Goal 3 provides for the preservation of Agricultural Lands for farm use. The subject property has been designated for forest uses, not farm uses, although small scale (non-commercial) farm uses are possible in the area. Because the subject property has not been identified or inventoried as agricultural land, Goal 3 does not apply to the proposal; however small-scale farming activities possible in the area are promoted by the allowance of the proposal.

Goal 4 - Forest Lands. Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land. The intention of this proposal is to accurately reflect the nature of the subject property by changing the zoning to F-F(10). Because Goal 4 applies, and the requested plan and zone designations would allow development of non-forest uses, an “exception” must be taken to Goal 4. The exception

is justified in part 2 of this narrative addressing LCDC's administrative rule requirements for “physically developed” and “irrevocably committed” exceptions.

Goal 5 -Open Spaces, Scenic and Historic Areas, and Natural Resources. Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The county zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the county. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

Goal 6 - Air, Water, and Land Resources Quality. Goal 6 is “To maintain and improve the quality of the air, water and land resources of the state.” The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

Goal 7 – Areas Subject to Natural Disasters and Hazards. Goal 7 is “To protect people and property from natural hazards.” Goal 7 calls for local governments to adopt measures “to reduce risk to people and property from natural hazards.” The subject property is not within any of the areas identified as being subject to natural disaster. The proposal complies with Goal 7.

Goal 8 – Recreational Needs. Goal 8 is “To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.” If the zoning is changed to F-F(10), “Parks, playgrounds, hunting and fishing preserves and campgrounds” would be allowed as conditional uses within the exception area. To the extent Goal 8 applies, the proposal is consistent with Goal 8.

Goal 9 – Economic Development. Goal 9 is “To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.” The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

Goal 10 – Housing. Goal 10 is “To provide for the housing needs of citizens of the state.” The rule is directed to lands in urban and urbanizable areas. However, the proposal will allow development of additional homes in an area that is already built

and irrevocably committed to residential uses. Consistent with Goal 10, the proposal will improve housing opportunities in an area where such uses are appropriate.

Goal 11 - Public Facilities and Services. Goal 11 is “To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” In this case, the proposed rural development is supported by facilities and services that are appropriate for, and limited to, the needs of the rural area to be served. Because the area is rural, public facilities such as water and sewer services are not considered necessary or appropriate. Public roads are available and adequate. Local fire and police services are provided by Mid-Columbia Fire and Rescue Department and the Wasco County Sheriff's Office. Neither water nor sewer services are provided to the area, but both are available on the subject property through individual well and septic tank systems. Electric and phone services are available in the area. The increased housing potential in the area is not great enough to have a significant impact on any facilities planned for under Goal 11. The density allowed by the change (1 residence per 10 acres) is less than the maximum density recommended by the TLSA study. The proposal complies with Goal 11.

Goal 12 - Transportation. Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The proposal will have little if any impact on the transportation system serving the subject property because there will be a minimal increase in traffic generated by development that might occur as a result of the plan amendment and zone change. Current estimates of use indicate that roads in the area are operating now well below their capacity, with Volume-to-Capacity ratios of 0.01. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads.

In connection with Goal 12, the County is required to apply the Transportation Planning Rule in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires, as to amendments to a comprehensive plan or zoning ordinance that “significantly affect a transportation facility,” that the County “assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” The proposed action does not significantly affect a transportation facility, and is in conformance with Goal 12 and the Goal 12 rule.

Goal 13 - Energy Conservation. Goal 13 is “To conserve energy.” Policy 3 directs the County to minimize energy consumption through the use of zoning and subdivision standards. In this case, Goal 13 is promoted by encouraging development near existing residential development and along established roads. The proposal conforms with and promotes Goal 13.



Goal 14 - Urbanization. Goal 14 is to “provide for an orderly and efficient transition from rural to urban land use.” Goal 14 lists seven factors to be considered when establishing and changing urban growth boundaries, and four considerations for converting urbanizable land to urban uses. The subject property is not near or within an urban growth boundary, and is not urban or urbanizable. The density of housing that could occur in the area following the requested plan amendment and zone change is one dwelling per ten acres, which is not an urban density. No decidedly “urban” services will be required to allow the maximum amount of development contemplated by this proposal. Water is available in the area in sufficient quantities to serve the proposed housing density (see Groundwater Evaluation). The proposed density will also allow sewage disposal through construction of on-site septic drainfields in accordance with DEQ and local health department requirements. To the extent Goal 14 applies to this proposal, conformance is demonstrated through detailed findings in this submittal addressing Goal 14 as required by Oregon Administrative Rules governing the exceptions process.

Goals 15 through 19 do not apply.

**1.7.3** As noted above, subsection 3 of the County's plan revision factors requires consideration of whether: “A mistake in the original comprehensive plan or change in the character of the neighborhood can be demonstrated.” As outlined in detail in the subsequent sections of this discussion, the subject property is the only parcel which touches Sevenmile Hill Road which is currently in resource zoning. The subject property is for all intents and purposes surrounded completely by residential development. It is not producing any marketable timber, and as outlined in the subsequent sections of this submittal, is unlikely to do so in the future. Comprehensive Plan Chapter 14 -- Findings and Recommendations outlines the anticipated uses for lands zoned F-2(80) as follows: “The ‘F-2 (40)’ and ‘F-2 (80)’ forest zones have very limited permitted uses and conditional uses that are generally compatible with primary timber management. Due to the high cost of these lands, the forty (40) and eighty (80) acre minimum lot sizes will be more than adequate to keep them in forest uses. Most of the lands zoned “F-2 (80)” is in either the Mt. Hood National Forest, White River Game Management Area or are private timber company holdings. These lands are adequately managed for forest, recreational and open space uses.”

Merriam-Webster's defines “mistake” as “to identify wrongly; confuse with another” or “a misunderstanding of the meaning or implication of something.” This proposal is being reviewed in a quasi-judicial proceeding, in which the County is considering whether proposed plan and zone designations for the subject property are more appropriate than the original designations. Based on the materials in this submittal, the County's original characterization of the area as most appropriate for commercial forest uses appears to have been incorrect. The area now appears not to be suitable for forestry uses, but to be more suitable for rural residential use. The TLSA study supports a conclusion that the original comprehensive plan was incorrect, and that the most

appropriate zoning of the property is F-F(10), allowing for rural residences. The County's rezoning of several parcels north of Sevenmile Hill Road from F-F(10) to RR-10, allowing development of nonfarm or forest dwellings as uses permitted outright, also supports this conclusion. The approval of dwellings on, around, and immediately adjacent to the subject property also supports a finding that the character of the neighborhood has changed, toward residential, and away from forestry use.

**1.7.4** As noted above, subsection 4 of the County's plan revision factors requires consideration of "Factors which relate to the public need for healthful, safe and aesthetic surroundings and conditions." This requirement is satisfied by the proposal, which is purposefully designed to allow limited residential development, and small-scale farm and forest uses, on land that is suited for such uses.

**1.7.5** As noted above, Subsection 5 of the County's plan revision factors requires consideration of "Proof of change in the inventories originally developed." The proof required by this section is provided by these findings, the attached exhibits, and testimony and evidence obtained by the County through the hearing process. The County's original inventory of forest lands included the subject property. That inventory has changed, because housing has been allowed on, and in close proximity to the subject property, in a manner that diminishes its suitability for forest uses. The most appropriate manner of addressing this change is as proposed-demonstrate that the land is built and committed to non-resource uses, and justify an exception to Goal 4 that will officially remove the property from the County's Goal 4 inventory. The property can then be dedicated to small scale farm and forest uses with limited density housing in a manner that is consistent with adjacent uses and which is compatible to those forest resource lands nearby.

**1.7.6** Subsection 6 of the County's plan revision factors states: "Revisions shall be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change must be established." As described throughout these findings, the proposed revisions are based on the TLSA study, previous County land use decisions affecting the area, as well as the information, justification and evidence contained and referenced in these findings and in the attached exhibits. These materials, and the County's plan, demonstrate that there is a public need for low-density rural residential uses and for small scale farm and forest uses in the county generally and in the Sevenmile Hill area. The justification for the particular change, addressed throughout these findings, is that the subject property is more properly designated for low density residential use than for commercial forestry uses. There is therefore a public need for the requested change, which has been fully justified by these findings and exhibits.

## **1.8 Transportation Planning Rule Compliance**

Subsection I. of Chapter 11 of the comprehensive plan states:

“1. Review of Applications for Effect on Transportation Facilities - A proposed plan amendment, whether initiated by the County or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule - “TPR”). 'Significant' means the proposal would:

a. Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

b. Change standards implementing a functional classification system; or

c. As measured at the end of the planning period identified in the adopted transportation system plan:

1. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

2. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP; or

3. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

2. Amendments That Affect Transportation Facilities - Amendments to the land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:

a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.

c. Altering land use designations, densities, or design requirements to reduce demand for vehicle travel and meet travel needs through other modes of transportation.

d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

3. Traffic Impact Analysis - A Traffic Impact Analysis shall be submitted with a plan amendment application pursuant to Section 4.140 Traffic Impact Analysis (TIA)) of the Land Use and Development Ordinance.”

**1.8.1** A separate Traffic Impact Analysis is not required for this proposal because there is not a “significant impact” under the TPR (OAR 660-12-0060(1)).



## **1.9 Procedures for a Plan Amendment.**

Subsection J. of Chapter 11 of the Comprehensive Plan states, in relevant part:

1. A petition must be filed with the Planning Offices on forms prescribed by the Commission.
2. Notice of a proposed revision within, or to, the urban growth boundary will be given to the appropriate city at least thirty (30) days before the County public hearing.
3. Notification of Hearing:
  - 1) Notices of public hearings shall summarize the issues in an understandable and meaningful manner.
  - 2) Notice of hearing of a legislative or judicial public hearing shall be given as prescribed in ORS 215.503 subject to ORS 215.508. In any event, notice shall be given by publishing notice in newspapers of general circulation at least twenty (20) days, but not more than forty (40) days, prior to the date of the hearing.
  - 3) A quorum of the Planning Commission must be present before a public hearing can be held. If the majority of the County Planning Commission cannot agree on a proposed change, the Commission will hold another public hearing in an attempt to resolve the difference or send the proposed change to the County Governing Body with no recommendation.
  - 4) After the public hearing, the Planning Commission shall recommend to the County Governing Body that the revision be granted or denied, and the facts and reasons supporting their decision. In all cases the Planning Commission shall enter findings based on the record before it to justify the decision. If the Planning Commission sends the proposed change with no recommendation, the findings shall reflect those items agreed upon and those items not agreed upon that resulted in no recommendation.
  - 5) Upon receiving the Planning Commission's recommendation, the County Governing Body shall take such action as they deem appropriate. The County Governing Body may or may not hold a public hearing. In no event shall the County Governing Body approve the amendment until at least twenty (20) days have passed since the mailing of the recommendation to parties."

These procedures and all other applicable statutory and local procedures have been or will be followed in consideration of the proposal.

## 2. Justification for Taking an Exception to Goal 4:

### 2.1 Introduction.

In order to amend its plan to change the subject property's designation from Forestry to Forest-Farm, and to implement that designation through its zoning ordinance, the County must adopt an exception to Goal 4.

Statewide Land Use Planning Goal 4, "Forest Lands" is:

"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture."

ORS 197 .932(1) states, in relevant part:

"(1) A local government may adopt an exception to a goal if:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal; [or]

(b) The land subject to the exception is irrevocably committed as described by Land Conservation and Development Commission rule to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;

\* \* \*

(4) A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the standards of subsection (1) of this section have or have not been met.

(5) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

\* \* \*

(8) As used in this section, 'exception' means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that:

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards under subsection (1) of this section.”

**2.1.1** In like manner, Planning Goal 2, part II, states, in relevant part:

“A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable Goal; [or]

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable;”

**2.1.2** Both the goal and the rule adopt the legislative definition of an exception with minor variation-subsection (c) is modified in the goal to state “Complies with standards for an exception” and in the rule to state “Complies with the provisions of this Division.” OAR 660-004-0010 states that the “process is generally applicable to all or part of those statewide goals which prescribe or restrict certain uses of resource land,” including: “Goal 4 'Forest Lands.’”

**2.1.3** Goal 4 provides that:

“Where a \* \* \* plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.”

**2.1.4** Rule definitions of “resource land” and “non-resource land” support a conclusion that, in this instance, an exception is necessary before the subject property can be plan and zone designated for forest-farm uses, a rural residential, non-resource category of uses under the County's plan and zoning ordinance. To justify an exception, the County must address all applicable criteria in LCDC's rule for exceptions, OAR 660, Division 4.2.2.

This request is for both “physically developed” and “irrevocably committed” exceptions to Goal 4, “Forest Lands,” which seeks to conserve forest lands by promoting efficient forest practices and sound management of the state's forest land base.

## 2.2 Exception Requirements for Land Physically Developed to Other Uses.

OAR 660-004-0025 contains standards for adoption of a “physically developed” exception.

OAR 660-004-0025 states:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.

**FINDING:** The proposed exception area consists of a 40.10 acre piece identified as tax lot 4400 located in T2N, R12E, and in the southwestern quarter of Section 22 (the subject property). The north line of the subject property abuts Sevenmile Hill Road, and the northwest corner of the subject property is at the intersection of Sevenmile Hill Road and Old Sevenmile Hill Road. The subject property is rectangle measuring roughly 1,600 feet east/west and 1,500 feet north/south. It is generally sloping downward to the north, with the northern boundary along Sevenmile Hill Road as the low point.

The subject property is improved with a log home with surrounding decks covering approximately 2,680 ft<sup>2</sup> and a 720 ft<sup>2</sup> basement located approximately halfway between the north and south boundaries and in the western one third of the property. A driveway serving the residence and properties to the south extends from the northwest corner of the subject property southward, generally paralleling the western boundary. There are two barns with stalls located generally east of the log home, each covering approximately 1,110 ft<sup>2</sup> for total coverage of 2,220 ft<sup>2</sup>.

Further east of the hay loft and barn there is an original home site with cabin covering 1,980 ft<sup>2</sup> located generally east of the log home. There is an old barn located south of the cabin covering 1,200 ft<sup>2</sup>.



The log home was built pursuant to a conditional use permit, the conditions of which required decommissioning the original cabin as a residential structure; however, the cabin legally exists and may be used for other uses consistent with the existing zoning.

A good portion of the southeastern portion of the subject property consists of a cleared area growing grass hay which previously served as a pasture for the cabin and now is baled each year. Most of the northern two thirds of the subject property has been cleared at some point in the past and remains clear at this time. There is no merchantable timber on the property, and the property has never supported merchantable timber. There are scrub oaks and pine trees growing on the southern portion and eastern boundary of the property. There are no fir trees of any size larger than a seedling on the property, and historically firs do not survive. Grasses and shrubs create moderately dense underbrush.

Soils on the subject property are Class 4, predominately 49C and 50D Wamic Loam, 5-12% slope. This soil type represents more gently sloping areas where the exposure is toward the north. On the subject property, this particular range of the soil class is characterized by smaller oak and scattered pine forest. These soils are suitable for dry farm small grain, grass hay, and pasture. The woodland site index designation of 70 for Ponderosa Pine indicates low productivity with no significant limitations or restrictions. This capability class is also designated under the pine-oak-fescue range and as such it is possible that it could be used for fruit orchards or other crops. In its uncultivated state, however, special management is required to reduce oak and shrub growth that will curtail stabilizing plant growth beneath what amounts to a thin, mainly pine canopy.

The area has no history of crop use with the exception of grass hay grown the pasture area. Due to the terrain and rocky soil, and because the elevation creates climatic extremes, crop agriculture is uneconomical and otherwise impracticable.

The subject property does not have a history of commercially successful grazing for sheep or cattle. Grazing was occasionally tried in the area in the 1940's, but the terrain, thin soil and climate have limited the activities to an occasional attempt rather than a sustained commercial success. There are no properties in the immediate area being used for commercial grazing.

Although the soils on the subject property could, at first glance, appear to indicate a potential for agricultural use, particularly small-scale orchards, that potential is severely reduced due to climatic conditions. The subject property is in current use for a residence, along with pasture and wildlife habitat in the scrub oak section. It has never been successfully utilized for agricultural purposes and has very limited value as forestland due to the dwellings on the site. The soils indicate low timber productivity. There are no productive orchards or other commercial agricultural uses in the area immediately surrounding the subject property.

The residential development surrounding the subject property has occurred mainly in proximity to Sevenmile Hill Road that runs along the northern boundary of the subject property. Because of this development and ownership pattern, and because of the small average and odd shaped lot

sizes, it would be impracticable to manage any of the property in the area as a commercial forestry operation or as part of such an operation.

## **2.3 Exception Requirements for Land Irrevocably Committed to Other Uses.**

OAR 660-004-0028 contains standards for adoption of an “irrevocably committed” exception.

### **2.3.1 OAR 660-004-0028(1) provides:**

- (1) “A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:
  - (a) A ‘committed exception’ is an exception taken in accordance with ORS 197.732(1)(b), Goal 2, Part II(b), and with the provisions of this rule;
  - (b) For the purposes of this rule, an ‘exception area’ is that area for which a ‘committed exception’ is taken;
  - (c) An ‘applicable goal,’ as used in this section, is a statewide planning goal or goal requirement that would apply to the exception area if an exception were not taken.

**FINDING:** The subject property contains a legal residence, and is surrounded on 2 sides by small residential tracts, and by a residence to the south. The subject property is irrevocably committed to non-resource use. All of the large forested tracts currently producing merchantable timber are located well south of the subject property, and adopting this exception for the subject property will not negatively impact those uses.

### **2.3.2 OAR 660-004-0028(2) provides: “Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:**

- (a) The characteristics of the exception area;”

**FINDING:** The characteristics of the subject property are fully discussed in the findings above in response to OAR 660-004-0025 (Physically Developed).

### **2.3.3 (b) “the characteristics of the adjacent lands;”**

### **FINDING:**

In general, the areas to the East and North of the subject property have been for the most part divided into smaller lots relative to rural development (10 acres or less). A large majority of the

parcels were created long before the area was subject to statewide or even county-wide zoning regulation. Of the three subdivisions in the immediate area of the subject parcel, two were platted in the early part of the 20th century, and the third in 1979 (Fairmont Orchard Tracts-1911; Sunnydale Orchards-1912; Flyby Night Subdivision-1979). The majority of the lots in these subdivisions are approximately 5 acres in size. The County has recognized the existing parcelization by zoning the area for rural residential development (R-R(5) and R-R(10)) and for small-scale agriculture or forestry uses in conjunction with a rural residence (F-F(10)). As a result of this parcelization and in keeping with the zoning, there has been a significant amount of rural residential development, particularly along the county roads and within the platted subdivisions. There have also been several applications for rural residences in the areas zoned F-F(10).

Specific adjacent lands analysis is as follows:

**East:** Directly to the east of and abutting the subject parcel are two parcels zoned F-F(10): T2N R12E, Section 22, Lots 4300 and 4200. Both of these lots have residences.

Properties further east along Wits End Drive and Sevenmile High South Road are zoned R-R(10) and all have residences (tax lots 3600, 3400, 3800, 3900, 4000). These properties average approximately 5 acres in size and are part of the Fairmont Orchard Tracts subdivision which was platted in 1911.

**North:** To the north of the subject property across Sevenmile Hill Road is a lot zoned R-R(5), Tax Lot 4600 (7.35 ac.), and a small lot owned by Wasco County (Tax Lot 4500, .7 acres). 4600 has a residence. Tax Lot 4700 meets the subject property on its northeast corner, is zoned F-F(10), and has a residence.

Properties north of the subject property lying along Richard Road are small acreages zoned R-R(5), all with residences.

All of the area north of the subject property is built and committed to low and medium density rural residential uses. There are two platted subdivisions: Sunnydale Orchards, platted in 1912, and Flyby Night, platted 1979.

The Sunnydale Orchards Subdivision was recorded on March 8, 1912. It consisted of 25 lots averaging about five acres each, with the largest at 11.4 acres. Lots in the subdivision are for the most part less than ten acres each. The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

The plat for the Flyby Night Subdivision was recorded November 8, 1979. The Flyby Night lots average approximately five acres each, with two larger, approximately 20-acre parcels as the exceptions. The zoning for the Flyby Night subdivision is R-R(5).

The areas to the north and east are the most heavily developed areas surrounding the subject property. As can be seen by the maps in Exhibits 1, virtually all lots to the north and east of the subject property have been improved with a residence or a manufactured home.

The County has recognized that development has increased in this area over the years, and rezoned several lots in the southern part of Sunnydale Orchards from F-F(10) to R-R(10) (Pursuant to Ordinance 99-111).

**West:** Tax lot 2N 10E 21 900, which abuts the west property line of the subject parcel, is split zoned, with the northern portion which abuts Sevenmile Hill Road zoned F-F(10) and the southern portion zoned F-2(80). The southern portion has not been commercially logged, and is slowly being cleared. Tax Lot 2900, a 439 acre parcel, abuts the southwest portion and corner of the subject property and is zoned F-2(80). It has a residence located on the western portion along Osburn Cutoff Road. This property has a creek running generally north-south which forms a clear line of demarcation between the more vibrant, productive land to the west and the scrubrier soils to the east. The land west of the creek supports the growth of Douglas Fir trees; the land to the east is predominantly scrub oak and pine similar to the subject property. The commercial logging on this piece has been confined to the area west of the creek.

In general, the parcels to the west of the subject property lying both north and south of and abutting Sevenmile Hill Road consist of small acreages zoned F-F(10), almost all improved with residences.

The subject property is the only parcel which touches Sevenmile Hill Road which is zoned F-2(80). The only other parcels similarly zoned which touch any road are large, unimproved parcels located well west of the subject property which lie south of and touch Dry Creek Road or which lie along Osburn Cutoff Road.

**South:** Tax lot 2N 10E 22 4100 abutting the subject property to the south is zoned F-2(80). It is owned by the owner of the subject property, and has a legal residence, and together with tax lot 2800 to the south, also in common ownership, comprises approximately 70 acres. It is not used for timber production. This parcel is transected by the BPA Bonneville-The Dalles power line right-of-way/easement, which forms a natural boundary between this parcel and the larger, commercially forested tracts to the south.

**Soils:** The subject property soils are 49C and 50D Wamic Loam. The parcels immediately north of the subject property are generally 51D Wamic Loam soils. Adjacent properties to the south and east are 49C and 50D, like the subject property. (See soils maps and productivity indices) 49C and 50D soils both have a site index of 70 for Ponderosa Pine, indicating a potential yield of 20-49 cubic feet per acre. However, with the exception of the 439 acre parcel adjoining the southwest corner of the subject property, none of the adjacent properties are supporting commercial timber production, and logging on the 439 acre parcel takes place west of the creek which runs parallel to the common boundary. All commercial timber production occurs well south of the subject property, generally south of the BPA power line transecting the



area. The subject property has never produced merchantable timber or been logged commercially.

**2.3.4 (c)** The relationship between the exception area and the lands adjacent to it;

**FINDING:** As described in the preceding sections of this submittal, the subject property is surrounded on two sides by residential lots in the F-F(10), R-R(10), and R-R(5) zones. None of these zones are resource zones. The subject property also has a residence located on the parcel immediately south of it; and even the large resource zoned tract abutting the southwest corner of the subject property is improved with a residence, although it is located some distance from the subject property. Thus, the subject parcel has residences surrounding it on all 4 sides, non-resource zoning designations on parcels abutting it on 3 sides, and intensive residential development on parcels abutting on 2 sides.

In general, all of the properties which adjoin Sevenmile Hill Road are committed to residential development and uses and are zoned accordingly. The subject parcel stands out as an anomaly in this pattern. Particularly in light of the fact that the subject property is already improved with a residence, the F-F(10) designation is far more consistent with the uses of adjacent lands than the F-2(80) designation. There is no evidence, historically or recently, that the subject property is or could be used for commercial timber production, and attempting to do so now would inevitably lead to conflicts with the immediately adjacent residential uses. Looking at the existing zoning map, it is clear that the large forestry designations are intentionally and more properly sited well away from the residential development which lies along a rural arterial road such as Sevenmile Hill.

**2.3.5 (d)** The other relevant factors set forth in OAR 660-004-0028(6).

**FINDING:** These factors are discussed in the following sections.

**2.3.6** OAR 660-004-0028(3) provides: “Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;

(a) Farm use as defined in ORS 215.203;

(b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;

(c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”

In turn, ORS 215.203(2)(a) states:

“[F]arm use” means the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof. “Farm use” includes the preparation, storage and disposal by marketing or otherwise of the products or by-products raised on such land for human or animal use. “Farm use” also includes the current employment of land for the primary purpose of obtaining a profit in money by stabling or training equines including but not limited to providing riding lessons, training clinics and schooling shows. “Farm use” also includes the propagation, cultivation, maintenance and harvesting of aquatic, bird and animal species that are under the jurisdiction of the State Fish and Wildlife Commission, to the extent allowed by the rules adopted by the commission. “Farm use” includes the on-site construction and maintenance of equipment and facilities used for the activities described in this subsection. “Farm use” does not include the use of land subject to the provisions of ORS chapter 321, except land used exclusively for growing cultured Christmas trees as defined in subsection (3) of this section or land described in ORS 321.267 (3) or 321.824 (3).)

OAR 660-033-0120 contains a chart of uses that are allowed outright, conditionally, or not authorized on agricultural lands, including “farm use” and “propagation or harvesting of a forest product,” and OAR 660-006-0025(2)(a) states:

(a) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;

**FINDING:** The rule does not require that the listed resource uses be impossible in the exception area; rather, it requires that they be impracticable. Impracticable means “not capable of being carried out in practice.” Webster’s New World Dictionary, 2nd College Edition, 1980. Capable means “having ability” or “able to do things well.” Id. Finally, “in practice” means by the usual method, custom or convention. Id. Webster’s Third New International Dictionary, (unabridged ed., 1993) defines “impracticable” as “**1a** : not practicable : incapable of being performed or accomplished by the means employed or at command : INFEASIBLE \* \* \* **c** : IMPRACTICAL, UNWISE, IMPRUDENT \* \* \*”

Based on the foregoing, the County must evaluate to what extent the adjacent uses and other factors affect the ability of property owners to carry out resource uses in practice on the subject

parcel. The rule only requires evaluating whether the resource use can be carried out by the usual, available methods or customs. Consequently, just because a farm or forest use can be attained by methods that are not usual or customary does not mean that the farm or forest use is practicable. Using the area for commercial agricultural or forestry uses—in a manner capable of generating a profit or return from those activities—is not practicable on the subject parcel for all of the reasons stated in this submittal. Resource designation is not necessary to preserve the area for small scale farm or forestry uses in conjunction with residential use.

A definition of “forest products” can be found in ORS 532.010(4), which states that forest products are “any form, including but not limited to logs, poles and piles, into which a fallen tree may be cut before it undergoes manufacturing, but not including peeler cores.”

The current level of residential development has increased to the point that commercial resource use has become impracticable. The subject property is surrounded on three sides by existing residential development, with the potential for additional residential development in the future. Conflicts caused by the proximity of residential neighbors on three sides require added expense related to fire protection, fencing and general control of the area, and prevent the use of spraying to control insects and vegetation that compete with commercial tree species. Further conflicts with residences arise because of the noise associated with commercial operations and the safety risks of logging near residential property.

The effects of these conflicts and impacts from residential uses combined with the long cycle for trees to reach maturity (100-125 years) make commercial forestry and commercial agriculture impracticable at this location. As explained throughout this submittal, residential development abutting and in close proximity to the subject property, coupled with the relatively small size of the subject property and local topography and climate, supports a conclusion that there is an inadequate buffer between the subject property and nearby rural residences. The steps that would need to be taken to efficiently and effectively manage timber in the area makes such uses impracticable.

To the extent this section requires that a justification for an exception to Goal 4 also requires consideration of the suitability of the area for farm uses, the record of this proceeding and the attached exhibits demonstrate the lack of suitability of the area for farm uses. The soils in the area are not generally suitable for farm use, nor is the climate conducive to those uses. At no time has the County considered the subject parcel to be farmland or to be suitable for farming, and at no time in the history of the area has farming taken place. Due to the existing parcelization, soils, climate and development in the area, it cannot be, and is not currently employed for the primary purpose of obtaining a profit from agricultural uses. The history of the area also supports this conclusion. At best, the area can support the small-scale, “peripheral” farm activities now taking place on adjacent F-F and R-R zoned properties, under circumstances in which residential use represents the primary and most highly valued use.

- 2.3.7** OAR 660-004-0028(4) provides: “A conclusion that an exception area is irrevocably committed shall be supported by findings of fact which address all applicable factors of section (6) of this rule and by a statement of reasons

explaining why the facts support the conclusion that uses allowed by the applicable goal are impracticable in the exception area.”

**FINDING:** This submittal, including this statement and all attached exhibits, addresses all applicable factors and reasons why, in this case, the facts support the conclusion that uses allowed by Goals 3 and 4 are impracticable in the exception area. See especially, the immediately preceding sections of this submittal, and sections addressing section (6) of the rule, below.

**2.3.8** OAR 660-004-0028(5) provides: “Findings of fact and a statement of reasons that land subject to an exception is irrevocably committed need not be prepared for each individual parcel in the exception area. Lands which are found to be irrevocably committed under this rule may include physically developed lands.”

**FINDING:** As discussed elsewhere in this submittal, the subject property includes a legal residence, other buildings, and associated physical development. The presence of the dwelling, and of the other dwellings immediately adjacent to the subject property, each contribute to the irrevocable commitment of the area to rural residential uses, and the impracticability of using the area for farm or forest uses.

**2.3.9** OAR 660-004-0028(6) provides: Findings of fact for a committed exception shall address the following factors:

**2.3.9.1** (a) Existing adjacent uses;

**FINDING:** The existing adjacent uses are discussed and considered in great detail in the sections above. Existing adjacent uses to the West, North and East are all residential.

**2.3.9.2** (b) Existing public facilities and services (water and sewer lines, etc.);

**FINDING:** There are no public water or sewer facilities on the subject property. An existing well provides water to the dwelling. Electric power and phone service are available to the area. The property can be adequately served by existing fire, police and school facilities.

**2.3.9.3** “(c) Parcel size and ownership patterns of the exception area and adjacent lands:

(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be



irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”

**FINDING:** As discussed in great detail above and in the attached exhibits, the existing development pattern for the Sevenmile Hill area was established prior to the adoption of the goals. Many of the small parcels that characterize the area were created between 1900 and 1920 and were marketed as orchard sites that could support a family. The lots in the vicinity of the subject property were not successful because of the cold and dry weather at this location and elevation. Virtually all of the existing lots have been developed and now have non-resource residences located on them. Only two parcels in the immediate area were created via exceptions to the goals: 7.35 acres located at 6955 Sevenmile Hill Road (Comprehensive Plan Amendment from F-2(40) to Rural Residential, CPA 89-104, October, 1989); and 9.87 acres located at the intersection of Sevenmile Hill Road and Sevenmile High Hill Road (Comprehensive Plan Amendment from FF-10 to Rural Residential, CPA 90-101, June 1990). Neither of these goal exception parcels are pivotal to the analysis of parcel size and ownership patterns in the immediate area. As noted, the local parcelization occurred long before the development of the goals, and the parcels created by that process have now been almost entirely developed.

(B) “Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land’s actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.”

**FINDING:** This provision is not applicable to this single parcel proposal; however, ownership patterns in the general area are discussed in detail in preceding sections of this narrative addressing OAR 660-004-0028(2)(a)-(c). The parcels are clustered along roads serving the area, as is the subject property, and virtually all parcels in the area are in separate ownerships. This parcelization pre-dates the adoption of the county zoning ordinance and comprehensive plan.

#### 2.3.9.4 “(d) Neighborhood and regional characteristics;”

**FINDING:** Based on the descriptions already provided in this submittal, the neighborhood and regional characteristics can best be described as non-resource, small acreage rural residential development clustered along Sevenmile Hill Road. Considering these characteristics, the current

designation of the subject property as the only resource designated property touching Sevenmile Hill Road stands out as an anomaly. The exception will serve to make the subject property more conforming with existing neighborhood and regional characteristics.

2.3.9.5 “(e) Natural or man-made features or other impediments separating the exception area from resource land. Such features or impediments include but are not limited to roads, watercourses, utility lines, easements, or rights-of-way that effectively impede practicable resource use of all or part of the exception area;”

**FINDING:** In general, the BPA Bonneville-The Dalles power line right-of-way/easement, which transects the local area south of the subject property, serves to separate the more residential areas to the north from the commercial forest areas to the south. As noted, most of the residential development lies in the immediate area along Sevenmile Hill Road, with most of the commercial forest areas lying well to the south and being served by secondary or primitive roads.

2.3.9.6 (f) “Physical development according to OAR 660-004-0025.” OAR 660-004-0025 sets forth the “Exception Requirements for Land Physically Developed to Other Uses” as follows:

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal.
- (2) Whether land has been physically developed with uses not allowed by an applicable Goal, will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception. The specific area(s) must be shown on a map or otherwise described and keyed to the appropriate findings of fact. The findings of fact shall identify the extent and location of the existing physical development on the land and can include information on structures, roads, sewer and water facilities, and utility facilities. Uses allowed by the applicable goal(s) to which an exception is being taken shall not be used to justify a physically developed exception.”

**FINDING:** Part of the justification for this exception is that the subject property is already physically developed with a dwelling, outbuildings, and associated access roads and other infrastructure. The minimum lot size for a forest dwelling is currently 240 acres, and the subject property is approximately 40 acres.

2.3.9.7 “(g) Other relevant factors;”

To the extent there are other relevant factors, they are discussed throughout this submittal and not repeated here.

**2.3.10** OAR 660-004-0028(7) provides: The evidence submitted to support any committed exception shall, at a minimum, include a current map, or aerial photograph which shows the exception area and adjoining lands, and any other means needed to convey information about the factors set forth in this rule. For example, a local government may use tables, charts, summaries, or narratives to supplement the maps or photos. The applicable factors set forth in section (6) of this rule shall be shown on the map or aerial photograph.

**FINDING:** The submittal complies with this requirement, and includes current maps as Exhibit 1 showing the subject property and adjoining lands.

**2.3.11** OAR 660-004-0040 concerns the:

“Application of Goal 14 Urbanization to Rural Residential Areas,” the purpose of which: “is to specify how Statewide Planning Goal 14, Urbanization, applies to rural lands in acknowledged exception areas planned for residential uses.”

Subsections -0040(1) through (3) explain what the rule does. It does not apply to land within an urban growth boundary; unincorporated community; urban reserve area; destination resort; resource land; and “nonresource land, as defined in OAR 660-004-0005(3).” The following sections of this submittal demonstrate compliance with Goal 14 as and to the extent specified in OAR 660-004-0040.

**2.3.11.1** Although it is not entirely clear, OAR 660-004-0040 does not appear to include standards that apply to the land use decisions requested by this submittal. The land in question is currently classified as resource land, and the request is to establish an exception to Goal 4 that will allow rural residential development on lots that are a minimum of ten acres per dwelling, or otherwise at a density that cannot exceed one dwelling for every ten acres in the area. The F-F(10) zoning to be applied will ensure that the requested housing density is not exceeded. The proposed housing density is not an urban density. No sewer or water services exist near the area or are proposed, and there are no other “urban” attributes of development that could occur if the request is granted.

**2.3.11.2** OAR 660-004-0040(4) and (5) provide:

“(4) The rural residential areas described in Subsection (2)(a) of this rule are rural lands. Division and development of such lands are subject to Statewide Planning Goal 14, Urbanization which prohibits urban use of rural lands.

(5)(a) A rural residential zone currently in effect shall be deemed to comply with Goal 14 if that zone requires any new lot or parcel to have an area of at least two acres.

(b) A rural residential zone does not comply with Goal 14 if that zone allows the creation of any new lots or parcels smaller than two acres. For such a zone, a local government must either amend the zone's minimum lot and parcel size provisions to require a minimum of at least two acres or take an exception to Goal 14. Until a local government amends its land use regulations to comply with this subsection, any new lot or parcel created in such a zone must have an area of at least two acres.

(c) For purposes of this section, 'rural residential zone currently in effect' means a zone applied to a rural residential area, in effect on the effective date of this rule, and acknowledged to comply with the statewide planning goals."

**FINDING:** This section does not appear to be an approval standard applicable to the request. However, the proposed zone will not allow the creation of any new lots or parcels within the exception area smaller than two acres, in conformance with this section.

**2.3.11.3** OAR 660-004-0040(6) and (7) provide:

"(6) After October 4, 2000, a local government's requirements for minimum lot or parcel sizes in rural residential areas shall not be amended to allow a smaller minimum for any individual lot or parcel without taking an exception to Goal 14 pursuant to OAR chapter 660, division 14, and applicable requirements of this division."

**FINDING:** The County recognizes the requirements of this section. No request has been made to allow smaller minimum lot sizes than allowed by the rule.

"(7)(a) The creation of any new lot or parcel smaller than two acres in a rural residential area shall be considered an urban use. Such a lot or parcel may be created only if an exception to Goal 14 is taken. This subsection shall not be construed to imply that creation of new lots or parcels two acres or larger always complies with Goal 14. The question of whether the creation of such lots or parcels complies with Goal 14 depends upon compliance with all provisions of this rule."

**FINDING:** The underlying zone will prevent the creation of any new lot or parcel in the subject property smaller than two acres. Lot sizes allowed in the area comply with all provisions of the Goal 2 rule for exceptions.

(b) Each local government must specify a minimum area for any new lot or parcel that is to be created in a rural residential area. For purposes of this rule, that minimum area shall be referred to as the minimum lot size.



**FINDING:** The minimum lot size proposed is ten acres.

(c) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size of two acres or more, the area of any new lot or parcel shall equal or exceed that minimum lot size which is already in effect.

**FINDING:** As stated, the minimum lot size of the underlying zone is currently ten acres, and that minimum lot size will apply on the subject property area.

(d) If, on October 4, 2000, a local government's land use regulations specify a minimum lot size smaller than two acres, the area of any new lot or parcel created shall equal or exceed two acres.

**FINDING:** As stated, the County's land use regulations do not specify a minimum lot size smaller than two acres.

(e) A local government may authorize a planned unit development (PUD), specify the size of lots or parcels by averaging density across a parent parcel, or allow clustering of new dwellings in a rural residential area only if all conditions set forth in paragraphs (7)(e)(A) through (7)(e)(H) are met:

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**FINDING:** The current proposal does not include a Planned Unit Development.

(f) Except as provided in subsection (e) of this section, a local government shall not allow more than one permanent single-family dwelling to be placed on a lot or parcel in a rural residential area. Where a medical hardship creates a need for a second household to reside temporarily on a lot or parcel where one dwelling already exists, a local government may authorize the temporary placement of a manufactured dwelling or recreational vehicle."

**FINDING:** In conformance with this section, the County is not proposing to allow more than one permanent single-family dwelling to be placed on any lot or parcel in the proposed rural residential area.

(g) In rural residential areas, the establishment of a new mobile home park or manufactured dwelling park as defined in ORS 446.003(32) shall be considered an urban use if the density of manufactured dwellings in the park exceeds the density for residential development set by this rule's requirements for minimum lot and parcel sizes. Such a park may be established only if an exception to Goal 14 is taken.

**FINDING:** The current proposal does not include a mobile home park or manufactured dwelling park.

(h) A local government may allow the creation of a new parcel or parcels smaller than a minimum lot size required under subsections (a) through (d) of this section without an exception to Goal 14 only if the conditions described in paragraphs (A) through (D) of this subsection exist:

(A) The parcel to be divided has two or more permanent habitable dwellings on it;

(B) The permanent habitable dwellings on the parcel to be divided were established there before the effective date of this rule;

(C) Each new parcel created by the partition would have at least one of those permanent habitable dwellings on it;

(D) The partition would not create any vacant parcels on which a new dwelling could be established.

(E) For purposes of this rule, habitable dwelling means a dwelling that meets the criteria set forth in ORS 215.283(t)(A)-(t)(D).

**FINDING:** Because the County is not allowing the creation of new parcels smaller than the minimum lot size required under subsections (a) through (d), subsections (A) through (E) of this section do not apply to the proposal.

(i) For rural residential areas designated after the effective date of this rule, the affected county shall either:

(A) Require that any new lot or parcel have an area of at least ten acres, or

(B) Establish a minimum lot size of at least two acres for new lots or parcels in accordance with the requirements of Section (6). The minimum lot size adopted by the county shall be consistent with OAR 660-004-0018, 'Planning and Zoning for Exception Areas.'"

**FINDING:** In this case, the County is establishing an overall density of residential development allowed as a ratio of one dwelling for every ten acres.

### **3. Justification for a Zone Change:**

#### **3.1 Zoning Ordinance - Chapter 9:**

Chapter 9 of the Wasco County Land Use and Development Ordinance (zoning ordinance), entitled "Zone Change and Ordinance Amendment," includes standards and procedures for zone changes. Section 9.010 states:

“Application for a zone change may be initiated as follows:

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C. By application filed with the Director of Planning upon forms prescribed by the Director of Planning and signed by a property owner with the area of the proposed change, and containing such information as may be required by the [Director of Planning]<sup>1</sup> to establish the criteria for the change (quasi-judicial only);”

As indicated previously, this zone change was initiated by property owner David Wilson. Planning staff is presenting the proposal with a recommendation for approval.

### **3.2 Zoning Ordinance - Section 9.020**

Section 9.020, entitled “Criteria for Decision,” provides as follows:

“The Approving Authority may grant a zone change only if the following circumstances are found to exist:

- A. The original zoning was the product of a mistake; or
- B. It is established that
  - 1. The rezoning will conform with the Comprehensive Plan; and,
  - 2. The site is suitable to the proposed zone;
  - 3. There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.”

**3.2.1** This request is for a plan amendment and an exception to Goal 4. The previous section of this discussion establishes that the current F-2(80) zoning can be considered a mistake given the location and characteristics of the subject property and its relationship to surrounding residential uses.

**3.2.2.** This narrative and the attached exhibits also establish that the requirements of subsection B. have been met: B(1) is met because the Comprehensive Plan is being amended specifically to support the proposed zoning designation; B(2) is met because the site is suitable to the proposed F-F(10) zone; and B(3) is met because through this zone change application and process

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<sup>1</sup> Missing text in published version of Section 9.010.

there has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.

**3.2.3.** The Wasco County Comprehensive Plan contains goals that mirror the statewide goals, and policies to carry them out. Except as discussed in these findings, the plan does not contain approval standards that apply to the requested zone change. The zone change is proposed with due consideration of all relevant comprehensive plan goals and policies, as required by section B(1):

#### Goal 1 - Citizen Involvement.

The purpose of Goal 1 is to ensure the “opportunity for citizens to be involved in all phases of the planning process.” Wasco County has incorporated opportunities in its Comprehensive Plan and the zoning ordinance. Compliance with Goal 1 is demonstrated by compliance with the applicable plan and zoning ordinance provisions with opportunity for public input and by the public hearings required as part of this application and process.

#### Goal 2 – Land Use Planning.

The County's land use planning goal requires that procedures be established and followed to ensure public participation in land use decision making, and that there is an “adequate factual base” for land use decisions. All applicable procedures have or will be complied with in the consideration of this proposal. These findings and the record of this proceeding are a more than adequate factual base for the decision.

#### Goal 3 - Agricultural Lands.

Goal 3 provides for the preservation of Agricultural Lands for farm use. There are no Goal 3 designated Agricultural Lands on the subject property and Goal 3 therefore does not apply.

#### Goal 4 -- Forest Lands.

Goal 4 provides for the preservation of Forest Lands. The subject property is currently designated Forest Land, but is not now in timber production and has not historically been in timber production. As discussed in the preceding sections of this discussion, the subject property is not generally suitable for commercial forestry due to its development and use as residential property; its proximity to other residential properties; and its soil characteristics and historic uses. The proposal is to redesignate the property for rural residential uses, which will not have any impact on lands actually being used for commercial forestry.

#### Goal 5 - Open Spaces, Scenic and Historic Areas and Natural Resources.

The County zoning ordinances contain siting and development criteria, found in zoning ordinance section 3.920, for lands within Division 8 - Sensitive Wildlife Habitat Overlay designated areas in the County. The subject property is within the Sensitive Wildlife Habitat Overlay. Goal 5 is met by the application of these standards to any development of the subject



property. No other inventoried Goal 5 resources are affected by the proposal. The proposal complies with Goal 5.

#### Goal 6 - Air, Land and Water Quality.

Goal 6 is "To maintain and improve the quality of the air, water and land resources of the state." The proposal is consistent with Goal 6. The subject property is not located in or near a federal air quality attainment area, and will not generate significant additional air pollution. Sewage disposal from potential additional new dwellings must comply with all state and local requirements. Those requirements ensure that such discharges will be properly treated and disposed of, and will not threaten to exceed the carrying capacity of, or degrade or threaten the availability of, area natural resources. The proposal complies with Goal 6.

#### Goal 7 -- Areas Subject to Natural Disasters and Hazards.

The subject property is not within any areas identified by the County as Natural Hazard Areas.

#### Goal 8 -Recreational Needs.

Goal 8 is "To satisfy the recreational needs of the citizens of Wasco County and visitors." None of the policies of Goal 8 apply to the proposal.

#### Goal 9 -- Economy of the State.

Goal 9 is "To diversify and improve the economy of Wasco County." The proposal promotes Goal 9 by allowing residential uses, which the County considers to be the appropriate use of the subject property in view of existing development. The proposal is consistent with, and promotes Goal 9.

#### Goal 10 -- Housing.

Goal 10 is "To provide for the housing needs of the citizens of Wasco County." There is an ongoing need for developable rural residential lots, and corresponding pressure on resource lands to fill that need. The proposed zone change helps to ameliorate that pressure by creating potential rural residential lots while having no impact on lands actually in forest production.

#### Goal 11 -- Public Facilities and Services.

Goal 11 is to "plan and develop a timely, orderly, and efficient arrangement of public facilities and services to provide a framework for urban and rural development." The existing services and facilities in the area of the subject property are adequate for the proposal. The subject property adjoins Sevenmile Hill Road. Local fire and police services are provided by the rural fire protection district and the sheriff's office. Neither water nor sewer services are provided to the subject property, but are available on the subject property through individual well(s) and septic tank systems.

#### Goal 12 -Transportation.

Goal 12 is “To provide and encourage a safe, convenient and economic transportation system.” The goal does not have approval standards, and is otherwise implemented through County transportation planning. The proposal will have little if any impact on the transportation system serving the subject property because there will be minimal increase in traffic generated by development that might occur as a result of the zone change. It is estimated that a maximum of 3 additional residences could be developed. Each residence is predicted to generate an average of 9.57 trips/day, which will not significantly affect the functionality, capacity, or level of service of Sevenmile Hill Road or other local roads. In connection with Goal 12, the County is required to apply the Transportation Planning Rule located in Chapter 660, Division 12 of the Oregon Administrative Rules. OAR 660-12-060 requires amendments to comprehensive plans that “significantly affect a transportation facility...assure that allowed land uses are consistent with the identified function, capacity, and level of service of the facility.” Sevenmile Hill/State Road is classified as a Rural Major Collector, which is consistent with the level of traffic from the rural residential uses that feed into it.

#### Goal 13 - Energy Conservation.

This Goal is met by application of development standards contained in the zoning ordinance.

#### Goal 14-Urbanization.

The level of existing development and possible development does not constitute “urban use.” Goal 14 does not, therefore, apply. It should be noted, however, that Policy 3 of Goal 14 encourages “subdivisions to be developed by a planned development approach, maximizing physical design, the retention of open space and reducing adverse impacts. The proposed zone change for the subject property is consistent with that policy.

**3.2.5** Subsection B(2) of zoning ordinance section 9.020 requires that the site be shown to be “suitable to the proposed use.” The proposed zone would allow, outright, farm and forest uses and dwellings on parcels of at least ten acres in conjunction with farm or forest uses. In discussing the Forest-Farm zone, zoning ordinance section 3.220.A. states:

“The purpose of the Forest-farm zone is to permit those lands which have not been in commercial agriculture or timber production to be used for small-scale, part-time farm or forest units by allowing residential dwellings in conjunction with a farm use while preserving open space and other forest uses.”

**3.2.5..1.** The Forest-Farm zone is not a resource zone. (See October 11, 1995 non-resource determination letter Exhibit WC-Q, Betzing Record). In this case, it is the most suitable designation for the subject property,

which has been physically developed and entirely committed to nonresource use due to its location in close proximity to major county rural residential areas. The area is suitable to the proposed use as described in the attached exhibits and otherwise as described in the reports and testimony received in this proceeding.

**3.2.5..2.** The history of the area is also relevant to addressing this standard. As discussed in the Irrevocably Committed section of this discussion, the extensive parcelization that took place to the west, north, and east of the subject property has resulted, over time, in the building and commitment of the surrounding area to non-resource, rural residential uses. As explained in previous sections of this narrative, the presence of dwellings in and adjacent to the subject property complicates and increases the cost of commercial forestry in that area in a manner rendering commercial forestry impracticable.

**3.2.6** Subsection B(3) of zoning ordinance section 9.020 requires, prior to approval of a zone change, that it be established that “There has been a conscious consideration of the public health, safety and welfare in applying the specific zoning regulations.” The exhibits and record of this proceeding support a finding of compliance with this requirement. This requirement for rezoning has been met.

### **3.3 Zoning Ordinance – Section 9.030**

Section 9.030 requires review of the proposed action to determine whether it significantly affects a transportation facility. As discussed in Section 1.8, the proposed zone change will not significantly affect a transportation facility.

### **3.4 Zoning Ordinance – Section 9.040**

Section 9.040 allows for the imposition of such reasonable conditions “as are necessary to insure the compatibility of a zone change to surrounding uses and as are necessary to fulfill the general and specific purposes of this Ordinance.” The Section lists without limitation eight general categories of areas which may be conditioned to achieve the desired compatibility. Because the minimum lot size in the proposed zone change is 10 acres, because the uses surrounding the subject property are almost entirely rural residential, and because any future development will require compliance with applicable building and development standards, no conditions are necessary as part of this application to ensure the compatibility of the subject property to the surrounding uses.

### **3.5 Zoning Ordinance – Section 9.060 – 9.080**

Sections 9.060 through 9.080 require that the Planning Commission hold a hearing on the proposed zone change and make a recommendation to the County Board of Commissioners, which shall then take such action as it deems appropriate no sooner than twenty days after receipt of the Planning Commission’s recommendation.

## CONCLUSION

Because of the unique circumstances of the relationship between the subject property and surrounding land as explained above, the proposed residential uses will not commit adjacent or nearby resource land to nonresource use. The rural residential uses allowed are compatible with nearby resource use. Based upon all of the findings of fact and conclusions of law set forth above, the Planning Director recommends approval of the exception and zone change and recommends that the subject property be rezoned to F-F(10), and that the corresponding Plan, map and ordinance changes be made.



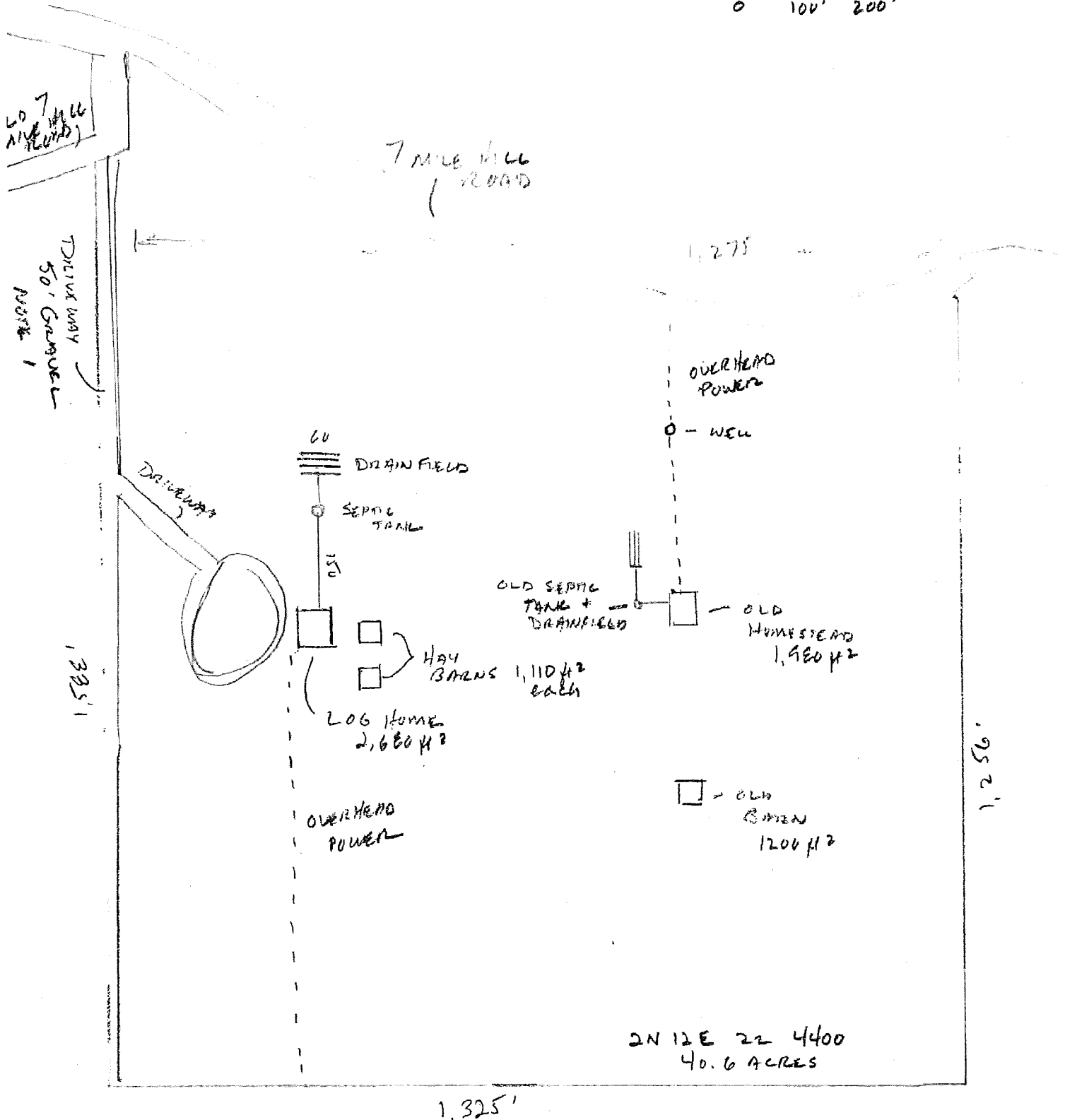


# WILSON SITE PLAN

NOTE: DRIVEWAY ALSO SERVES  
PROPERTY TO SOUTH, IN COMMON  
OWNERSHIP WITH SUBJECT PARCEL

SCALE: 20

0 100' 200'





RECEIVED

WVASC  
003105

24/2E-22cb

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.785)

APR 20 1987

## (1) OWNER:

Name Richard J. Murray Well Number:   
Address 2175 Ridge Rd WATER RESOURCES DEPT  
City The Dalles, State Oregon Zip 97058 SALEM, OREGON

## (2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

## (3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable  
☐ Other

## (4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Other

## BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well 3/20 ft.  
Explosives used ☐ Yes ☒ No Type Amount

HOLE			SEAL			Amount sacks or pounds
meter	From	To	Material	From	To	
12	0	24	Bentonite	0	24	700#

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E  
☐ Other RoddedBackfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

## (6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	+2	25	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

location of shoe(s)

## (7) PERFORATIONS/SCREENS:

☐ Perforations Method  
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

## (8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing ☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50	100%	550	1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom NODid any strata contain water not suitable for intended use? ☒ Too little☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

## (9) LOCATION OF WELL by legal description:

County Wasco Latitude Longitude  
Township 2N Nor S, Range 12 E E or W, WM.  
Section 22 NW 1/4 SW 1/4  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Seven Mile Rd

## (10) STATIC WATER LEVEL:

150 ft. below land surface. Date 3/20  
Artesian pressure lb. per square inch. Date

## (11) WATER BEARING ZONES:

From	To	Estimated Flow Rate	SWL
230	270	5	
334	350	2 50	150

## (12) WELL LOG:

Ground elevation 1600

Material	From	To	SWL
Clay brown	0	10	
Basalt gray	10	23	
Clay yellow	23	26	
Basalt gray	26	230	
Basalt black visic WB	230	270	
Basalt gray	270	334	
Rock gray & pink WB	334	350	150
Basalt gray	350	480	
Rock blk. & claystone gray & green	480	495	
Basalt gray with cracks	495	550	

Date started 4 March 1987 Completed 20 March 1987

## (unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed WWC Number 606  
Date 4/17/87

## (bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed Richard J. Murray WWC Number 606  
Date 4/17/87

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

(Do not write above this line)

WV-4500

State Well No. 2N-12E-22

State Permit No. \_\_\_\_\_

003111

Name Samuel Decker  
Address Route 4, Box 210  
The Dalles, Oregon 97058

New Well ☐ Deepening ☐ Reconditioning ☒ Abandon ☐  
If abandonment, describe material and procedure in Item 12.

Rotary	<input checked="" type="checkbox"/>	Driven	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Jetted	<input type="checkbox"/>
Dug	<input type="checkbox"/>	Bored	<input type="checkbox"/>

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

**CASING INSTALLED:** Threaded ☐ Welded ☒

8" Diam. from 0 ft. to 43 ft. Gage 250

6" Diam. from 0 ft. to 110 ft. Gage 250

" Diam. from ft. to ft. Gage

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations	in. by	in.
perforations from	ft. to	ft.
perforations from	ft. to	ft.
perforations from	ft. to	ft.

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name .....

Type ..... Model No. ....

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Diam. .... Slot size ..... Set from ..... ft. to ..... ft.

Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller

Yield: 60 gal./min. with 100 ft. drawdown after 2 hrs.

" " "

" " "

Baller test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m.

Well seal—Material used Cement  
Well sealed from land surface to 42 ft.  
Diameter of well bore to bottom of seal 12 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite Yellowstone  
Number of pounds of bentonite per 100 gallons  
of water 65 lbs./100 gals.  
Was a drive shoe used? ☒ Yes ☐ No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water? ☐ Yes ☒ No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed? ☐ Yes ☒ No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

County	Wasco	Driller's well number
NW ¼ SW ¼ Section	22 T. 2N R. 12 E.	E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road

Depth at which water was first found 25 ft.  
 Static level 33 ft. below land surface. Date 7-23-74  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

Cleaned out \_\_\_\_\_  
Depth drilled \_\_\_\_\_ ft. Depth of completed well 320 ft.

**Formation:** Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

[illegible]

Work started	7-16	1974	Completed	7-22	1974
Date well drilling machine moved off of well				7-23	1974

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] William Clayton Date Oct. 30 1975  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 129

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt 1, Box 61-A, The Dalles, Ore.

[Signed] Gilbert Clayton  
(Water Well Contractor)  
Contractor's License No. 569 Date Oct. 30, 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

SP\*45656-119



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

RECEIVED

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WASC

WATER WELL REPORT

STATE OF OREGON

MAY 28 1974

State Well No.

2N/12E-22

003131

(Please type or print)

STATE ENGINEER

State Permit No.

SALEM, OREGON

(1) OWNER:

Name Samuel Decker

Address Route 4, Box 210

The Dalles, Oregon 97058

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐  
Cable ☐ Jetted ☐  
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐  
Irrigation ☒ Test Well ☐ Other ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒

6" Diam. from 0 ft. to 41 ft. Gage 250

" Diam. from " ft. to " ft. Gage "

" Diam. from " ft. to " ft. Gage "

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations in. by in.

" perforations from " ft. to " ft.

" perforations from " ft. to " ft.

" perforations from " ft. to " ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name

Type Model No.

Diam. Slot size Set from ft. to ft.

Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Air Bailer test 50 gal./min. with 100 ft. drawdown after 9 hrs.

Artesian flow g.p.m.

Temperature of water 50° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite - cement

Well sealed from land surface to 40 ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 4 sacks

Number of sacks of bentonite used in well seal 2 sacks

Brand name of bentonite Yellowstone

Number of pounds of bentonite per 100 gallons

of water 65 lbs./100 gals.

Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed? ☐ Yes ☒ No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Wasco Driller's well number

NW 1/4 SW 1/4 Section 22 T. 2N R. 12 E. W.M.

Bearing and distance from section or subdivision corner 120' south  
from center of Seven Mile Hill county  
road.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 25 ft.

Static level 33 ft. below land surface. Date 5-14-74

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 320 ft. Depth of completed well 320 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Soil, brown clay	0	4	
Rock, decomposed	4	12	
Rock, broken	12	35	15
Rock, grey	35	65	20
Rock, black	65	120	20
Rock, grey	120	180	20
Rock, grey-green, clay seams	180	255	20
Rock, red porous	255	275	33
Rock, grey porous, pyrites	275	308	33
Rock, grey	308	320	33

Work started May 2 1974 Completed May 13 1974

Date well drilling machine moved off of well May 14 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Gilbert Clayton Date May 25, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 129

Water Well Contractor's Certification:

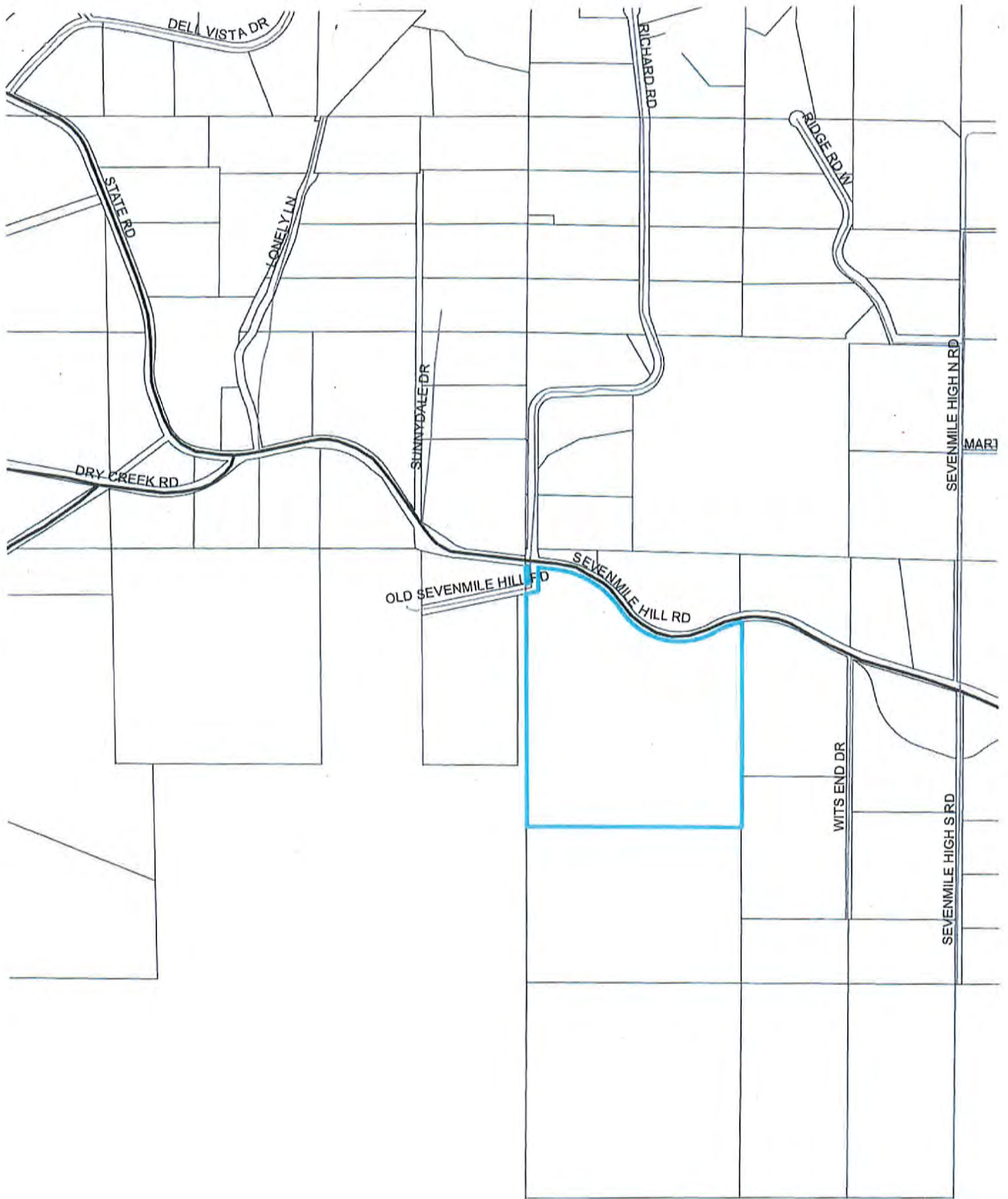
This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

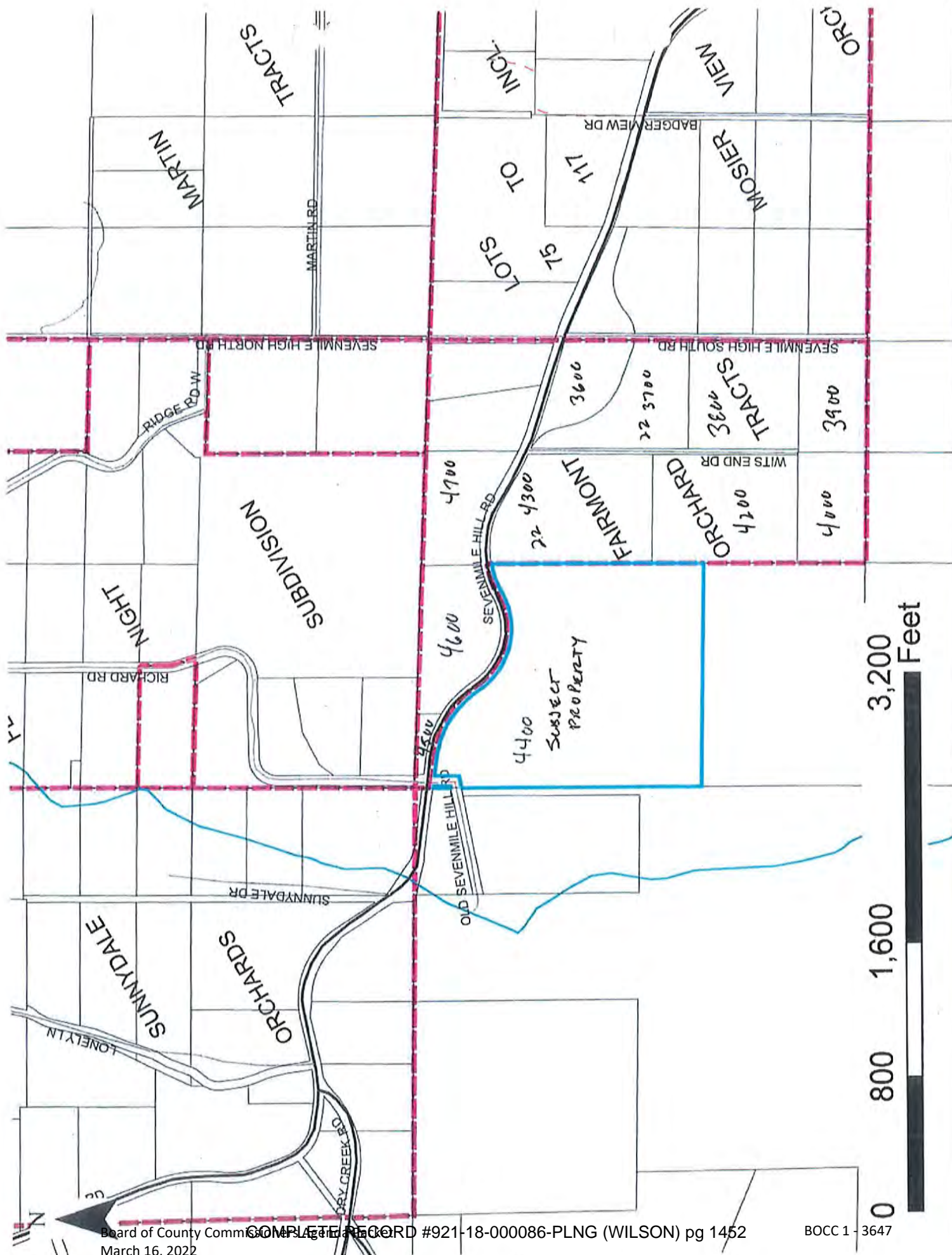
Name Gilbert Clayton Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt 1, Box 61-A, The Dalles, Oregon

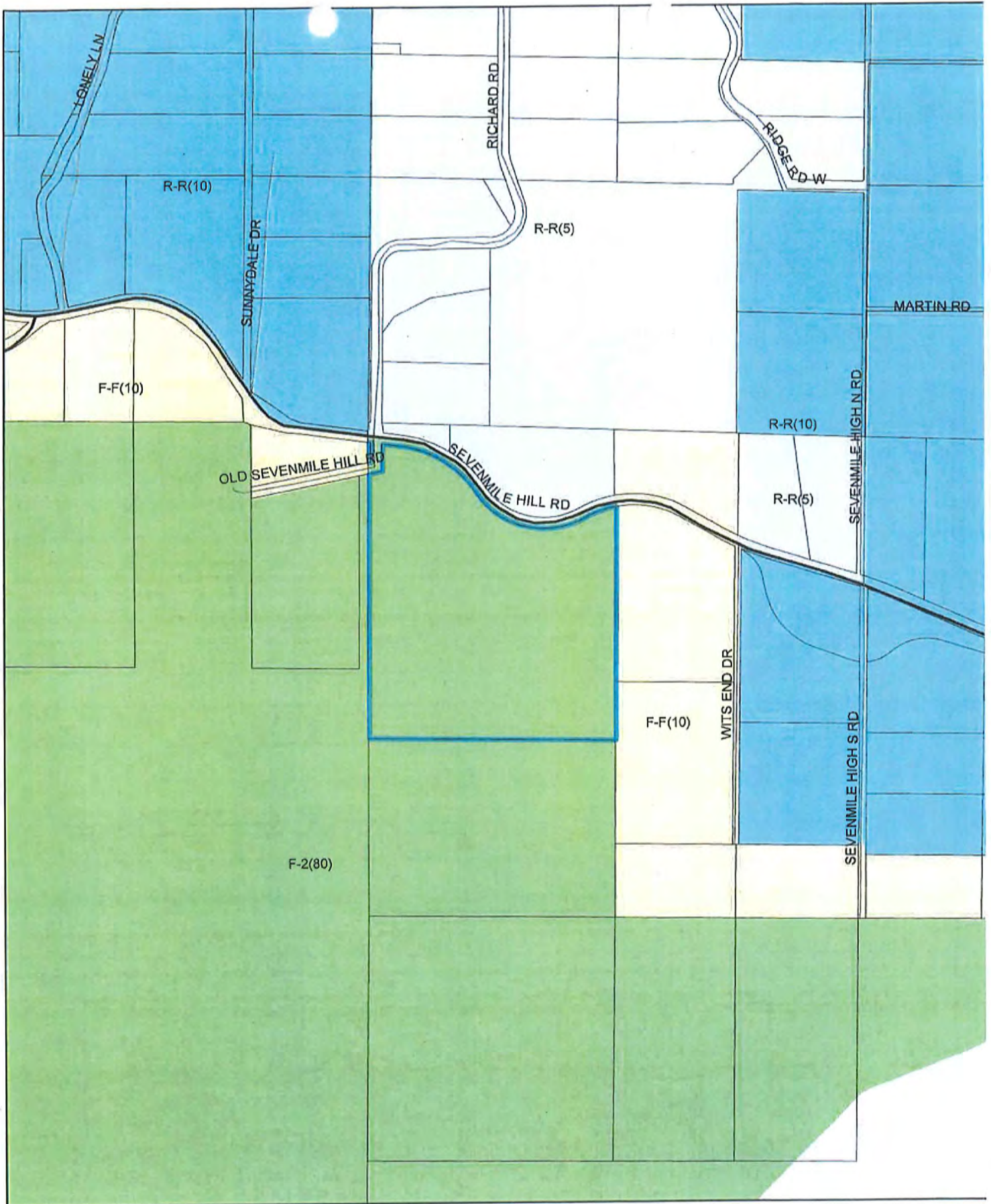
[Signed] Gilbert Clayton  
(Water Well Contractor)

Contractor's License No. 569 Date May 25, 1974

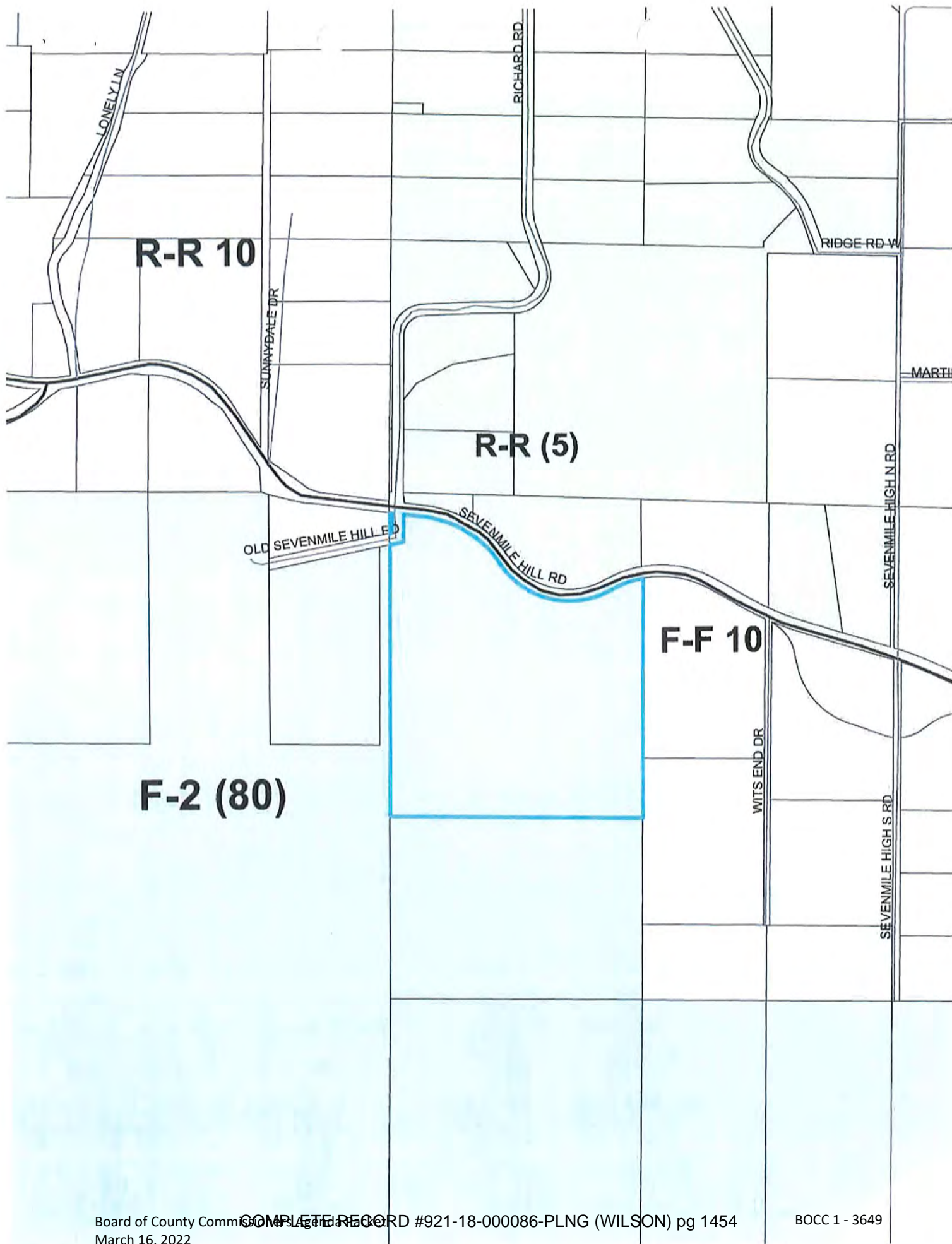








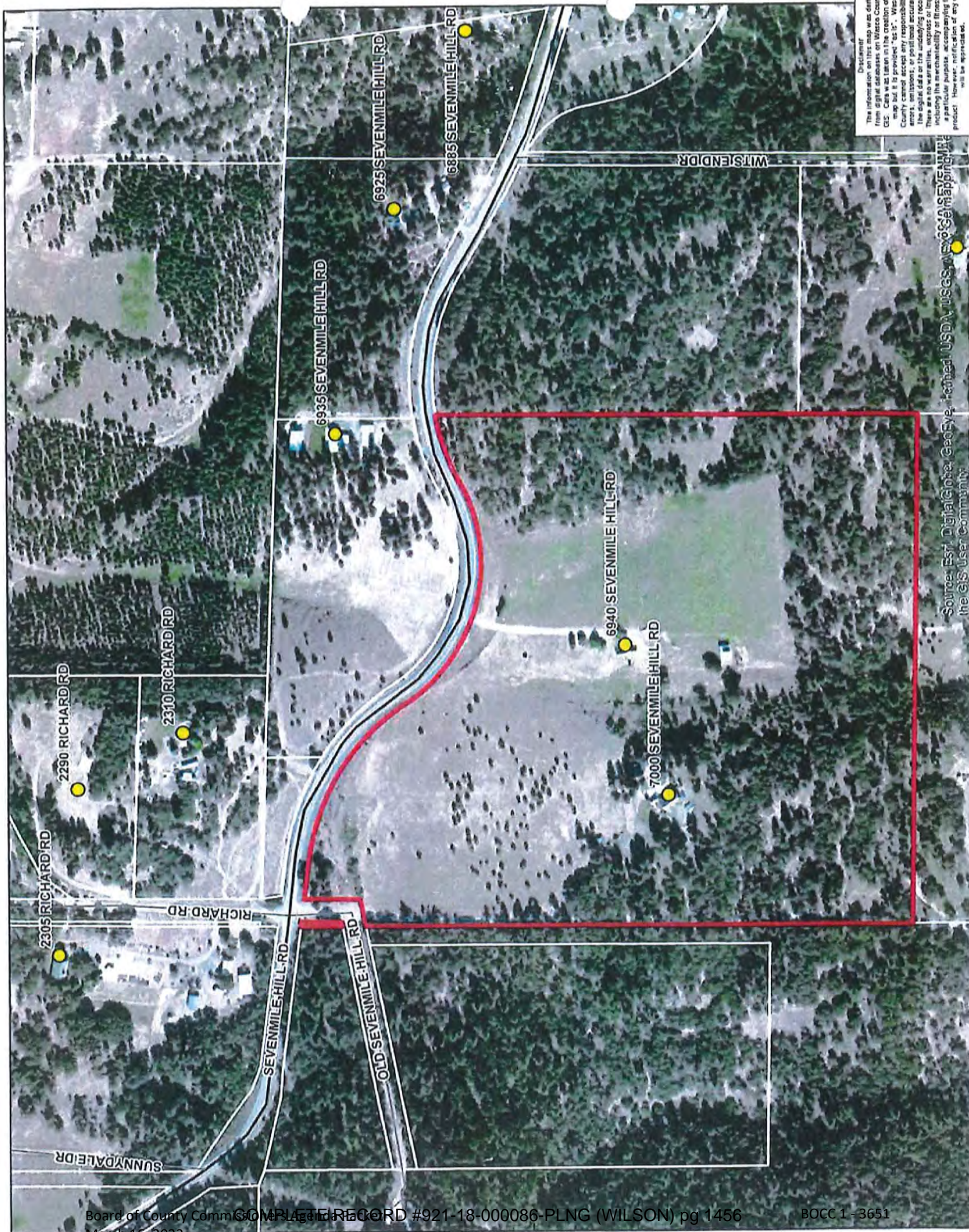












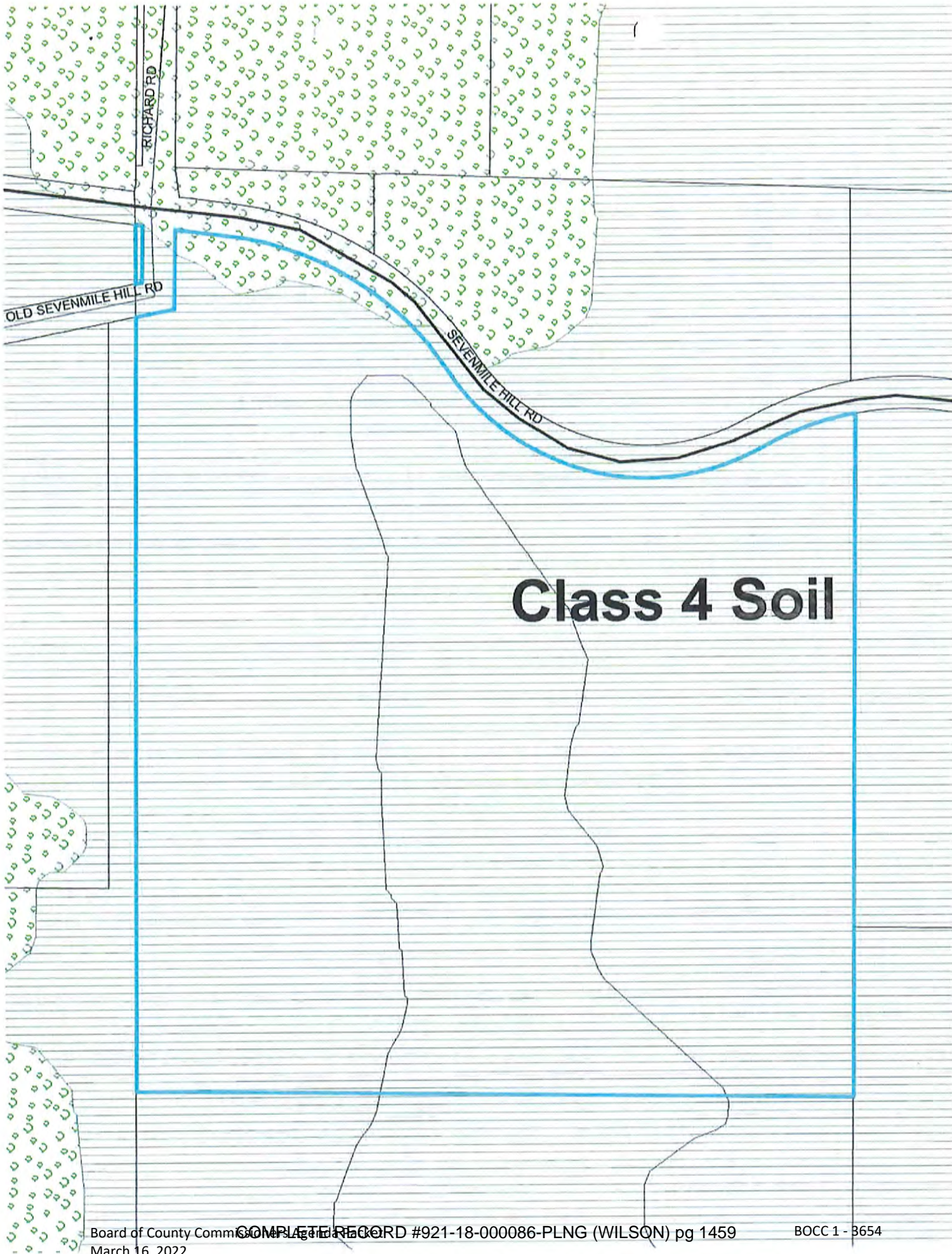




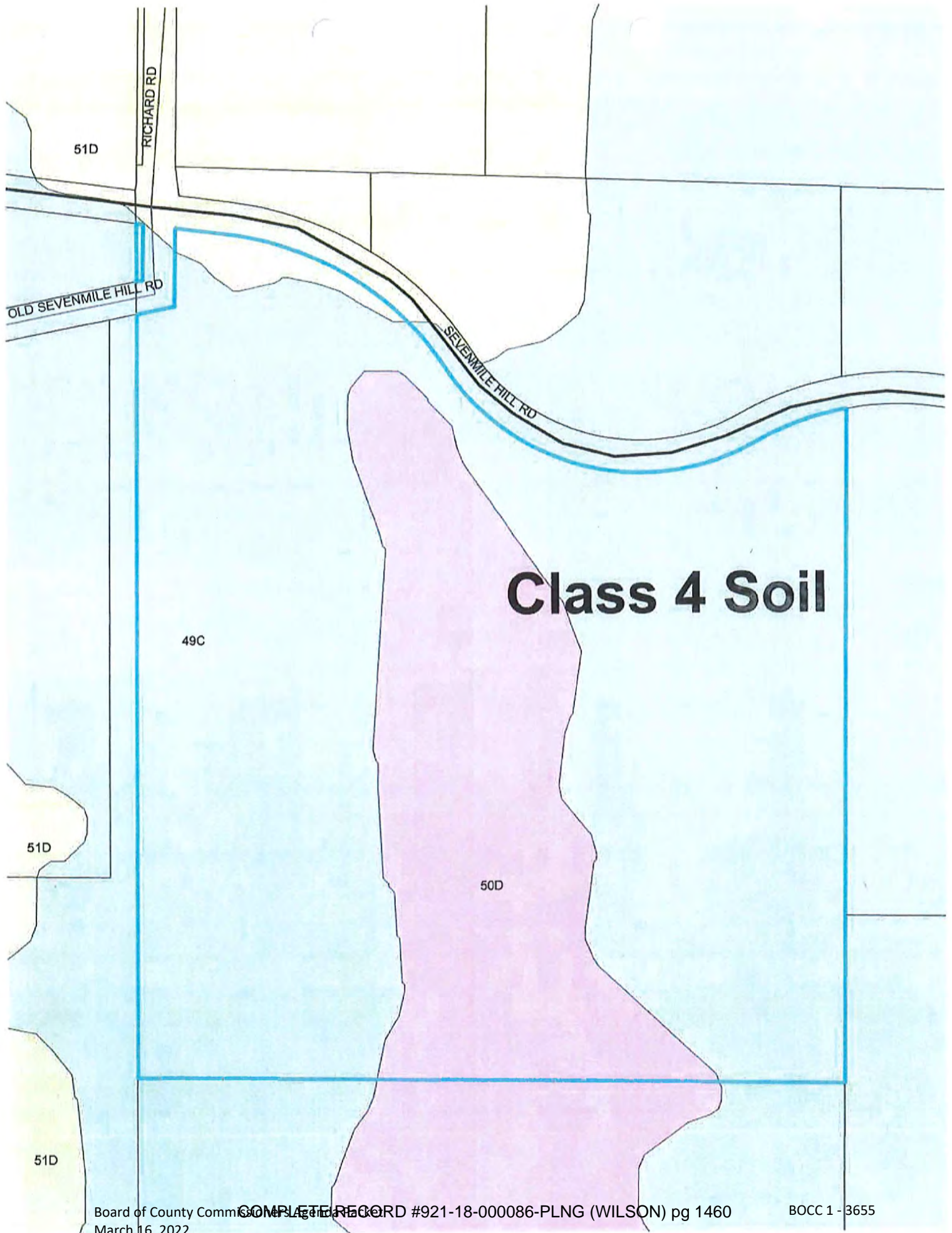




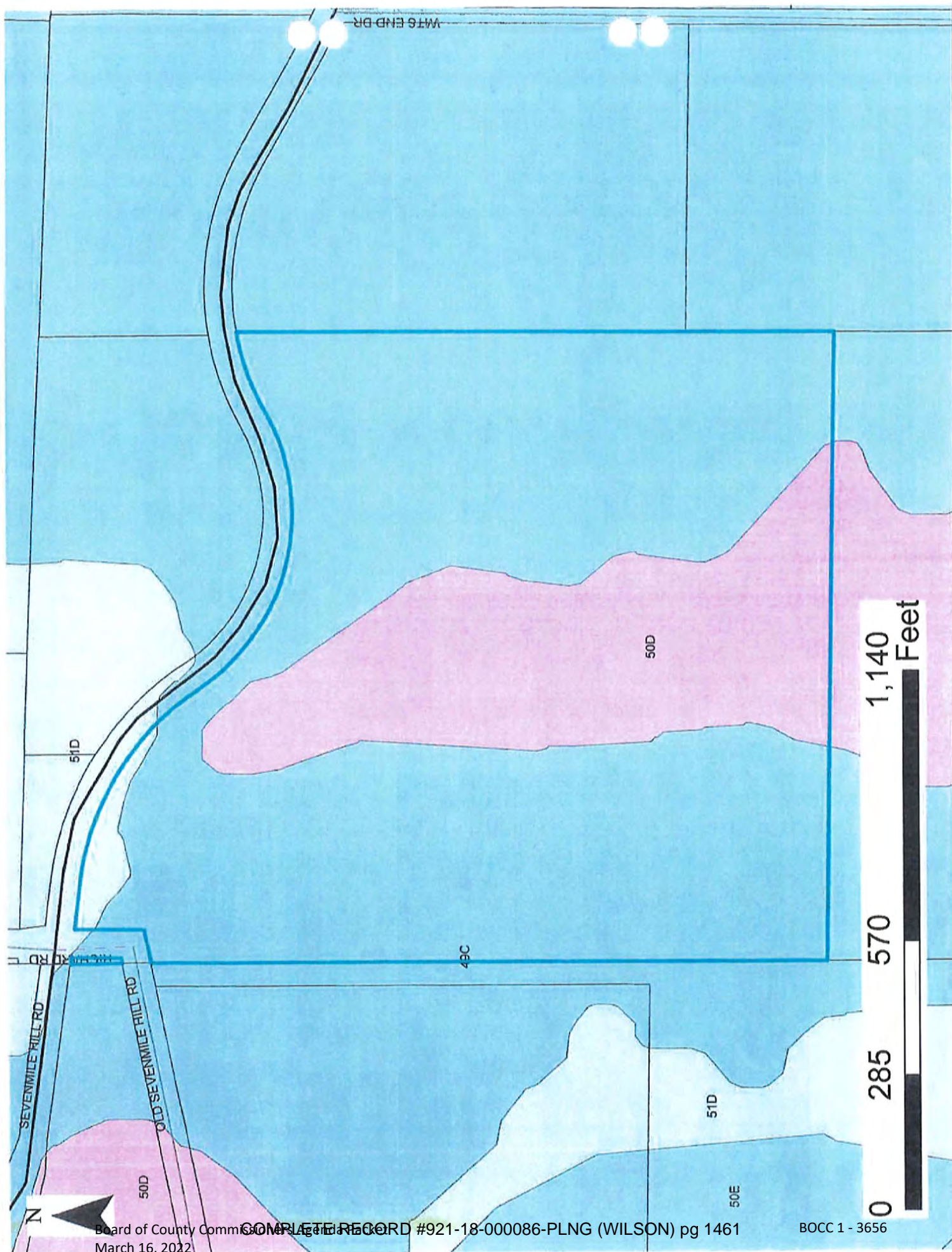
















## AGENDA ITEM

### DLCD Grant

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[COVER LETTER](#)

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[DEPARTMENT OF LAND CONSERVATION & DEVELOPMENT TECHNICAL  
ASSISTANCE GRANT AGREEMENT](#)

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[MOTION LANGUAGE](#)

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# Oregon

Kate Brown, Governor

## Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

[www.oregon.gov/LCD](http://www.oregon.gov/LCD)

March 2, 2022

Kelly Howsley Glover, Interim Planning Director  
Wasco County  
2705 E 2<sup>nd</sup> Street  
The Dalles, Oregon 97058



SENT VIA E-MAIL

**Re:** Wasco County Grant No. TA-23-207 Agreement for County Comprehensive Plan Guidebook

Dear Kelly:

The Department of Land Conservation and Development (DLCD) is pleased to offer Wasco County a grant in the amount of \$8,000 for the County Comprehensive Plan Guidebook. You will find the grant agreement in an attached PDF file. Please read it carefully.

Please e-sign the contract at page 8, or print, sign and scan the signed page. The agreement must be signed by Wasco County and pages 1-8 of the agreement returned to DLCD. Whether returning the signed agreement via mail or e-mail, it must be received by DLCD's Salem office within 30 days of the date of this letter. If the signed agreement is not received by **April 1, 2022**, this offer may be withdrawn.

The attached grant agreement is not in effect until signed by Wasco County and DLCD. An electronic file of the agreement with both signatures will be returned to you for your records. Funds will be sent to you in accordance with the payment schedule in the grant agreement. Please note that we can reimburse only eligible costs incurred after all parties have signed and before the termination date of this agreement.

If you have questions about the agreement, please contact me at 971-345-1987 or [DLCD.GFGrant@dlcd.oregon.gov](mailto:DLCD.GFGrant@dlcd.oregon.gov). If you have other questions about the project, please contact your grant manager, Angie Brewer, at 541-306-8530 or [angie.brewer@dlcd.oregon.gov](mailto:angie.brewer@dlcd.oregon.gov).

Yours truly,

Angela Williamson  
Grants Administrative Specialist

cc: Angie Brewer, DLCD Regional Representative

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STATE OF OREGON  
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT



**2021-2023 TECHNICAL ASSISTANCE GRANT**

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<b>AGREEMENT COVER SHEET</b>	
<b>This cover sheet is informational and not a part of the agreement</b>	
<b>Offer Date:</b> March 2, 2022	
<b>Grantee</b> Wasco County 2705 E 2 <sup>nd</sup> Street The Dalles, Oregon 97058	<b>Grant No.</b> TA-23-207
<b>Project Title:</b> County Comprehensive Plan Update Guidebook	
<b>Grantee Representative</b> Kelly Howsley Glover, Interim Plan. Director 541-506-2565 <a href="mailto:kellyg@co.wasco.or.us">kellyg@co.wasco.or.us</a>	<b>DLCD Grant Manager</b> Angie Brewer 541-306-8530 <a href="mailto:Angie.brewer@dlcd.oregon.gov">Angie.brewer@dlcd.oregon.gov</a>
<b>GRANT AMOUNT:</b> \$8,000	<b>CLOSING DATE:</b> May 31, 2023
<b>Last day to amend agreement:</b> March 1, 2023	

**Signature**

Grantee shall return a signed agreement to DLCD by e-mail within thirty (30) days of the Offer Date. If not signed and returned without modification by Grantee within thirty (30) days of the Offer Date, the DLCD Grant Program Manager may terminate this offer of the grant award. Upon receipt of the Agreement signed by Grantee, the DLCD Grant Program Manager shall sign and return a digital copy of the signed document via e-mail.

**List of Products**

Preliminary report: Project staff with contact information, advisory committee membership, and refinement of scope by May 1, 2022 (Project Requirement 7)

Signed agreement: between the Grantee and consultant, no later than three business days after both parties have signed the agreement. (Project Requirement 6)

Task 1: Inclusive Outreach Plan

Task 2: Guidebook Template

Task 3: Draft Guidebook

Task 4: Final Guidebook

Task 5: Distribution of Guidebook

Task 6: Equity and Inclusion Self-Assessment

Grantee and the consultant will provide all draft and final Products, including memos, reports, and maps produced by this grant agreement in a digital media format. The term “digital media” means a compact disc, digital video disc, USB flash drive, e-mail, or FTP submittal authorized by DLCD.

STATE OF OREGON  
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT  
2021-2023 TECHNICAL ASSISTANCE GRANT  
AGREEMENT

**DLCD Grant Number:** TA-23-207

**Wasco County**

This agreement (“Agreement”) is made and entered into by and between the **State of Oregon, acting by and through its Department of Land Conservation and Development**, hereinafter referred to as “DLCD,” and **Wasco County**, hereinafter referred to as “Grantee,” and collectively referred to as the “Parties.”

1. **Effective Date and Availability of Grant Funds.** This Agreement is effective on the date on which every party has signed this Agreement and all required State approvals have been obtained (“Effective Date”). Grant Funds under this Agreement are available for eligible costs as defined in Sections 4 and 6 incurred beginning on the Effective Date and ending on the earlier of the termination of this Agreement or the Project End Date provided in Attachment A. DLCD’s obligation to disburse Grant Funds under this Agreement ends 60 days after the earlier of termination of this Agreement or the Project End Date.
2. **Agreement Documents.** The Agreement consists of this agreement (without any attachments) and the following Attachments, all of which are attached hereto and incorporated by reference:

Attachment A: **Project Description and Budget**

Attachment B: **DLCD Contact Names and Addresses**

Attachment C: **Request for Product Reimbursement Form and Instructions**

In the event of a conflict between two or more of the documents comprising this Agreement, the language in the document with the highest precedence shall control. The precedence of each of the documents comprising this Agreement is as follows: this Agreement without Attachments; Attachments as listed, in descending order of precedence.

3. **Grant Funds.** The maximum, not-to-exceed, grant amount that the DLCD will pay to Grantee is **\$8,000** (the “Grant Funds”). Disbursements will be made only in accordance with the schedule and requirements contained in this Agreement, including Attachment A.
4. **Project.** The Project is described in Attachment A. Grant Funds may be used solely for the Project described in Attachment A and may not be used for any other purpose. No Grant Funds will be disbursed for any changes to the Project unless such changes are approved by DLCD by amendment pursuant to Section 9 hereof. Grantee agrees to implement the Project in accordance with the terms and conditions of this Agreement and complete the Project no later than the Project End Date.
5. **Reports.** Grantee shall submit the reports required by this section to the DLCD Grant Manager and Grants Administrative Specialist in writing by personal delivery, e-mailing, or mailing at the address or number set forth in Attachment B or to such other addresses or numbers as DLCD may specify by notice to Grantee in accordance with Section 8 hereof.

- a. **Progress Reports.** Grantee will submit a written status report at the request of the DLCD Grant Manager or as required in the Project Requirements in Attachment A.



- b. **Financial Reimbursement Reports.** In order to receive reimbursement, Grantee must submit to DLCD requests for reimbursement of eligible costs incurred in producing Product(s), as provided in Attachment A, on the form provided in Attachment C. Grantee shall submit a closeout report to DLCD within 30 days after the termination of the Agreement or the Project End Date, whichever is earlier. Reimbursements for products will be reduced or withheld if Progress or Closeout Reports have not been timely submitted or are incomplete.

## 6. Disbursement and Recovery of Grant Funds.

- a. **Disbursement Generally.** DLCD will disburse the Grant Funds as reimbursement for eligible costs incurred to produce Products in carrying out the Project, up to the amount provided in Section 3, and subject to the timelines and limits for each Task, as specified in Exhibit A. Grantee may request a reimbursement after completion of a Product. Reimbursements will be made by DLCD within 30 days of DLCD's approval of a request for reimbursement. Eligible costs are the reasonable and necessary costs incurred by Grantee, during the period specified in Section 1, in performance of the Project and that are not excluded from reimbursement by DLCD, either by this Agreement or by exclusion as a result of financial review or audit.
- b. **Conditions Precedent to Disbursement.** DLCD's obligation to disburse Grant Funds to Grantee is subject to satisfaction, with respect to each disbursement, of each of the following conditions precedent:
  - i. DLCD has received funding, appropriations, limitations, allotments or other expenditure authority sufficient to allow DLCD, in the exercise of its reasonable administrative discretion, to make the disbursement.
  - ii. Grantee is in compliance with the terms of this Agreement.
  - iii. Grantee's representations and warranties set forth in Section 7 hereof are true and correct on the date of disbursement with the same effect as though made on the date of disbursement.
  - iv. Grantee has provided to DLCD a request for reimbursement in accordance with Section 5.b hereof. Grantee must submit its final request for reimbursement no later than 30 days after the earlier of termination of this Agreement or the Project End Date. Grantee will not disburse Grant Funds in response to reimbursement requests submitted after that date.

## 7. Representations and Warranties of Grantee. Grantee represents and warrants to DLCD as follows:

- a. **Organization and Authority.** Grantee is duly organized and validly existing under the laws of the State of Oregon and is eligible to receive the Grant Funds. Grantee has full power, authority, and legal right to make this Agreement and to incur and perform its obligations hereunder, and the making and performance by Grantee of this Agreement (1) have been duly authorized by all necessary action of Grantee and (2) do not and will not violate any provision of any applicable law, rule, regulation, or order of any court, regulatory commission, board, or other administrative agency or any provision of Grantee's organizational documents, (3) do not and will not result in the breach of, or constitute a default or require any consent under any other agreement or instrument to which Grantee is a party or by which Grantee or any of its properties may be bound or affected. No authorization, consent, license, approval of, filing or

registration with or notification to any governmental body or regulatory or supervisory authority is required for the execution, delivery or performance by Grantee of this Agreement.

- b. **Binding Obligation.** This Agreement has been duly executed and delivered by Grantee and constitutes a legal, valid and binding obligation of Grantee, enforceable in accordance with its terms subject to the laws of bankruptcy, insolvency, or other similar laws affecting the enforcement of creditors' rights generally.

The warranties set in this section are in addition to, and not in lieu of, any other warranties set forth in this Agreement or implied by law.

8. **Notices.** Except as otherwise expressly provided in this Agreement, any notices to be given hereunder shall be given in writing by personal delivery, e-mailing, or mailing the same by registered or certified mail, postage prepaid, to the Grantee's Grant Representative or DLCD's Grant Manager, as the case may be, at the address or number set forth in Attachment B, or to such other addresses or numbers as either party may indicate pursuant to this section. Any notice delivered by e-mail shall be effective on the day the party receives the transmission if the transmission was during normal business hours of the receiving party, or on the next business day if transmission was outside normal business hours of the receiving party. Any notice given by personal delivery shall be effective when actually delivered. Any notice given by mail shall be effective three days after deposit in the mail.
9. **Amendments.** The terms of this Agreement will not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by the Parties (or in the case of a waiver, by the party against whom the waiver is sought to be enforced). If the Grantee wishes to amend the Agreement, the Grantee must submit a written request, including a justification for any amendment, to the DLCD Grant Manager at least 90 calendar days before the Project End Date.
10. **Default.** Reimbursements to Grantee may be withheld or reduced if DLCD determines that Project performance under this Agreement is unsatisfactory, or if one or more terms or conditions of this Agreement have not been met. The amount of Grant Funds withheld will be based on the best professional judgment of the DLCD Grant Manager and Grant Program Manager.
11. **Ownership of Product(s).**
- a. **Definitions.** As used in this Section 11 and elsewhere in this Agreement, the following terms have the meanings set forth below:
- i. **"Grantee Intellectual Property"** means any intellectual property owned by Grantee and developed independently from the Project.
- ii. **"Third Party Intellectual Property"** means any intellectual property owned by parties other than DLCD or Grantee.
- iii. **"Product(s)"** means every invention, discovery, work of authorship, trade secret or other tangible or intangible item and all intellectual property rights therein that Grantee is required to deliver to DLCD or create pursuant to the Project, including but not limited to any Product(s) described in Attachment A.
- b. **Non-Exclusive License.** Grantee hereby grants to DLCD, under Grantee Intellectual Property and under intellectual property created by Grantee pursuant to the Project, an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon,

distribute copies of, perform and display the Product(s) for governmental purposes, and to authorize others to do the same on DLCD's behalf. If a Product(s) created by Grantee pursuant to the Project is a derivative work based on Third Party Intellectual Property, or is a compilation that includes Third Party Intellectual Property, Grantee shall secure on DLCD's behalf and in the name of DLCD an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display, for governmental purposes, the pre-existing elements of the Third Party Intellectual Property employed in the Product(s), and to authorize others to do the same on DLCD's behalf. If a Product(s) is Third Party Intellectual Property, Grantee shall secure on DLCD's behalf and in the name of DLCD, an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display, for governmental purposes, the Third Party Intellectual Property, and to authorize others to do the same on DLCD's behalf.

## **12. Indemnity.**

- a. **GENERAL INDEMNITY.** SUBJECT TO THE LIMITS OF THE OREGON CONSTITUTION AND STATE OF OREGON TORT CLAIMS ACT, IF APPLICABLE TO GRANTEE, GRANTEE SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS DLCD, THE STATE OF OREGON AND THEIR AGENCIES, SUBDIVISIONS, OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS FROM AND AGAINST ALL CLAIMS, SUITS, ACTIONS, LOSSES, DAMAGES, LIABILITIES, COSTS AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY FEES, ARISING OUT OF, OR RELATING TO THE ACTS OR OMISSIONS OF GRANTEE OR ITS OFFICERS, EMPLOYEES, SUBCONTRACTORS, OR AGENTS UNDER THIS AGREEMENT.
- b. **CONTROL OF DEFENSE AND SETTLEMENT.** GRANTEE SHALL HAVE CONTROL OF THE DEFENSE AND SETTLEMENT OF ANY CLAIM THAT IS SUBJECT TO SECTIONS 12.a; HOWEVER, NEITHER GRANTEE NOR ANY ATTORNEY ENGAGED BY GRANTEE SHALL DEFEND THE CLAIM IN THE NAME OF THE STATE OF OREGON OR ANY AGENCY OF THE STATE OF OREGON, NOR PURPORT TO ACT AS LEGAL REPRESENTATIVE OF THE STATE OF OREGON OR ANY OF ITS AGENCIES, WITHOUT FIRST RECEIVING FROM THE OREGON ATTORNEY GENERAL, IN A FORM AND MANNER DETERMINED APPROPRIATE BY THE ATTORNEY GENERAL, AUTHORITY TO ACT AS LEGAL COUNSEL FOR THE STATE OF OREGON. NOR SHALL GRANTEE SETTLE ANY CLAIM ON BEHALF OF THE STATE OF OREGON WITHOUT THE APPROVAL OF THE ATTORNEY GENERAL. THE STATE OF OREGON MAY, AT ITS ELECTION AND EXPENSE, ASSUME ITS OWN DEFENSE AND SETTLEMENT IN THE EVENT THAT THE STATE OF OREGON DETERMINES THAT GRANTEE IS PROHIBITED FROM DEFENDING THE STATE OF OREGON, OR IS NOT ADEQUATELY DEFENDING THE STATE OF OREGON'S INTERESTS, OR THAT AN IMPORTANT GOVERNMENTAL PRINCIPLE IS AT ISSUE AND THE STATE OF OREGON DESIRES TO ASSUME ITS OWN DEFENSE.

13. **Recovery of Grant Moneys.** Any Grant Funds disbursed to Grantee under this Agreement that are expended in violation or contravention of one or more of the provisions of this Agreement ("Misexpended Funds") or that remain unexpended on the earlier of termination of this Agreement or the Project End Date must be returned to DLCD. Grantee shall return all Misexpended Funds to DLCD promptly after DLCD's written demand and no later than fifteen (15) days after DLCD's

written demand. Grantee shall return all Unexpended Funds to DLCD within fifteen (15) days after the earlier of termination of this Agreement or the Project End Date.

**14. Termination:**

- a. **DLCD's Right to Terminate at its Discretion.** At its sole discretion, DLCD may terminate this Agreement:
  - i. **For its convenience** upon thirty (30) days' prior written notice by DLCD to Grantee;
  - ii. **Immediately upon written notice** if DLCD fails to receive funding, appropriations, limitations, allotments or other expenditure authority at levels sufficient to allow DLCD, in the exercise of its reasonable administrative discretion, to continue to make disbursement under this Agreement; or
  - iii. **Immediately upon written notice** if federal or state laws, regulations, or guidelines are modified or interpreted in such a way that the Project is no longer allowable or no longer eligible for funding under this Agreement.
- b. **DLCD's Right to Terminate for Cause.** In addition to any other rights and remedies DLCD may have under this Agreement, DLCD may terminate this Agreement immediately upon written notice by DLCD to Grantee, or at such later date as DLCD may establish in such notice, after the occurrence of any of the following events:
  - i. **Grantee is in default** because Grantee institutes or has instituted against it insolvency, receivership or bankruptcy proceedings, makes an assignment for the benefit of creditors, or ceases doing business on a regular basis;
  - ii. **Grantee is in default** because Grantee commits any material breach or default of any covenant, warranty, obligation or agreement under this Agreement, fails to perform any of its obligations under this Agreement within the time specified herein or any extension thereof, or so fails to pursue its work hereunder as to endanger Grantee's performance under this Agreement in accordance with its terms, and such breach, default or failure is not cured within fourteen (14) calendar days after DLCD's notice, or such longer period as DLCD may specify in such notice.
- c. **Grantee's Right to Terminate for Cause.** Grantee may terminate this Agreement by written notice to DLCD if DLCD is in default because DLCD fails to pay Grantee any amount due pursuant to the terms of this Agreement, and DLCD fails to cure such failure within thirty (30) calendar days after Grantee's notice or such longer period as Grantee may specify in such notice; or
- d. **Termination** under Section 14 shall be without prejudice to any claims, obligations, or liabilities either party may have incurred prior to such termination.

- 15. Accounting and Fiscal Records:** Grantee shall maintain its fiscal records related to this Agreement in accordance with generally accepted accounting principles. The Grantee shall maintain records of the receipt and expenditure of all funds subject to this Agreement for a period of six (6) years after the Project End Date, or for such longer period as may be required by applicable law or until the conclusion of any audit, controversy or litigation arising out of or related to this Agreement, whichever date is later. Accounting records related to this Agreement will be separately maintained from other accounting records.



16. **Governing Law, Consent to Jurisdiction.** This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, suit or proceeding (collectively, "Claim") between DLCD (or any other agency or department of the State of Oregon) and Grantee that arises from or relates to this Agreement shall be brought and conducted solely and exclusively within the Circuit Court of Marion County in the State of Oregon. In no event shall this section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, from any Claim or from the jurisdiction of any court. Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum.
17. **Audit.** The Oregon Secretary of State, Attorney General of the State of Oregon and the Director of DLCD or any other duly authorized representative of DLCD shall have access to and the right to examine any records of transactions related to this Agreement for six (6) years after the final disbursement of Grant Funds under this Agreement is authorized by DLCD.
18. **Counterparts.** This Grant Agreement may be executed in any number of counterparts, and any single counterpart or set of counterparts signed, in either case, by all the parties hereto shall constitute a full and original instrument, but all of which shall together constitute one and the same instrument.
19. **Survival.** All agreements, representations, and warranties of Grantee shall survive the execution and delivery of this Agreement, any investigation at any time made by DLCD or on its behalf and the making of the Grant.
20. **Successors and Assigns.** Recipient may not assign this Agreement or any right hereunder or interest herein, in whole or in part, without the prior written consent of DLCD. This Agreement shall be binding upon and shall inure to the benefit of the parties and their respective permitted successors and assigns.
21. **Validity and Severability.** If any provision of this Agreement is held to be invalid, such event shall not affect, in any respect whatsoever, the validity of the remainder of this Agreement and the remainder shall be construed without the invalid provision so as to carry out the intent of the parties to the extent possible without the invalid provision.
22. **Relationship of the Parties.** Nothing contained in this Agreement or any acts of the parties hereto shall be deemed or construed to create the relationship of principal and agent, or of partnership, or of joint venture or of any other association other than that of independent contracting parties.
23. **No Third Party Beneficiary Rights.** No person not a party to this Agreement is an intended beneficiary of this Agreement, and no person not a party to this Agreement shall have any right to enforce any term of this Agreement.
24. By signing this Agreement the Parties each represents and warrants that it has the power and authority to enter into this Agreement and that the Agreement is executed by its duly authorized representative. By signing the document, Grantee agrees to comply with the terms of this Agreement.

**Grantee:** Wasco County

**Grant No.** TA-23-207

Print Name of Authorized Official For the Grantee	Title	Date
Signature of Authorized Official For the Grantee		

**Grantor:** State of Oregon, acting by and through its Department of Land Conservation and Development

Print Name of DLCD Grant Program Manager	Title  <b>Community Services Division Manager</b>	Date
<b>Gordon Howard</b>		
Signature of DLCD Grant Program Manager		

### **PROJECT PURPOSE STATEMENT**

Staff will produce a guidebook, based on recent Periodic Review experience, to help under-resourced counties update their Comprehensive Plans by offering templates, recommendations, and case studies. Modernizing comprehensive plans ensures county planning departments can be responsive to their communities needs and more proactively pursue other important land use requirements and opportunities.

### **PROJECT OVERVIEW AND MANAGEMENT**

Overall management of the Project will be the responsibility of the Grantee and assisted by the DLCD Grant Manger. Specific Project management duties of Grantee will include:

- a. Organizing and managing the advisory committee;
- b. Selecting a consultant and contracting for consultant services;
- c. Overseeing consultant work described in this Project Description;
- d. Scheduling and managing meetings, including activities such as, preparing and distributing meeting notices, agendas, and summaries; and assisting the consultant with meeting facilitation.

Staff will produce an approximately 50 to 75-page guidebook based on recent experience. Staff will manage a consultant for the graphic design work and compilation of the final guide document.

#### ***Advisory Committees***

No advisory committee will be used to prepare the guidebook.

#### ***Agency Role***

DLCD will provide financial, administrative, and technical assistance to the Project. DLCD supports the collaborative, regional approach envisioned in the Project and agrees to work equally and fairly with each jurisdiction to help assure that state and local interests are optimized. DLCD recognizes the Periodic Review Guidebook will inform, but will not bind, future land use decisions of the cooperating jurisdictions.

#### ***Consultant Role***

The Project will use consultant services to perform graphic design and digital compilation of text and materials provided by staff from recent efforts in their completion of Voluntary Periodic Review. The consultant is expected to compile the text, data, images, and photographs provided by staff, produce a draft for review, finalize the draft with Staff feedback and produce a final product that can be shared in print and an editable digital format.

#### ***Project Meeting Materials***

The project is a guidebook based on recent public process that has come to an end. There are no new meetings scheduled to compile this resource.

#### ***Project Schedule***

The schedule identified in “Schedule, Products, and Budget” section of this Project Description will be observed. DLCD may require an amendment to this Agreement if the timeframes in the schedule are not satisfied. The Project End Date is May 31, 2023.

### ***Expectations for All Written and Graphic Products***

All reports and Products will be delivered to the DLCD Grant Manager according to the schedule provided in this Project Description.

All reports, studies, and other documents produced under the Project must bear the statement in Project Requirement 3, below.

Grantee and the consultant will provide all draft and final Products, including memos, reports, and maps produced by this Agreement in a digital media format. The term “digital media” means a compact disc, digital video disc, USB flash drive, e-mail, or FTP submittal authorized by DLCD.

## **PROJECT REQUIREMENTS**

Grantee agrees to carry out the Project and submit Products in accordance with the requirements in this section.

1. Grantee will produce and submit to DLCD those Products as specified in this Agreement and this Project Description and Budget.
2. Grantee will provide copies of all final Product(s) produced under this Agreement to DLCD in the manner described in this Project Description.
3. All reports, studies, and other documents produced under the Project must indicate on the cover or the title page an acknowledgement of the financial assistance provided by DLCD by bearing the following statement: “This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.”
4. Grantee will identify the location of the originals of any Product(s) if a copy is submitted to DLCD or if the product is one-of-a-kind document.
5. Grantee will provide all letters, memos, reports, charts, products and maps produced under this Agreement in a digital media format.
6. Grantee will provide a legible copy of the signed agreement between the jurisdiction and the contractor no later than three business days after both parties have signed the agreement.
7. Grantee will complete the following by May 1, 2022:
  - a. Identify relevant impacted priority populations and devise a community outreach and inclusion plan.
8. It is understood that this product will not be an adopted document.
9. Any notice issued by Grantee that is eligible for reimbursement under ORS 215.503 – Notice to county property owners for costs incurred for Measure 56 – is not reimbursable under this Agreement.
10. Grantee will submit a written status report at the request of the DLCD Grant Manager at any time outside of the payment schedule in addition to the reports submitted with Attachment C.



11. DLCD will provide no more than one interim payment before the Project End Date and a final payment. Payments will be made only upon submittal of qualifying Product(s) and progress report(s) in accordance with the terms of this Agreement and Attachment C. The report(s) must describe the progress to date on each Task(s) or Product(s) undertaken during the billing period. Other written or verbal progress reports will be provided upon reasonable request by the DLCD Grant Manager.
12. Payments under this Agreement may be reduced if Product(s) scheduled to be completed are not completed by the timeline provided in the Project Description. DLCD's payment obligations under this Agreement are conditioned upon DLCD receiving funding, appropriations, limitations, allotments, or other expenditures authority sufficient to allow DLCD in the exercise of its reasonable administrative discretion, to meet its payment obligations under this Agreement.

## **SCHEDULE, PRODUCTS, AND BUDGET**

### **Pre-Task Submittals**

The contract in Project Requirement 6 and the report in Project Requirement 7 in this Project Description and Budget will be submitted.

***Pre-task Timeline:*** By the dates specified in those requirements.

***Pre-task report budget:*** \$0

### **Task 1: Inclusive Outreach Plan**

Staff will develop a section in the guidebook to support the development of inclusive outreach and engagements plans, supporting the participation of priority populations in settings of steering or citizen advisory committees.

#### ***Task 1 Products:***

The guidebook will provide recommendations, resources, and templates to assemble an inclusive outreach plan for the periodic review process, particularly in rural communities. In rural Oregon, the primary populations are extremely low income, community members with limited English proficiency, homeless populations, and people with disabilities. This is often exacerbated by limited access to high-speed internet, significant distance between rural communities and therefore public meetings, and lack of public transportation.

***Task 1 Timeline:*** December 30, 2022

***Task 1 budget:*** \$500

### **Task 2: Guidebook Template**

Build outline for content, sub-contract graphic artist, discuss layout and overall design.

#### ***Task 2 Products:***

Draft and final guidebook template

***Task 2 Timeline:*** April 29, 2022

***Task 2 budget:*** \$500

**Task 3 – Draft Guidebook**

Written narrative content, produce templates, and finalize draft.

***Task 3 Products:***

Draft Guidebook

***Task 3 Timeline:*** December 30, 2022

***Task 3 budget:*** \$3,000

**Task 4 – Final Guidebook**

Share draft with graphic artist for clean-up and finalization of images, page numbers, and overall design.

***Task 4 Products:***

Draft and final guidebook

***Task 4 Timeline:*** March 31, 2023

***Task 4 budget:*** \$3,000

**Task 5 – Distribution of Guidebook**

Coordinate with the Association of Oregon County Planning Directors (AOCPD) to share final product at meeting, provide a link on the project website and email to County and State partners.

***Task 5 Products:***

Guidebook in .doc and .pdf format available for download

***Task 5 Timeline:*** May 31, 2023

***Task 5 budget:*** \$500

**Task 6 – Equity and Inclusion Self-Assessment**

Grantee to complete equity and inclusion self-assessment using evaluation framework developed in Task 1. Report describing grantee's performance against its goals for inclusive outreach and engagement for the project to be provided to DLCD.

***Task 6 Products:***

Equity and inclusion self-assessment

***Task 6 Timeline:*** May 31, 2023

***Task 6 budget:*** \$500

**Budget Summary**

Task 1 – Inclusive Outreach Plan	\$ 500
Task 2 – Guidebook Template	\$ 500
Task 3 – Draft Guidebook	\$ 3,000
Task 4 – Final Guidebook	\$ 3,000
Task 5 – Distribution of Guidebook	\$ 500
Task 6 – Equity and Inclusion Self-Assessment	\$ 500
<b>TOTAL</b>	<b>\$ 8,000</b>

**DLCD TA Grant Agreement  
Contact Information**

For questions regarding your grant, please contact:

**Grant Manager:**

Angie Brewer  
Central Regional Solution Center  
1011 SW Emkay Drive, Suite 108  
Bend, Oregon 97702

Office: 541-306-8530

E-mail: [angie.brewer@dlcd.oregon.gov](mailto:angie.brewer@dlcd.oregon.gov)

OR

**Grant Program Manager:**

Gordon Howard  
DLCD Salem Office  
635 Capitol Street N.E., Suite 150  
Salem, Oregon 97301-2540

Office: 503-856-6935

E-mail: [gordon.howard@dlcd.oregon.gov](mailto:gordon.howard@dlcd.oregon.gov)

Payment requests should be sent to:

**Grants Administrative Specialist**

Angela Williamson  
DLCD Salem Office  
635 Capitol Street N.E., Suite 150  
Salem, Oregon 97301-2540

Office: 971-345-1987

E-mail: [DLCD.GFGrant@dlcd.oregon.gov](mailto:DLCD.GFGrant@dlcd.oregon.gov)



**Department of Land Conservation and Development (DLCD)  
2021-2023 Request for Interim Reimbursement / Final Closeout**

Grantee Name <b>Wasco County</b>		Grant No. assigned by DLCD <b>TA-23-207</b>		Final Payment Yes No	
Grant Agreement Start Date From: Execution	Grant Agreement Close Date To: <b>May 31, 2023</b>	Period covered by this Payment From:	Period covered by this Payment To:		
<b>DLCD Grant Expenditures</b>	<b>DLCD Grant Expenditures</b>	<b>DLCD Grant Expenditures</b>	<b>DLCD Grant Expenditures</b>		
<b>Transactions</b>	<b>Previously Reported</b>	<b>This Payment</b>		<b>Cumulative</b>	
1. Salaries and Benefits					
2. Supplies and services					
3. Contracts (see instructions)					
4. Other (provide list & explain)					
5. <b>Total (add lines 1–4)</b>					
<b>Local Contributions (if applicable)</b>					
6. Salaries and Benefits					
7. Supplies and services					
8. Contracts					
9. Other					
10. <b>Total (add lines 6–9)</b>					
11. Payment requested (from line 5)	<b>DO NOT WRITE IN THIS SPACE</b>		<b>DO NOT WRITE IN THIS SPACE</b>		
12. <u>Certification:</u> I certify to the best of my knowledge and belief that this report is correct and complete and that all expenditures are for the purposes set forth in the award document. I further certify that all records are available upon request, and the financial records will be retained for six years after the final payment.					
13. Typed or Printed Name and Title		14. Address where payment is to be sent			
15. Signature of Authorized Certifying Official		16. Date Payment Submitted			

Do Not Write Below This Line

**FOR DLCD USE ONLY**

Do Not Write Below This Line

<b><u>DLCD CERTIFICATION</u></b>			
I certify as a representative of the Department of Land Conservation and Development (DLCD), that the Grantee:			
_____ Has met the terms and conditions of the grant and that payment in the amount of \$ _____ should be issued			
_____ Has not met the terms and conditions of the grant for the reasons stated on the attached sheet, and payment in the amount of \$ _____ should be issued.			
Signature of DLCD Grant Manager		Date	
Signature of DLCD Program Manager		Date	
<b>BATCH #</b>	<b>DATE</b>	<b>VOUCHER#</b>	<b>DATE</b>
<b>PCA#</b>	<b>OBJECT #</b>	<b>VENDOR #</b>	<b>AMOUNT</b>

**Department of Land Conservation and Development  
2021-2023 Planning Technical Assistance Grant Agreement  
Interim Reimbursement and Closeout Form Instructions**

General and line-by-line instructions for completing the Request for Interim Reimbursement/Final Closeout form are provided herein.

***General Instructions and Reminders***

- This form may be completed by hand or typed on paper or completed in Microsoft Word. If you need a Word file, please contact the Grants Administrative Specialist at [DLCD.GFGrant@dlcd.oregon.gov](mailto:DLCD.GFGrant@dlcd.oregon.gov). In any case, submit the form with the grant Product(s) electronically, as called for in the Agreement.
- This form is used for all reimbursement requests – interim or final.
- It is important that you retain documentation of expenditures as provided in paragraph 16 of the Agreement, which provides that records be maintained for at least six years after the final payment has been received by the grantee.
- Interim and final reimbursement requests must not include work performed prior to the Effective Date of this Agreement (generally the date the Agreement is signed by DLCD) and not after the Closing Date of this Agreement.

***Completing the Form***

Please show *total actual expenditures only* of DLCD grant award and local contributions.

First row: DLCD will complete the Grantee Name and Grant Number. In the Final Payment box, highlight or circle “No” for interim payments and “Yes” for final closeouts.

Second row: DLCD will complete Agreement start and close dates. Complete the “Period covered by this payment” The form includes separate boxes for “from” and “to.” Please complete both. These dates must accurately depict the dates the work for the reimbursable expenditure was incurred. If there are any applicable limits on these dates, they will be provided in the payment descriptions in the “Schedule, Products, and Budget” section of the Agreement.

The next section of the form includes columns for itemizing each expense category:

- **“DLCD Grant Expenditures, Previous Reported”** column -- should be blank if the submission is Payment 1. If the request is for a second or later interim payment or final closeout, enter the sum of previous payments in this “Previously Reported” column.
- **“DLCD Grant Expenditures, This Payment”** column – captures and identifies expenditures for the products that are currently being submitted for review and payment.
- **“DLCD Grant Expenditures, Cumulative”** column – simply the total of the two previous columns.
- **“DLCD Grant Expenditures, Transactions”** – Complete items 1–4 as applicable and item 5, total in the “Previously Reported” column if applicable and in the “This Payment” column. Complete previous and current local contributions in items 6–9 and the total on line 10 if applicable. Local contribution does not include expenses reimbursed by the grant. It is included to provide DLCD with accurate information regarding the cost of projects and/or products completed in compliance with this grant. This category includes both in-kind and cash contributions.
  - **1. Salary and Benefits** includes the grantee’s staff time, including Other Personnel Expenses. Receipts are not required with this report submission.

- **2. Supplies and Services** include allowable grantee supplies used for completion of grant products. Receipts are not required with this report submission.
  - **3. Contracts** include consultants, attorneys, and any company or individual hired by the grantee to conduct grant work. This category does not include employees of the grantee, but rather an individual or entity that invoices the grantee for services rendered. Information required for the closeout report includes name, address, phone number, and e-mail address of the payee. If there are multiple entities, please provide the amount of grant funds allocated for the reimbursement of each.
  - **4. Other** - Provide a brief explanation and cost breakdown for amounts listed as “Other.” Receipts are not required. Note: Grantee travel expenses are not eligible for reimbursement.
  - **5. Totals** – Sum the categories of grant expenditures in the Previously Reported, This Payment, and Cumulative columns. The Total payments at closeout cannot exceed the maximum amount in paragraph 3 of the Agreement.
- Re-enter the payment request from line 5 “DLCD Grant Expenditures This Payment” on line 11.

Certification: Be sure to read and understand the information in item 12 prior to signing the form.

- A legible name and title is required in cell 13.
- A mailing address, including city and zip code, where payment should be sent must be provided in cell 14.
- The signature under “Signature of Authorized Certifying Official” must be of the person taking responsibility for the accuracy of the information contained in the form.

Before a payment can be issued, *all grant products, required documentation, and the signed reimbursement request form* must be received, accepted, and reviewed by the grant manager and grant program manager, subject to the requirements contained in the Agreement.

Please follow the payment schedule as identified in the Grant Agreement when submitting a request for payment or closeout.

A **signed cover letter**, completed and signed **reimbursement request form**, and completed **Products** can be submitted in one of the following ways: (1) the preferred method – an e-mail with PDF files sent to the Grants Administrative Specialist at [DLCD.GFGrant@dlcd.oregon.gov](mailto:DLCD.GFGrant@dlcd.oregon.gov), or (2) via the DLCD FTP site (contact the Grants Administrative Specialist for instructions at 971-345-1987) or (3) a CD or DVD mailed to the address for the Grants Administrative Specialist in Attachment B of the Agreement. If none of these options are possible, mail the relevant documents to:

Grants Administrative Specialist  
Department of Land Conservation and Development  
635 Capitol St. NE Suite 150  
Salem, OR 97301



## **MOTION**

**SUBJECT: DLCD Grant Agreement**

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I move to approve The Department of Land Conservation & Development 2021-2023 Technical Assistance Grant Agreement #TA-23-207.





## AGENDA ITEM

### Space Use Agreement

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[MAUPIN MOU](#)

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[MOTION LANGUAGE](#)

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**MEMORANDUM OF UNDERSTANDING  
REGARDING LICENSED (NO CHARGE) USE OF FACILITY AT MAUPIN  
CIVIC CENTER BY WASCO COUNTY PLANNING DEPARTMENT –  
WASCO COUNTY, OREGON PLANNING PERSONNEL**

This Memorandum of Understanding (MOU), is entered into by and between the **CITY OF MAUPIN, OREGON**, an Oregon municipal corporation, (“City”), and **WASCO COUNTY, OREGON**, ACTING BY AND THROUGH THE WASCO COUNTY PLANNING DEPARTMENT (HEREINAFTER: “WASCO COUNTY PLANNING DEPARTMENT”).

**RECITALS:**

- A. WASCO COUNTY PLANNING DEPARTMENT believes that use of an area, access and restroom at the Maupin Civic Center by Wasco County, Oregon Planning Personnel to facilitate Land Use Planning Activities would be beneficial to the Wasco County Planning Department and to the residents of South Wasco County, Oregon. It is intended that WASCO COUNTY PLANNING DEPARTMENT’s use of this area at the Maupin Civic Center will be for processing applications, answering queries and performing activities in the South Wasco County area and would serve as an office for preparation of reports and research and conducting community outreach.
- B. The City of Maupin has found and does find that the intended use of a desk and space at the Maupin Civic Center for the described purposes and as a license, for no compensation and on terms as described below is in the City’s best interest.
- C. The City and WASCO COUNTY PLANNING DEPARTMENT believe that some formalization of an agreement between them regarding the terms, activities and use of the City’s property by the WASCO COUNTY PLANNING DEPARTMENT will foster understanding, cooperation and equity as relates to use of space at the Maupin Civic Center by WASCO COUNTY PLANNING DEPARTMENT.

NOW, THEREFORE, in consideration of the above recitals, which recitals are contractual in nature, the mutual covenants herein contained and such other and further consideration as is hereby acknowledged, the parties agree as follows:

- 1. NATURE OF USE OF SPACE AT MAUPIN CIVIC CENTER: WASCO COUNTY PLANNING DEPARTMENT will be entitled to use, under this license, an identified space at the Maupin Civic Center and identified associated access ways and restroom facilities.
- 2. Such use of this property, owned by the City of Maupin, shall be on the terms and subject to the conditions. as follows:

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**PAUL F. SUMNER, P.C.**

ATTORNEY AT LAW

185 NW ‘B’ STREET, P.O. BOX 16; MADRAS, OR 97741

(541) 475-7277 [FAX (541) 475-2857]

- a. The use of the facilities shall be by employees of WASCO COUNTY PLANNING DEPARTMENT.
- b. Employees shall not allow other persons into the facility during Maupin Civic Center closed times and will not use the facility for any uses other than official Wasco County planning activities under the direct supervision and control of employees of WASCO COUNTY PLANNING DEPARTMENT.
- c. Employees shall log all entrance and activities observed and encountered during the Employees' use of the facility, when the Civic Center is closed and when extraordinary events are observed. Included in the logs shall be the following:
  - i. Who entered the facility
  - ii. The time of entrance
  - iii. The time of exit
  - iv. Suspicious activities observed
  - v. Any damage or disruption to the Civic Center, observed when entering, exiting or when using the facility
  - vi. Any use of the facility by others during hours when the facility is not open for business
- d. The parties agree that this license shall commence on the executions hereof and shall continue until terminated by the parties with their mutual agreement or upon either party giving 30 days notice to the other party.
- e. WASCO COUNTY PLANNING DEPARTMENT will cooperate with City's maintenance, general upkeep and cleaning of all areas of the Civic Center, including the area being used by WASCO COUNTY PLANNING DEPARTMENT.
- f. During the licensed use of the subject area, City will not enter the space being occupied by the Employees of WASCO COUNTY PLANNING DEPARTMENT except in the presence of a representative of the WASCO COUNTY PLANNING DEPARTMENT, except in the case of emergency, jeopardizing persons and/or property.

### 3. ROLES, CONTRIBUTIONS AND RESPONSIBILITIES

- a. City will provide and will be responsible for:
  - i. Providing utilities, as are currently installed.
  - ii. Communicating schedules, building agendas, meetings, utilities changes and servicing and other scheduled changes which could effect the use of the space allocated for use by the WASCO COUNTY PLANNING DEPARTMENT.
  - iii. Allowing WASCO COUNTY PLANNING DEPARTMENT necessary

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- access and exclusive use of the designated space together with all associated access keys and security codes.
- iv. Not disturbing or interfering with WASCO COUNTY PLANNING DEPARTMENT's activities at the licensed area at the Maupin Civic Center and WASCO COUNTY PLANNING DEPARTMENT's use of the licensed area for its intended purpose.
  - v. Not initiating any new activity on or about the licensed area which will or may unreasonably interfere with the activities of WASCO COUNTY PLANNING DEPARTMENT's permitted use of the licensed area.
  - vi. On reasonable request by WASCO COUNTY PLANNING DEPARTMENT and at reasonable times provide agreed assistance to the WASCO COUNTY PLANNING DEPARTMENT for the improvement of the licensed area.
- b. WASCO COUNTY PLANNING DEPARTMENT will provide and will be responsible for:
- i. Maintaining the licensed area consistent with the use of WASCO COUNTY PLANNING DEPARTMENT;
  - ii. Correcting any injury or destruction caused by the WASCO COUNTY PLANNING DEPARTMENT's licensed access, use and occupancy of the Maupin Civic Center.
- c. Restrictions on use of the Site:
- i. The City shall not modify its use of city property around the site such that it interferes with WASCO COUNTY PLANNING DEPARTMENT's permitted use of the site.
  - ii. WASCO COUNTY PLANNING DEPARTMENT shall not modify its use on the property without consent of City. WASCO COUNTY PLANNING DEPARTMENT shall not use the site in any manner other than uses contemplated herein. WASCO COUNTY PLANNING DEPARTMENT shall not modify the premises in any manner, except as agreed with City.
4. WASCO COUNTY PLANNING DEPARTMENT shall be entitled to use the premises as provided herein and in compliance with the terms hereof without any compensation being paid to City.
5. RENEGOTIATION: The parties are free to negotiate amendments to this agreement at any time.
6. RECORD KEEPING AND PERFORMANCE DATA: Each party shall keep and

**Page 3 of 7 — MEMORANDUM OF UNDERSTANDING REGARDING LICENSED (NO CHARGE) USE OF FACILITY AT MAUPIN CIVIC CENTER BY WASCO COUNTY PLANNING DEPARTMENT – WASCO COUNTY, OREGON PLANNING PERSONNEL**

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maintain proper records and documentation sufficient to substantiate its compliance with the terms of this agreement.

7. **COMPLIANCE WITH GOVERNING LAW:** Each party shall comply with all federal, state and local laws, rules and regulations in its pursuit hereof. No party in its performance of this MOU shall employ discriminatory practices on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, ethnicity, status as a disabled veteran or veteran of the Vietnam era.
8. **CAPACITY OF CITY AND WASCO COUNTY PLANNING DEPARTMENT:** Each party is acting in an independent capacity. Nothing in this MOU and nothing in the course of dealings between the parties hereunder shall be deemed to create any fiduciary relationship, trust, partnership, joint venture, agency or employment relationship, jointly and severally. In addition and without limitation, each party shall be solely responsible for all matters relating to payment of its employees, including, but not limited to, compliance with applicable social security withholding and all other regulations governing such matters.
9. **INDEMNIFICATION AND INSURANCE:** To the furthest extent allowed by law, including, but not limited to, the Oregon Tort Claims Act, WASCO COUNTY PLANNING DEPARTMENT shall indemnify, hold harmless and defend City and each of its officers, officials, employees, agents and volunteers from any and all loss, liability, fines, penalties, forfeitures, costs and damages (whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage) incurred by City, WASCO COUNTY PLANNING DEPARTMENT or any other person, and from any and all claims, demands and actions in law or equity (including attorney's fees and litigation expenses), arising or alleged to have arisen directly or indirectly out of performance of this MOU. WASCO COUNTY PLANNING DEPARTMENT's obligations under the preceding sentence shall not apply to any loss, liability, fines, penalties, forfeitures, costs or damages caused by the negligence or by the willful misconduct of City or any of its officers, officials, employees, agents or volunteers. If WASCO COUNTY PLANNING DEPARTMENT should subcontract all or any portion of the services to be performed under this MOU, WASCO COUNTY PLANNING DEPARTMENT shall require each subcontractor to indemnify, hold harmless and defend City and each of its officers, officials, employees, agents and volunteers in accordance with the terms of this paragraph. This paragraph shall survive termination or expiration of this MOU. Throughout the life of this MOU, WASCO COUNTY PLANNING DEPARTMENT shall pay for and maintain in full force and effect all policies of insurance required hereunder. The following policies of insurance are required:
  - a. **COMMERCIAL GENERAL LIABILITY** insurance which shall include insurance

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for "bodily injury", "property damage" and contractual liability (including, without limitation, indemnity obligations under the Agreement) with limits of liability of not less than \$1,000,000 per occurrence and \$1,000,000 general aggregate for bodily injury and property damage.

- b. WORKERS' COMPENSATION insurance as required by law.
  - c. WASCO COUNTY PLANNING DEPARTMENT shall be responsible for payment of any deductibles contained in any insurance policies required hereunder.
  - d. In the event any policies are due to expire during the term of this Agreement, WASCO COUNTY PLANNING DEPARTMENT shall provide a new certificate evidencing renewal of such policy not less than 15 calendar days prior to the expiration date of the expiring policy(ies). Upon issuance by the insurer, broker, or agent of a notice of cancellation in coverage, WASCO COUNTY PLANNING DEPARTMENT shall file with City a new certificate and all applicable endorsements for such policy(ies).
  - e. If at any time during the life of the MOU or any extension, WASCO COUNTY PLANNING DEPARTMENT fails to maintain the required insurance in full force and effect, all work under this MOU shall be discontinued immediately until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City. Any failure to maintain the required insurance shall be sufficient cause for City to terminate this MOU.
  - f. If WASCO COUNTY PLANNING DEPARTMENT should subcontract all or any portion of the services to be performed under this Agreement, WASCO COUNTY PLANNING DEPARTMENT shall require each subcontractor to provide insurance protection in favor of City, its officers, officials, employees, agents and volunteers in accordance with the terms of each of the preceding paragraphs, except that the subcontractors' certificates and endorsements shall be on file with WASCO COUNTY PLANNING DEPARTMENT and City prior to the commencement of any work by the subcontractor.
10. ATTORNEYS FEES: If a party is required to commence any proceeding or legal action to enforce or interpret any term, covenant or condition of this MOU, the prevailing party in such proceeding or action shall be entitled to recover from the other party its/their reasonable attorneys fees and legal expenses.
11. PRECEDENCE OF DOCUMENTS: In the event of any conflict between the body of this MOU and any exhibit/attachment hereto, the terms and conditions of the body of this

**Page 5 of 7 — MEMORANDUM OF UNDERSTANDING REGARDING LICENSED (NO CHARGE) USE OF FACILITY AT MAUPIN CIVIC CENTER BY WASCO COUNTY PLANNING DEPARTMENT – WASCO COUNTY, OREGON PLANNING PERSONNEL**

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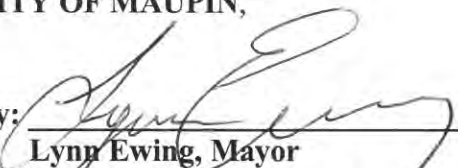
MOU shall control and take precedence over terms and conditions expressed within the exhibit/attachment. Furthermore, any terms or conditions contained within any exhibit/attachment hereto which purport to modify the allocation of responsibility or liability between the parties, provided for within the body of this MOU, shall be null and void.

12. NOTICES: Any notice required or intended to be given to a party under the terms of this MOU shall be in writing and shall be deemed to be duly given if delivered personally or deposited into the United States mail, return receipt requested, with postage prepaid, addressed to the party at that party's last known address.
13. BINDING EFFECT AND ASSIGNMENT: Once this MOU is signed by all the parties, it shall be binding upon, and shall inure to the benefit of, the parties, and each party's respective heirs, successors, assigns, transferees, agents, servants, employees and representatives, provided however that WASCO COUNTY PLANNING DEPARTMENT shall not assign this lease to any other entity without City's prior written consent. Consent to one assignment shall not be a waiver of the right to withhold consent to other assignments.
14. WAIVER: The waiver by any party of a breach by the other of any provision of this MOU shall not constitute a continuing waiver or a waiver of any subsequent breach of either the same or a different provision of this MOU. No provisions of this MOU may be waived unless in writing and approved by and signed by all parties to this MOU. Waiver of any one provision herein shall not be deemed to be a waiver of any other provision herein.
15. GOVERNING LAW AND VENUE: This MOU shall be governed by, and construed and enforced in accordance with, the laws of the State of Oregon. Venue for purposes of the filing of any action regarding the enforcement or interpretation of this MOU and any rights and duties hereunder shall be Wasco County, Oregon.
16. HEADINGS: The section headings in this MOU are for convenience and reference only and shall not be construed or held in any way to explain, modify or add to the interpretation or meaning of the provisions of this MOU.
17. SEVERABILITY: The provisions of this MOU are severable. The invalidity or unenforceability of any one provision in this MOU shall not affect the other provisions.
18. INTERPRETATION: The parties acknowledge that this MOU in its final form is the result of the combined efforts of the parties and that, should any provision of this MOU be found to be ambiguous in any way, such ambiguity shall not be resolved by construing this MOU in favor or against any party, but rather by construing the terms in accordance with their generally accepted meaning.

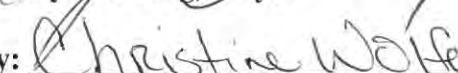
19. ENTIRE MOU: It is mutually understood and agreed that the foregoing constitutes the entire MOU between the parties. Any modifications or amendments to this MOU must be in writing signed by an authorized agent of each party.

IN WITNESS THEREOF, the parties have caused their authorized agents to execute this MOU:

**CITY OF MAUPIN,**

By:   
Lynn Ewing, Mayor

2/28/22  
Date

By:   
Christine Wolfe, City Recorder

2/28/22  
Date

**WASCO COUNTY, OREGON, ACTING BY AND THROUGH THE WASCO COUNTY  
PLANNING DEPARTMENT – WASCO COUNTY, OREGON PLANNING  
PERSONNEL,**

BY: \_\_\_\_\_  
SCOTT HEGE, County Commissioner

\_\_\_\_\_  
DATE

BY: \_\_\_\_\_  
STEVE KRAMER, County Commissioner

\_\_\_\_\_  
DATE

BY: \_\_\_\_\_  
KATHY SCHWARTZ, County Commissioner

\_\_\_\_\_  
DATE

BY: \_\_\_\_\_  
\_\_\_\_\_, Wasco County Planner

\_\_\_\_\_  
DATE

**Page 7 of 7 — MEMORANDUM OF UNDERSTANDING REGARDING LICENSED (NO  
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## **MOTION**

**SUBJECT: Facility Use MOU**

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I move to approve the Memorandum of Understanding regarding licensed (No Charge) use of facility at Maupin Civic Center by Wasco County Planning Department Personnel.



## AGENDA ITEM

### 2022 Wasco County Owned Land Sales

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[STAFF MEMO](#)

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[NOTICE OF SALE](#)

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[MOTION LANGUAGE](#)

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## MEMORANDUM

**SUBJECT: Wasco County Owned Land Sale**

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**TO: BOARD OF COUNTY COMMISSIONERS**

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**FROM: JILL AMERY**

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**DATE: 3/1/2022**

### **BACKGROUND INFORMATION:**

The Department of Assessment & Tax is proposing the sale of three tax-foreclosed properties at auction on May 24, 2022. The list of properties is attached for review. Additional descriptions of the properties are as follows:

**Account #17279**, located at 348 Little Lake Rd, Maupin, OR. It is a .12 acre bare lot. The property is located in Maupin within the Rivercrest Subdivision.

**Account #17280**, located at 417 Little Lake Rd, Maupin, OR. It is .12 acre bare lot. The property is located in Maupin within the Rivercrest Subdivision.

**Account #7311**, located at 6615 Reservoir Rd, The Dalles OR is a 0.29 acre parcel located off of Mill Creek Road at Reservoir Road in a rural setting with the sounds of the creek. The property has a manufactured structure on it that is a teardown.

## PUBLIC SALE OF TAX FORECLOSED REAL PROPERTY

Notice is hereby given that Wasco County intends to sell the tax foreclosed properties identified below through public sale on Tuesday, May 24, 2022, pursuant to an Order of the Board of Commissioners for Wasco County, Oregon, made and entered on March 16, 2022. The auction is to occur outside at 511 Washington Street, at or near the Courthouse parking lot area.

All property will be sold **AS IS, without warranty as to title, value, zoning, suitability for any purpose, environmental condition, wetland designation, easements, or any other condition and will be conveyed by quitclaim deed.** Further information on this sale can be found on the website: [http://www.co.wasco.or.us/departments/assessment\\_and\\_taxation/index.php](http://www.co.wasco.or.us/departments/assessment_and_taxation/index.php) or by calling (541) 506-2510.

### Property ID & Tax Lot

#17279 5S 14E 5BB 348	348 Little Lake Rd Maupin, OR 97037 .12 acre bare lot	2021 Mkt Value: \$27,840 Min. Bid: \$ 20,880
#17280 5S 14E 5BB 349	417 Little Lake Rd Maupin, OR 97037 .12 acre bare lot	2021 Mkt Value: \$27,840 Min. Bid: \$ 20,880
#7311 1N 12E 22CC 1200	6615 Reservoir Rd The Dalles, OR 97058 .29 acre w/ a Manufactured Structure in VERY poor condition	2021 Mkt Value: \$117,170 Min. Bid: \$48,650





## MOTION

**SUBJECT:** County-Owned Land Sale

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I move to approve the sale of Tax Account Properties 17279, 17280 and 7311 as outlined in the Wasco County Sale of Tax Foreclosed and Surplus Real Property Policy.



## AGENDA ITEM

### Wasco County Printer Fleet

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[STAFF MEMO](#)

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[SAMPLE LEASE](#)

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## INFORMATION SERVICES

511 Washington St., Ste. 101 • The Dalles, OR 97058  
p: [541] 506-2550 • f: [541] 506-2551 • [www.co.wasco.or.us](http://www.co.wasco.or.us)

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### Overview

Wasco County Information Systems is reviewing the existing multi-function printer fleet (large copier / scanner / faxing) machines that provide core printing, copying, and faxing services to departments. Each of these large machines work off an equipment lease that lasts 5 years. Within this lease, maintenance, customer support, and supplies are provided by the vendor. Historically, services have been provided by Ricoh; however, technical issues, customer support concerns, print costs, and machine capabilities have caused us to take a closer look at a competing vendor, SolutionsYes.

Additionally, as leases expire and departments are looking to upgrade their primary copy machines, requests for color and other functionalities are becoming more prevalent. Several departments have been using the copiers from SolutionsYes for a couple years for testing purposes, and based on discussions, IS has had with end users, more prefer to use the SolutionsYes machines versus the Ricoh's. Additionally, WC IS has received fewer complaints where the SolutionsYes machines have been installed. The SolutionsYes customer representative has also regularly stopped by the office to ensure all machines are operating as expected; whereas, limited customer service has been experienced by Ricoh and in some cases support has not resolved issues.

### Costs

Each vendor's machines cost very similarly in terms of hardware and capabilities. Pricing for this project has largely focused on copy costs. The costs for both companies are shown below:

- **Ricoh** (uses a flat per copy cost for color and black & white)
  - Black & White, Per Copy, \$0.005
  - Color, Per Copy, \$0.0275
- **SolutionsYes** (uses flat cost for black & white and a scale for color copy costs)
  - Black & White, Per Copy, \$0.0045
  - Spot Color, Per Copy, \$0.025
  - Business Color, Per Copy, \$0.035
  - Full Color, Per Copy, \$0.045

Ricoh uses flat rates, which means if a color print job is performed, each copy will cost one price, no matter how much color appears on the page. SolutionsYes uses a scaled approach to color where partial color prints are cheaper to perform than that of a page with more color. Essentially, this means printing letterhead with a color logo on Ricoh would cost 2.75 cents per page, while SolutionsYes may be as little as 2.5 cents per page (this adds up when printing thousands of copies monthly).



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Analysis shows costs are very comparable between the two vendors with no differences between hardware and negligible differences between copy costs. SolutionsYes has the potential to be cheaper or slightly more expensive, depending on usage (i.e., more B&W or more Color). IS was able to negotiate down average hardware costs between vendors to range between \$105 and \$145 based on machine functionality between departments. SolutionsYes and Ricoh matched each other's prices at around ~\$2100 monthly for all machines (~\$25,200 annually). Exhibit 1 provides a use case example of copy costs for a single department in a given month. The 6000 average monthly volume is a real volume experienced by a county department.

### Conclusion

In Summary, IS is looking to move forward in signing a 5-year lease agreement with SolutionsYes to upgrade our existing 16 multi-function printer fleet based on the following:

- Potential cost savings as outlined in the use case Exhibit
- End user feedback between Ricoh and SolutionsYes machines
- Reduction of technical issues experienced by the IS department

All costs are currently budgeted in the IS, Equipment - Copiers budget. This work represents a potentially small savings in total costs between hardware and copy jobs and is more about a quality-of-life improvement for departments in their printing capabilities and customer support from an IS and end user perspective.





## INFORMATION SERVICES

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**Exhibit 1: Breakdown of Cost Per Print Scenario in Department**

<b>Average Monthly Volume (AMV)</b>	6,067		
	<b>% of AMV</b>	<b>Cost</b>	<b>Total</b>
<b>Ricoh</b>			
B&W	73%	0.005	\$22.14
Color	27%	0.0275	\$45.05
<b>Ricoh Total:</b>			\$67.19
<b>SolutionsYes</b>	(%'s based on current installed machines and averages provided by SolutionsYes)		
B&W	73%	0.0045	\$19.93
Color			
Spot	20%	0.025	\$30.71
Business	4%	0.035	\$8.60
Graphic	3%	0.045	\$7.37
<b>SolutionsYes Total</b>			\$66.62
<b>5 Year Cost Difference</b>			
Ricoh	\$4,031.52		
<i>SolutionsYes</i>	\$3,996.94	lower	
	\$34.58		

# STATE AND LOCAL GOVERNMENT ADDENDUM

## AGREEMENT # 2782827

Addendum to Agreement # 2782827 and any future supplements/schedules thereto, between County of Wasco, as Customer ("Customer") and Solutions Yes, as Lessor. The words "you" and "your" refer to Customer. The words "we" and "us" refer to Lessor. In the event of any conflict between the terms and conditions of the Agreement and this Addendum, the terms and conditions of this Addendum shall control, and in the event of any conflict between the general provisions of this Addendum and any provision of this Addendum that expressly applies to you only if you are a political subdivision, county, city, or school district of specific state ("State-Specific Provision"), then the State Specific Provision shall control.

1. The parties wish to amend the above-referenced Agreement by adding the following language:

**REPRESENTATIONS AND WARRANTIES OF CUSTOMER:** You hereby represent and warrant to us that: (i) you have been duly authorized under the Constitution and laws of the applicable jurisdiction and by a resolution or other authority of your governing body to execute and deliver this Agreement and to carry out your obligations hereunder; (ii) all legal requirements have been met, and procedures have been followed, including public bidding, in order to ensure the enforceability of this Agreement; (iii) this Agreement is in compliance with all laws applicable to you, including any debt limitations or limitations on interest rates or finance charges; (iv) the Equipment will be used by you only for essential governmental or proprietary functions of you consistent with the scope of your authority, will not be used in a trade or business of any person or entity, by the federal government or for any personal, family or household use, and your need for the Equipment is not expected to diminish during the term of this Agreement; (v) you have funds available to pay Payments until the end of your current appropriation period, and you intend to request funds to make Payments in each appropriation period, from now until the end of the term of this Agreement; and (vi) your exact legal name is as set forth on page one of this Agreement.

**INITIAL TERM AND RENEWAL TERM(S):** The term of the Agreement consists of an initial term beginning on the date we pay Supplier and ending at the end of your fiscal year in which we pay Supplier, and a series of renewal terms, each co-extensive with your fiscal year. Except to the extent required by applicable law, if you do not exercise your right to terminate the Agreement under the Non-Appropriation or Renewal paragraph as of the end of any fiscal year, the Agreement will be deemed automatically renewed for the next succeeding renewal term.

An election by you to terminate the Agreement under the Non-Appropriation or Renewal paragraph is not a default.

Notwithstanding anything to the contrary set forth in the Agreement, if we cancel the Agreement following a default by you, we may require that you pay the unpaid balance of Payments under the Agreement through the end of your then-current fiscal year, but we may not require you to pay future Payments due beyond that fiscal year or the anticipated residual value of the Equipment. If we sell the Equipment following a default by you, you will not be responsible for a deficiency, except to the extent of our costs of repossession, moving, storage, repair and sale, and our attorneys' fees and costs.

**NON-APPROPRIATION OR RENEWAL:** If either sufficient funds are not appropriated to make Payments or any other amounts due under this Agreement or (to the extent required by applicable law) this Agreement is not renewed either automatically or by mutual ratification, this Agreement shall terminate and you shall not be obligated to make Payments under this Agreement beyond the then-current fiscal year for which funds have been appropriated. Upon such an event, you shall, no later than the end of the fiscal year for which Payments have been appropriated or the term of this Agreement has been renewed, deliver possession of the Equipment to us. If you fail to deliver possession of the Equipment to us, the termination shall nevertheless be effective but you shall be responsible, to the extent permitted by law and legally available funds, for the payment of damages in an amount equal to the portion of Payments thereafter coming due that is attributable to the number of days after the termination during which you fail to deliver possession and for any other loss suffered by us as a result of your failure to deliver possession as required. You shall notify us in writing within seven days after (i) your failure to appropriate funds sufficient for the payment of the Payments or (ii) to the extent required by applicable law, (a) this Agreement is not renewed or (b) this Agreement is renewed by you (in which event this Agreement shall be mutually ratified and renewed), provided that your failure to give any such notice under clause (i) or (ii) of this sentence shall not operate to extend this Agreement or result in any liability to you.

**SUPPLEMENTS; SEPARATE FINANCINGS:** To the extent applicable, in the event that the parties hereafter mutually agree to execute and deliver any supplement or schedule ("Supplement") under the above-referenced Agreement, such Supplement, as it incorporates the terms and conditions of the Agreement, shall be a separate financing distinct from the Agreement or other Supplements thereto. Without limiting the foregoing, upon the occurrence of an event of default or a non-appropriation event with respect to the Agreement or a Supplement (each, a separate "Contract"), as applicable,

we shall have the rights and remedies specified in the Agreement with respect to the Equipment financed and the Payments payable under such Contract, and we shall have no rights or remedies with respect to Equipment financed or Payments payable under any other Contract unless an event of default or non-appropriation event has also occurred under such other Contract.

2. The parties wish to amend the above-referenced Agreement by restating certain language as follows:

Any provision in the Agreement stating that you shall indemnify and hold us harmless is hereby amended and restated as follows: "You shall not be required to indemnify or hold us harmless against liabilities arising from this Agreement. However, as between you and us, and to the extent permitted by law and legally available funds, you are responsible for and shall bear the risk of loss for, shall pay directly, and shall defend against any and all claims, liabilities, proceedings, actions, expenses, damages or losses arising under or related to the Equipment, including, but not limited to, the possession, ownership, lease, use or operation thereof, except that you shall not bear the risk of loss of, nor pay for, any claims, liabilities, proceedings, actions, expenses, damages or losses that arise directly from events occurring after you have surrendered possession of the Equipment in accordance with the terms of this Agreement to us or that arise directly from our gross negligence or willful misconduct."

Any provision in the Agreement stating that the Agreement is governed by a particular state's laws and you consent to such jurisdiction and venue is hereby amended and restated as follows: "This Agreement will be governed by and construed in accordance with the laws of the state where you are located. You consent to jurisdiction and venue of any state or federal court in such state and waive the defense of inconvenient forum."

Any provision in the Agreement stating this Agreement supersedes any invoice and/or purchase order is hereby amended and restated as follows: "You agree that the terms and conditions contained in this Agreement, which, with the acceptance certification, is the entire agreement between you and us regarding the Equipment and which supersedes any purchase order, invoice, request for proposal, response or other related document."

Any provision in the Agreement stating that this Agreement shall automatically renew unless the Equipment is purchased, returned or a notice requirement is satisfied is hereby amended and restated as follows: "Unless the purchase option is \$1.00 or \$101.00, you agree to send us written notice at least 30 days before the end of the final renewal term that you want to purchase or return the Equipment, and you agree to so purchase or return the Equipment not later than the end of the final renewal term. If you fail to so purchase or return the Equipment at or before the end of the final renewal term, you shall be a holdover tenant with respect to this Agreement and the Equipment, and this Agreement shall renew on a month-to-month basis under the same terms hereof until the Equipment has been purchased or returned."

Any provision in the Agreement stating that we may assign this Agreement is hereby amended and restated as follows: "We may sell, assign, or transfer this Agreement without notice to or consent from you, and you waive any right you may have to such notice or consent."

Any provision in the Agreement stating that you grant us a security interest in the Equipment to secure all amounts owed to us under any agreement is hereby amended and restated as follows: "To the extent permitted by law, you grant us a security interest in the Equipment to secure all amounts you owe us under this Agreement and any supplements hereto. You authorize and ratify our filing of any financing statement(s) and the naming of us on any vehicle title(s) to show our interest."

Any provision in the Agreement stating that a default by you under any agreement with our affiliates or other lenders shall be an event of default under the Agreement is hereby amended and restated as follows: "You will be in default if: (i) you do not pay any Payment or other sum due to us under this Agreement when due or you fail to perform in accordance with the covenants, terms and conditions of this Agreement; (ii) you make or have made any false statement or misrepresentation to us; or (iii) you dissolve, liquidate, terminate your existence or are in bankruptcy."

Any provision in the Agreement stating that you shall pay our attorneys' fees is hereby amended and restated as follows: "In the event of any dispute or enforcement of rights

NOTE: CAPITALIZED TERMS IN THIS DOCUMENT ARE DEFINED AS IN THE AGREEMENT, UNLESS SPECIFICALLY STATED OTHERWISE.

under this Agreement or any related agreement, you agree to pay, to the extent permitted by law and to the extent of legally available funds, our reasonable attorneys' fees (including any incurred before or at trial, on appeal or in any other proceeding), actual court costs and any other collection costs, including any collection agency fee."

Any provision in the Agreement requiring you to pay amounts due under the Agreement upon the occurrence of a default, failure to appropriate funds or failure to renew the Agreement is hereby amended to limit such requirement to the extent permitted by law and legally available funds.

3. If your end-of-term option is the purchase of all Equipment for \$1.00 or \$101.00, the following applies: Unless otherwise required by law, upon your acceptance of the Equipment, title to the Equipment shall be in your name, subject to our interest under this Agreement; provided, however, that if you are a political subdivision of any of the States of Colorado, Georgia, Louisiana, Minnesota, Ohio or Oklahoma, and if your end-of-term option is the purchase of all Equipment for \$1.00 or \$101.00, title to the Equipment shall be in our name, subject to your interest under the Agreement.

4. With respect to any **"Financed Items,"** the following provisions shall be applicable to such Financed Items:

This Addendum concerns the granting to you of certain software and/or software license(s) ("Licensed Software"), the purchase by you of certain software components, including but not limited to, software maintenance and/or support ("Products") and/or the purchase by you of certain implementation, integration, training, technical consulting and/or professional services in connection with software ("Services") (collectively, the "Financed Items") from software licensor(s) and/or supplier(s) (collectively, the "Supplier"), all as further described in the agreement(s) between you and Supplier (collectively, the "Product Agreement"). For essential governmental purposes only, you have requested and we have agreed that instead of you paying the fees pursuant to the Product Agreement to Supplier for the Financed Items, we will satisfy your obligation to pay such fees to Supplier, and in consideration thereof, you shall repay the sums advanced by us to Supplier by promptly making certain installment payments to us, which are included in the Payments set forth in the Agreement.

To the extent permitted by law, you grant us a security interest in the license(s), including without limitation, all of your rights in the Licensed Software granted thereunder, the Products, all rights to payment under the Product Agreement, the Financed Items, and all proceeds of the foregoing to secure all amounts you owe us under this Agreement. You authorize and ratify our filing of any financing statement(s) to show our interest.

Ownership of any Licensed Software shall remain with Supplier thereof. All Financed Items shall be provided by a Supplier unrelated to us, and your rights with respect to such Financed Items shall be governed by the Product Agreement between you and Supplier, which shall not be affected by this Agreement. IN NO EVENT SHALL WE HAVE ANY OBLIGATION TO PROVIDE ANY FINANCED ITEMS, AND ANY FAILURE OF SUPPLIER TO PROVIDE ANY FINANCED ITEMS SHALL NOT EXCUSE YOUR OBLIGATIONS TO US IN ANY WAY. YOU HAVE SELECTED SUPPLIER AND THE FINANCED ITEMS BASED UPON YOUR OWN JUDGMENT. WE DO NOT TAKE RESPONSIBILITY FOR THE INSTALLATION OR PERFORMANCE OF THE FINANCED ITEMS. SUPPLIER IS NOT AN AGENT OF OURS AND WE ARE NOT AN AGENT OF SUPPLIER, AND NOTHING SUPPLIER STATES OR DOES CAN AFFECT YOUR OBLIGATIONS HEREUNDER. YOU WILL MAKE ALL PAYMENTS UNDER THIS AGREEMENT REGARDLESS OF ANY CLAIM OR COMPLAINT AGAINST ANY SUPPLIER, LICENSOR OR MANUFACTURER, AND ANY FAILURE OF A SERVICE PROVIDER TO PROVIDE SERVICES WILL NOT EXCUSE YOUR OBLIGATIONS TO US UNDER THIS AGREEMENT. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE FINANCED ITEMS COVERED BY THE PRODUCT AGREEMENT AND TAKE ABSOLUTELY NO RESPONSIBILITY FOR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AS TO ANY PATENT, TRADEMARK OR COPYRIGHT INFRINGEMENT, CONDITION, QUALITY, ADEQUACY, TITLE, DATA ACCURACY, SYSTEM INTEGRATION, FUNCTION, DEFECTS OR ANY OTHER ISSUE IN REGARD TO THE FINANCED ITEMS. YOU HEREBY WAIVE ANY CLAIM (INCLUDING ANY CLAIM BASED ON STRICT LIABILITY OR ABSOLUTE LIABILITY IN TORT) THAT YOU MAY HAVE AGAINST US FOR ANY LOSS, DAMAGE (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF DATA OR ANY OTHER DAMAGES) OR EXPENSE CAUSED BY THE FINANCED ITEMS COVERED BY THE PRODUCT AGREEMENT OR A TERMINATION OF THE FINANCED ITEMS PURSUANT TO AN EVENT OF DEFAULT, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE, LOSS, EXPENSE OR COST.

The following shall be additional events of default under the Agreement: (i) you fail to perform in accordance with the covenants, terms and conditions of the Product Agreement, or (ii) the Product Agreement is terminated, suspended, materially restricted or limited.

The following shall be additional remedies we have for your default under the Agreement: We shall have the right to: (a) cause the termination of the Financed Items and you irrevocably consent to such termination of the Financed Items by Supplier; and (b) require you to immediately stop using the Financed Items (regardless of whether you are

in default under the Product Agreement) and you shall, at our option, either deliver to us a certification executed by a duly authorized officer certifying that you have ceased use of the Financed Items or deliver the Financed Items to a location designated by us. In the event you are entitled to transfer the right to use the Financed Items to any third party, you hereby agree to transfer any such right to use the Financed Items to any third party selected by us and acknowledge that you shall have no right to fees payable by any third party in connection with such transfer. However, we shall not be required to mitigate our damages caused by a default by transferring any Financed Items to a third party.

5. If you are a political subdivision of the State of Arizona, the following applies: We understand that you may cancel the Agreement within three years after the start date of the Agreement if any person significantly involved in negotiating, drafting, securing or obtaining the Agreement for or on your behalf becomes, during the term of the Agreement, our employee or agent or becomes, during the term of the Agreement, a consultant to us with respect to the subject matter of the Agreement.

6. If you are a school district in the State of California and your end-of-term option is the purchase of all Equipment for \$1.00 or \$101.00, the following applies: You will be deemed to have acquired title to the Equipment from the Supplier on the date we pay for it, and you hereby sell, transfer and convey the Equipment to us on that date. You represent to us that the resolution of your governing body authorizing the execution and delivery of the Agreement contained a finding that the Equipment is a major item of equipment or data processing equipment and that the sale and leaseback of the Equipment was the most economical means of providing the Equipment to you.

7. If you are a political subdivision of the State of Florida, the following applies: We agree that there is no intention to create under the Agreement a right in us to dispossess you involuntarily of your interests in or the right of use of the Equipment. We hereby irrevocably waive any right to specific performance of your covenant to return possession of the Equipment to us if you default or exercise your right not to appropriate funds to make Payments. We acknowledge that Payments may not be payable from ad valorem taxes, and in no event may we compel the use of ad valorem taxing power for you to make Payments.

If the end-of-term option for the Agreement is the purchase of all Equipment for \$1.00 or \$101.00, you agree that you will give all notices and file all reports with the State Division of Finance as may be required in connection with the Agreement by Florida Statutes Annotated Section 218.38 and the rules adopted thereunder.

8. If you are a county of the State of Florida and your end-of term option is the purchase of all Equipment for \$1.00 or \$101.00, the following applies: If the term of the Agreement exceeds five (5) years, you represent and covenant to us that Payments will be paid from sources other than ad valorem taxes, and that the Agreement has been approved by our Board of County Commissioners.

9. If you are a political subdivision in the State of Georgia, the following applies: You represent to us that your acquisition or lease (or other financing) of the Equipment has not been the subject of a referendum or a proposed issuance of bonded debt which failed to receive the approval of your voters within the four calendar years immediately preceding the start date of the Agreement.

10. If you are a school district in the State of Georgia, the following applies: The term of the Agreement will consist of an original term, which will commence on the date we pay the Supplier and will continue through the end of the then-current calendar year, and a series of renewal terms, each having a duration of one calendar year. You will have the right to terminate the Agreement pursuant to the Non-Appropriation or Renewal paragraph at the end of each calendar year, and at the end of each fiscal year, if sufficient funds are not appropriated for such fiscal year or calendar year to make Payments. If you do not exercise your right to terminate this Agreement pursuant to the Non-Appropriation or Renewal paragraph at the end of any calendar year or fiscal year, the Agreement will be deemed to have been automatically renewed for the next calendar year or fiscal year, as applicable.

11. If you are a political subdivision of the State of Idaho, the following applies: If you are required under the Agreement to make any payments to us (other than a Payment) during any fiscal year during the term of the Agreement in the event of (a) a late payment charge for Payments, (b) an advance by us which you are required to repay, (c) an indemnity payment you owe to us, or (d) any other additional payment obligation you owe to us under the Agreement (collectively, the "Additional Payments"), the Additional Payments shall be payable solely from legally appropriated funds available for such fiscal year ("Available Funds"). To the extent Available Funds are not available for such fiscal year for payment of the Additional Payments, then the Additional Payments shall be subject to appropriation for the following fiscal year, or the fiscal year following the final fiscal year of the term of the Agreement, if the Additional Payment was incurred in the final fiscal year of the term of this Agreement. Failure to so appropriate the Additional Payments for the following fiscal year in each such case shall be a non-appropriation described in the Non-Appropriation or Renewal paragraph of the Agreement, providing the remedies to us for such an event in said paragraph. You will not be entitled to prepay the Agreement or to exercise your option to purchase the

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Equipment at the end of the term of the Agreement so long as any Additional Payments are outstanding and unpaid.

12. If you are a political subdivision of the State of Kansas, the following applies: We agree that you are obligated only to pay Payments under the Agreement as may lawfully be made from funds budgeted and appropriated for that purpose during the then-current fiscal year, or funds made available from any lawfully operated revenue producing source. If you are a school district, you represent and warrant to us that your Board of Education, by resolution approved by a majority of members of the Board of Education, has elected to omit the mandatory contract provisions prescribed by the Kansas Department of Administration in form DA-146a, as amended, from the Agreement, and such provisions are hereby so omitted; provided, however, that this election does not authorize the omission from the Agreement of the provisions of Kansas Statutes Annotated ("K.S.A.") § 72-1146 (related to indemnification and hold harmless provisions) or § 72-1147 (applicable law shall be Kansas law and applicable courts shall be Kansas courts), as amended. To the extent that the terms of the Agreement is in conflict with the terms of K.S.A. § 72-1146 or K.S.A. § 72-1147, the terms of K.S.A. § 72-1146 and K.S.A. § 72-1147 shall prevail.

13. If you are a political subdivision of the State of Kentucky and your end-of-term option is the purchase of all Equipment for \$1.00 or \$101.00, the following applies: You represent to us that you have in connection with the Agreement given all notices to and obtained all consents from the state local debt officer (or in the case of a school district, the chief state school officer) required by applicable law.

14. If you are a school district of the State of Missouri and your end-of-term option is the purchase of all Equipment for \$1.00 or \$101.00, the following applies: You represent to us that Payments under the Agreement will be paid from the capital outlay fund, and that sufficient funds necessary to make Payments required under the Agreement have been appropriated to the capital outlay fund for the fiscal year that includes the commencement date of the Agreement.

15. If you are a political subdivision of the State of Nevada, the following applies: You represent to us that, to the extent required by applicable law (a) the Agreement has been approved by the Executive Director of the Nevada Tax Commission, (b) the Agreement was approved by resolution of your governing body, and such resolution was approved by two-thirds of the members of such governing body, and (c) the resolution approving the Agreement was in form that complies with Nevada Revised Statutes Section 350.087, including the required findings of fact, and was published in accordance with the requirements of Section 350.087. To the extent required by applicable law, you agree to update your plan for capital improvements in accordance with the requirements of Nevada Revised Statutes Section 350.091.

16. If you are a school district of the State of New Jersey, the following applies: You represent to us that (a) you have complied with all rules and regulations of the New Jersey State Board of Education applicable to the leasing of the Financed Items under the Agreement, (b) you have complied with and will continue to comply with all rules and regulations related to New Jersey Statute 18A:18A-4.6, (c) you are not entering into the Agreement to finance maintenance, guarantees, or verification of guarantees of energy conservation measures, and (d) you will not except out the Agreement from any budget or tax levy limitation otherwise provided by law.

17. If you are a political subdivision of the State of New York, the following applies: The Agreement shall be deemed executory only to the extent of monies

appropriated and available for the purpose of the Agreement, and no liability on account hereof shall be incurred by you beyond the amount of such monies. The Agreement is not your general obligation. Neither your full faith and credit nor your taxing power are pledged to the payment of any amount due or to become due under the Agreement. It is understood that neither the Agreement nor any representation by any public employee or officer created any legal or moral obligation to appropriate or make monies available for the purposes of the Agreement.

18. If you are a political subdivision of the State of Oklahoma, the following applies: The Agreement will terminate at the end of each fiscal year unless you and we ratify the renewal thereof, and any such termination will be treated as a non-appropriation under the Non-Appropriation or Renewal paragraph of the Agreement.

19. If you are a political subdivision of the Commonwealth of Pennsylvania, the following applies: You represent to us that you have complied with the Pennsylvania Local Government Unit Debt Act, Pa. Cons. Stat. tit. 53, Sections 8001 to 8049 (including filing of debt statement and advertisement of proposed financing) in connection with the Agreement.

20. If you are a political subdivision of the State of South Dakota, the following applies: You represent to us that the Agreement has been approved by the requisite number of members of your governing body. If you are a school district, you represent and covenant to us that all Payments under the Agreement will be paid from your capital outlay fund and that you have not received any petitions from your voters requesting voter approval of the Agreement, and the time for filing such petitions has expired.

21. If you are a school district in the State of West Virginia, the following applies: Any action, suit or proceeding arising out of or relating to the Agreement shall be tried in the West Virginia Court of Claims, and we hereby consent to the jurisdiction and venue in such court. You will have no obligation to pay any taxes associated with the use, ownership or acquisition of the Equipment unless the use, ownership or acquisition of the Equipment is determined by final non-appealable judicial order to be subject to taxation, in which event you shall, to the extent permitted by applicable law, pay such taxes. If you receive notice from any taxing authority alleging that the Equipment is subject to property taxes, you will (a) give prompt written notice to us, (b) contest such allegations by proper proceedings, and (c) to the extent permitted by applicable law, and without prejudice to the position that the Equipment should be exempt from all property taxes, establish reserves for the payment of such taxes as required by general accepted accounting principles. We understand that you do not waive the benefit of any statute of limitations governing the time in which we may bring suit against you under the Agreement. You will not be obligated to pay any attorneys' fees incurred by us in connection with any suit, action, proceeding or other exercise of remedies under the Agreement absent a final, non-appealable order of a court of competent jurisdiction awarding attorneys' fees to us. We agree not to repossess the Equipment following a default or non-appropriation under the Agreement without giving seven (7) days prior written notice to you. Following the repossession or return of the Equipment as a result of a default or non-appropriation, you will have the right to acquire or lease similar property without restriction. We understand that the Agreement is a public record under the West Virginia Freedom of Information Act.

By signing this Addendum, Customer acknowledges the applicable changes noted above are incorporated by reference into the Agreement. In all other respects, the terms and conditions of the Agreement remain in full force and effect and remain binding on Customer. Customer has caused this Addendum to be executed by its duly-authorized officer as of the date below.

<hr/>	
Lessor	
<hr/>	
Signature	
<hr/>	
Title	Date

<hr/>	
Customer	
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X	
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Signature	
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Title	Date



## Terms & Conditions

**EQUIPMENT SUPPORT AGREEMENT ("ESA"):** Solutions YES, LLC agrees to perform maintenance and make inspections, adjustments and repairs, and replace defective parts without additional charge to Customer, provided such calls are made during normal business hours. Solutions YES, LLC will furnish supplies, to be delivered at acceptable intervals and quantities in accordance with manufacturer's suggested yields. This ESA does not include paper, labels, staples, or transparencies. Solutions YES, LLC agrees to train customer in the use of the equipment at reasonable times. Title to all supplies furnished in connection with the ESA, including consumable parts such as drums, remains in Solutions YES, LLC until said supplies are consumed to the extent that they may not be further utilized in the copy making process. Toner consumption shall be within 10% of the manufacturer's suggested yields. A charge for toner consumption exceeding 10% of manufacturer's suggested yields will be charged at current retail price. In the event of customer default or cancellation, supplies and consumable parts shall be returned to Solutions YES, LLC on demand. Beyond the initial set-up and installation, any network or connectivity related service call, i.e. unable to print/scan or requests for additional desktops set up to print or scan, are considered chargeable calls at the current Solutions YES, LLC networking labor rates, unless it is determined to be a hardware related issue.

**EXCESSIVE DAMAGE:** Damage to the equipment or its parts arising out of misuse, abuse, negligence or causes beyond the control of Solutions YES, LLC are not covered. Solutions YES, LLC may terminate this agreement in the event the equipment is modified, damaged, altered or serviced by personnel other than those employed by Solutions YES, LLC, or if parts, accessories, components or supplies not authorized by Solutions YES, LLC are fitted to or used in the equipment.

**EXCESS COPIES:** Under the "ESA", the "Base Charge" is calculated on anticipated customer usage as stated in "Image Allowance" on the face of the Equipment Support Agreement. Image allowance copies are accumulated from the initial meter read. Should the allowance be exceeded prior to the expiration of any applicable billing cycle, customer agrees to pay the current excess copy charge for each copy in excess of the stated allowance. Invoices for excess copies will be tendered according to the "Overage Billing Cycle" and/or at the end of the initial term and shall be due and payable within 15 days. For agreements billed annually, upon exceeding the image allowance, customer may request that a new agreement be executed with the initial date of the term to coincide with the date that original image allowance is exceeded. Customer's option in this regard shall be void if all previously tendered invoices have not been paid.

**BUSINESS HOURS FOR SERVICE:** Support services shall be provided hereunder only during Solutions YES, LLC's normal business hours, which shall consist of 8:00a.m. to 5:00p.m., Monday through Friday, exclusive of Solutions YES' holidays and are subject to change by Solution YES. At customer's request, Solutions YES, LLC may render support service outside of normal business hours, subject to availability of personnel, at established Solutions YES, LLC rates then in effect.

**AVAILABILITY OF SUPPLIES:** Customer support engineers do not carry or deliver consumable supplies (toner, etc.). It is customer's responsibility to have the necessary supplies available for customer support engineer's use.

**RECONDITIONING:** When a shop reconditioning is necessary, or the manufacturer's life expectancy of the equipment has been exceeded, and normal repairs and parts replacement cannot keep a unit in satisfactory operating condition, Solutions YES, LLC may refuse to renew this agreement, and/or refuse to continue providing support under this agreement, furnishing support only on a Per Call basis at Solutions YES, LLC's current rates.

**CANCELLATION OF SERVICE:** Cancellation at the conclusion of the initial term or any renewal term may be accomplished by either party by providing written notice of such cancellation no later than thirty (30) days prior to the expiration of the term then in effect. In addition, Solutions YES, LLC may cancel this agreement, in whole or in part, at any time upon seven (7) days written notice, or without notice in the thirty (30) days prior to renewal date. If customer at any time is in breach of any term or condition contained herein, Solutions YES, LLC may apply any refund due to the satisfaction of any past due invoices for any other products or services. Should this agreement be cancelled by customer, Solutions YES, LLC will not issue any refund.

**LATE CHARGES; INTEREST; SUSPENSION OF SERVICE:** Customer agrees to pay all invoices tendered for services performed and/or parts installed on equipment when services are performed, according to invoice payment terms. If any payment due to Solutions YES, LLC hereunder is more than 10 days past due, customer agrees to pay a late charge equal to ten (10%), to cover Solutions YES, LLC's administrative costs occasioned by said late payment. Customer agrees that amounts not timely paid shall bear interest at the rate of 1.5% monthly (18% per annum) or at the maximum rate allowed by law, whichever is less. Without waiver of any other rights hereunder, Solutions YES, LLC shall have the right to discontinue service in the event customer becomes delinquent in payment.

**DAMAGES:** In the event Customer is in default of an obligation under this agreement, and remains in default for seven (7) days after notice thereof, Solutions YES, LLC may cancel this agreement and collect damages according to the following formula. In such an event, Customer promises to pay Solutions YES, LLC the following amounts as liquidated damages (and not as a penalty): (a) During the first six months of the initial term, six times the average monthly charge; (b) At any time thereafter, amount owed at three times the monthly charge.

**RENEWAL:** Unless otherwise terminated as set forth herein, this agreement shall be automatically renewed upon expiration of the initial term for successive renewal terms, at Solutions YES, LLC maintenance rates in effect at the time of application renewal. Annual increases may be incurred during the term of the contract.

**INSTALLATION:** Certain equipment must be installed according to specific requirements in terms of space, electric, and environmental conditions. Installation requirements are defined in the equipment operator manual. Customer shall ensure that the equipment is placed in an area that conforms to these requirements.

**DISCLAIMER:** Solutions YES, LLC expressly disclaims any duty as insurer of the equipment and customer shall pay for all costs of repair and parts or replacement of the equipment made necessary by, but not limited to, loss or damage through accident, abuse, misuse, theft, fire, water, casualty, natural forces or any other negligent act of customer or customer's agent and/or service performed by non-Solutions YES, LLC personnel. Solutions YES, LLC will not assume any liability for any conditions arising from electrical circuitry external to the equipment and equipment line cord, nor is any external electrical work covered under this agreement.

**CUSTOMER CHANGES:** Any Customer changes, alterations, or attachments may require a change in the charges set forth herein. Solutions YES, LLC also reserves the right to terminate this agreement in the event it has been determined such changes, alterations, or attachments make it impractical for Solutions YES, LLC to continue to service the equipment.

**ATTORNEY'S FEES; COSTS:** In the event customer defaults under this Equipment Support Agreement, or if any other dispute arises hereunder requiring Solutions YES, LLC to refer said matter to an attorney and/or to initiate, or defend, any court action in any way related to this agreement, customer agrees to pay Solutions YES, LLC reasonable attorney's fees and all costs resulting from such actions.

**WAIVER OF JURY TRIAL:** Customer hereby waives trial by jury as to any and all issues out of, or in any way related to this ESA.

**NO WAIVER:** Customer acknowledges and agrees that any delay or failure to enforce the rights hereunder by Solutions YES, LLC, does not constitute a waiver of such rights by Solutions YES, LLC or in any way prevent Solutions YES, LLC from enforcing such rights, or any other rights hereunder, at a later time.

**ENTIRE AGREEMENT:** This ESA constitutes the entire agreement between Customer and Solutions YES, LLC related to the service and maintenance of the equipment, and any and all prior negotiations, agreements (oral or written), or understandings are hereby superseded.

**NO MODIFICATIONS OF TERMS:** Customer expressly acknowledges and agrees that these terms and conditions may not be varied, modified, or changed except by written agreement executed by a corporate officer of Solutions YES, LLC. No sales or service personnel, including but not limited to managers or supervisors, has any authority to override this provision.

**NOTICE:** Any notice or other communication given or required in connection with this Equipment Support Agreement, shall be in writing, and shall be given by certified or registered mail, postage prepaid, return receipt requested. If sent to Solutions YES, LLC said notice shall be sent to Solutions YES, LLC, Attn: CFO, 8300 SW Hunziker St., Portland, OR 97223, or such other address Solutions YES, LLC may hereafter designate in writing. If to Customer, the notice shall be sent to Customer at the address specified in the reverse side hereof, or such address which may be specified, by customer, in writing to Solutions YES, LLC.

Customer Initials



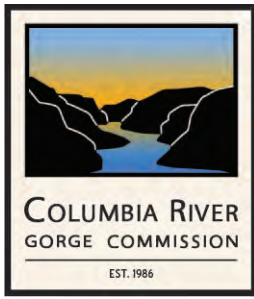
## AGENDA ITEM

### Gorge Commission Funding Update

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[MEMO](#)

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March 16, 2022

Wasco County Board of Commissioners  
511 Washington St, Ste 302  
The Dalles, OR 97058

Dear Chair Schwartz and Commissioners Hege and Kramer,

Thank you for the invitation to provide an update from the Gorge Commission. I am joined today by Gorge Commission Chair, Robin Grimwade. Chair Grimwade is the Clark County appointee to the Gorge Commission after serving on the Clark County Planning Commission for several years. Joanna Kaiserman, Senior Land Use Planner, is also joining us since she has been the lead for working with Wasco County on the NSA land use ordinance revisions. I have two updates for you today:

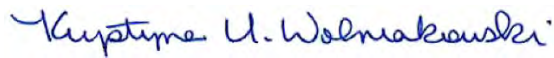
**Gorge Commission approval of the NSA Land Use Ordinance:** On March 8, 2022, the Gorge Commission held a hearing to review the revised ordinance for Wasco County incorporating the revisions needed to be consistent with the new Management Plan. Joanna prepared the staff report for the Commission that summarized her analysis and consistency determination. The Gorge Commission approved it unanimously. The Gorge Commission values Wasco County as a full partner and participant in the National Scenic Area and believes your implementation of your National Scenic Area ordinance remains the most efficient and effective manner of land use planning in the NSA portion of Wasco County for your staff and landowners. We recognize and appreciate the amount of effort and time it took for your Planning Director, Kelly Howsley-Glover, former Planning Director, Angie Brewer, and the small planning staff, to complete the revised ordinance and meet the 270-day deadline established by the National Scenic Area Act. We thank the county planning staff for their coordination and thorough work on this ordinance update. We have submitted the ordinance to the Secretary of Agriculture for concurrence. The Secretary has 90 days to review and concur. The concurrence letter should be issued no later than mid-June.

**Climate Change Action Plan:** The revised Management Plan included a new Climate Change chapter and specifically directed staff to prepare a Climate Change Action Plan (CCAP) that outlines adaptation and mitigation strategies. For the last year, staff worked with a technical review committee representing agencies, tribes and other experts to prepare the first draft. At the March 8, 2022 meeting, the Gorge Commission reviewed and discussed the first draft and provided some additional input. The Gorge Commission received public comment from Deborah Ferrer, Wasco County resident, that the city of The Dalles and Wasco County have recently agreed to form a joint Climate Action Task Force and we look forward to learning more about progress made and if we

can be of assistance. The Commission will release the next draft CCAP by early April for a 60-day comment period. The Commission's lead staff, Jessica Olson, Senior Natural Resources Planner, will host four Open Houses with "Question and Answer" sessions in April and May to engage the public and gather more comments that will inform the final draft to be presented to the Commission in mid-summer 2022. This effort will be coordinated with the NSA counties, the two states, and the four Columbia River Treaty Tribes in partnership with the Forest Service in the National Scenic Area. In addition, our Vital Sign Indicators long-term monitoring initiative will be integrated into the CCAP.

The Gorge Commission appreciates the opportunity to provide this brief update and looks forward to your questions and comments.

Sincerely,



Krystyna U. Wolniakowski  
Executive Director





## AGENDA ITEM

**Point in Time Count Update**

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[PRESENTATION](#)

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# Mid-Columbia Community Action Council

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Serving Hood River, Wasco and Sherman Counties  
312 E. Fourth St.  
The Dalles, OR 97058  
541-298-5131

# Presenter:

Kenny LaPoint

Executive Director

Mid-Columbia Community Action Council

Email: [klapoint@mccac.com](mailto:klapoint@mccac.com)

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# Who is Mid-Columbia Community Action Council (MCCAC)?

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MCCAC is the Community Action Agency serving Hood River, Wasco and Sherman Counties. We provide Housing, Shelter, Household Utility and Home Weatherization assistance to lower income and houseless community members. Our primary funding comes from state and federal sources.





# Mission

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Our mission is to build a better future for our community through partnership and equity-centered programs that prevent and eliminate poverty and houselessness.



# Values

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Equity, Compassion, Collaboration, Community, Respect



**Mid-Columbia  
Community  
Action Council**



# Houselessness in Wasco County

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## 2022 Point-in-Time Count: Wasco County

- 194 individuals experiencing houselessness (+82)
  - 138 Unsheltered (+43) ; 56 Sheltered (+39)
  - 54 self-identified as having a mental illness (+24)
  - 34 identified having a substance use disorder (+18)
  - 9 Veterans (+3)
  - 16 Native Community Members (+10)
  - 32 Latinx Community Members (+24)
  - 19 People of Color (+1)
  - 19 Children and Youth under the age of 24 (+1)

\*(+/-) change from 2020 PIT Count



# 2022 PIT Count Takeaways

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- 74% increase in houselessness
- Significant increases in houselessness among Native and Latinx community members
  - Partnerships with culturally-specific organizations have increased our ability to identify those experiencing houselessness among specific demographics.
  - Nch’l Wana Housing and The Next Door assisted with the count
  - Counting done on the Native In-Lieu sites
- Large increases in those with behavioral health and substance use disorders
  - Impacts on chronic homelessness
- 70% increase in sheltered houseless individuals
  - Largely due to increase in shelter beds in the region
- We are getting better at conducting the count and collaborating among the agencies serving the community. Better coordination typically results in immediate increases in numbers and better data quality.





# Other MCCAC Updates

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- House Bill 4123 AOC/LOC Homeless Coordination Pilots





**Mid-Columbia  
Community  
Action Council**

## Contact us



**Facebook**

[www.facebook.com/mccactd](http://www.facebook.com/mccactd)



**Website**

[www.MCCAC.com](http://www.MCCAC.com)



**Email**

[info@mccac.com](mailto:info@mccac.com)



**Phone**

541.298.5131



## AGENDA ITEM

### MCEDD

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[STATE PARKS GRANT](#)

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[WORK PLAN/STRATEGIC PLAN](#)

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## AGENDA ITEM

### MCEDD – State Parks Grant

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[STAFF MEMO](#)

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[RESOLUTION 22-001 AUTHORIZING APPLICATION & DELEGATING  
AUTHORITY](#)

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[MOTION LANGUAGE](#)

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## Memorandum

**Date:** March 8, 2022  
**To:** Wasco County Board of County Commissioners  
**From:** Carrie Pipinich, EDC Staff  
**Re:** Wasco County Kramer Field Application

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**Request:** Authorize Wasco County staff to apply to the Oregon State Park Department (OPRD)'s Local Government Grant Program for \$1 million to acquire property to support a new ball field complex and support providing up to \$470,000 in matching funds.

### **Background**

The County has asked for EDC staff support in drafting a grant application to Oregon Parks and Recreation Department's (OPRD) Local Government Grant Program as part of the process to develop a sufficiently large parcel needed for a new sports complex in The Dalles. EDC staff has been working closely with County administration to explore eligibility, gather necessary documentation, and start developing application materials. This grant application is likely one of a series of pieces that can support this vision.

There is still some diligence required in preparation for the grant, and staff is working to address these items in advance of the April 1, 2022 application deadline. The grant cycles occur on an annual basis. Staff request authorization from the BOCC for the County to submit an application to the OPRD program if the County Administrator is satisfied with the diligence.

**Proposed Project:** For this application, the County would be seeking funds to purchase an approximately seven-acre parcel from NORCOR to support development of the proposed new sports complex. The grant application package must include a letter from NORCOR indicating they are willing to sell the property as well. Appraised at \$1.47 million, the parcel would add additional acreage to the 35 acres that would be transferred through the Strategic Investment Program agreement with Design LLC. These two parcels together would make up the bulk of a proposed new site with one additional parcel being explored. This application does not determine the final uses and site plans for the overall project but only supports acquisition.

### **Considerations:**

- Due to program allocation being put on hold during the COVID-19 pandemic and higher than usual lottery fund generation, the funding available in this program is more than double its usual annual pool of resources at approximately \$14 million.
- Acquiring this parcel with these funds commits it to being utilized for park and recreation purposes for at least 25 years.
- Since the current Kramer Field complex received grant funding in the past, staff is continuing to do diligence as it relates to this acquisition about the process for fulfilling those grant requirements as part of the formal replacement for Kramer Field.



IN THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

IN AND FOR THE COUNTY OF WASCO

IN THE MATTER OF AUTHORIZING WASCO COUNTY TO APPLY FOR A LOCAL GOVERNMENT GRANT FROM THE OREGON PARKS AND RECREATION DEPARTMENT FOR ACQUISITION AND TO DELEGATE AUTHORITY TO THE COUNTY ADMINISTRATIVE OFFICER TO SIGN THE APPLICATION

**RESOLUTION #22-001**

NOW ON THIS DAY, the above-entitled matter having come on regularly for consideration, said day being one duly set in term for the transaction of public business and a majority of the Board of Commissioners being present; and

**WHEREAS**, the Oregon Parks and Recreation Department is accepting applications for the Local Government Grant Program; and

**WHEREAS**, Wasco County desires to participate in this grant program to the greatest extent possible as a means of providing needed park and recreation acquisitions, improvements and enhancements; and

**WHEREAS**, Board of County Commissioners has identified developing a new at sports complex as a high priority need in Wasco County; and

**WHEREAS**, acquisition of the proposed parcel is critical to the future development of a modern, accessible sports complex, and

**WHEREAS**, Wasco County has available local matching funds to fulfill its share of obligation related to this grant application should the grant funds be awarded; and

**WHEREAS**, Wasco County will provide adequate funding for on-going operations and maintenance of this park and recreation facility should the grant funds be awarded; and

**NOW, THEREFORE, BE IT RESOLVED BY THE WASCO COUNTY BOARD OF COMMISSIONERS AS FOLLOWS:**

Section 1: The Board of County Commissioners demonstrates its support for the submittal of a grant application to the Oregon Parks and Recreation Department for property acquisition to develop a new sports complex.

Section 2: This Resolution shall be effective following its adoption by the Board of Commissioners

DATED this 16<sup>TH</sup> day of March, 2022.

APPROVED AS TO FORM

Wasco County Board of Commissioners

Kristen Campbell, County Counsel

Kathleen B. Schwartz, Chair

Steven D. Kramer, Vice-Chair



## MOTION

**SUBJECT: State Parks & Recreation Grant Application**

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I move to approve Resolution 22-001 authorizing Wasco County to apply for a local government grant from the Oregon Parks and Recreation Department for acquisition and to delegate authority to the County Administrative Officer to sign the application.



## AGENDA ITEM

### MCEDD – Plans

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[STAFF REPORT](#)

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[STRATEGIC ACTION PLAN](#)

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**Wasco County Economic Development Commission  
Report to the Wasco County Board of Commissioners**

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March 2022

**2022-2027 EDC Strategic Action Plan Update**

Throughout 2021, the EDC dedicated time at each of its meetings to update its Strategic Action Plan to guide its focus for the coming five year period. Staff prepared materials for discussion at the June, September, and December meetings including a data review, strengths-weaknesses-opportunities-threats and assets analysis; updates to the EDC's mission and vision for economic development in Wasco County, and the goals and strategies to move toward that vision. The Committees then provided input into developing an action plan to support implementation in each area. Staff compiled this into a plan that was presented at the March 3, 2022 meeting of the EDC.

The plan as accepted by the EDC is attached for your reference and input.

The staff report below is developed based around the goal areas outlined in the Action Plan. The EDC decided to shift its committee structure to align work with its goal areas to support implementation of their action plans.

**Vibrant and Diverse Local Economy**

- Staff coordinated meetings with the Brownfield Coalition group as well as one with City of The Dalles staff and the consultant to discuss neighborhood planning type activities. The grant currently has nine sites working through the program.
- The Wasco County Innovation Strategy group (Port, CGCC, EDC/MCEDD, Business Oregon, Regional Solutions) are the partners coming together to work toward implementation of our initial phases of work after completing the Center on Rural Innovation (CORI) planning process. The group is focusing on mapping out our entrepreneurial ecosystem and conducting outreach to local businesses to better understand their experiences with it. This will help identify areas for focus and programming opportunities as we move forward. This group also worked with CORI to support CGCC's participation in their Good Jobs Challenge application for
- Staff has met with the SBDC and other MCEDD staff to discuss concepts for pub talks to be hosted in the coming year. Next steps will be to reach out to the local chambers and the Wasco County Innovation group to discuss opportunities for collaboration.
- Staff has been invited to participate in CORI's Rural Innovation Network's annual Summit in May to connect with and learn from other communities in the network. The Port and EDC staff will be attending.
- MCEDD has been working with chambers in the region to identify and profile businesses who have implemented successful resilience strategies during the pandemic. These are featured on MCEDD's website in the preparedness section ([mcedd.org/ready](https://mcedd.org/ready)) along with resources available to local businesses to plan for resilience.

**Robust Infrastructure: Broadband Committee**

- The Wasco County Broadband Action Team held its first meeting in January and it was well attended with engagement from broadband providers, utilities, schools, and community groups all engaged. The next meeting is scheduled for mid-March with the group planning for regular meetings every two months.

- Staff has been working with a sub-committee of the BAT to develop a survey instrument, interview guide, and outreach plan for the mapping and gap analysis that is being started. This will occur in conjunction with the statewide Faster Broadband Oregon speed test mapping push that is being coordinated with BATs, Economic Development Districts, and Link Oregon. The campaign will likely start in May. This work will be a big focus in the coming quarter.
- Q-Life and MCEDD are working to complete additional planning work for the Cascadia East Colocation facility. This will include architectural and engineering drawings and meeting with other colocation and interconnection facilities in Oregon to explore business models.

### **Robust Infrastructure: Water/Waste Water**

- Staff is meeting with the City of Dufur, the Port of The Dalles, and Business Oregon to discuss next steps with the City's needed water system investments on March 10<sup>th</sup>.
- Staff has worked to review upcoming resources through the infrastructure bill passed that may impact our local systems.

### **Community Capacity, Information Source, and Advocacy**

- Staff conducted some research for the City of Shaniko about potential resources for installing historic streetlights in their downtown core.
- Staff is working with Paul Lindberg of the Healthy Gorge Initiative, Lauren Kraemer of OSU Extension, and Chelsea Ruder from OHSU to explore collaborating to host a grant writing training this spring focused on non-profits and local governments. This compliments the infrastructure focused training from the fall with a look at broader grant writing strategies. The group has put out [a survey](#) to gather input from local partners on structure and format. We are tentatively planning for a May series of sessions for this effort.

### **General EDC Activities:**

EDC staff provided the following support services:

- Staff met with The Dalles Main Street staff to explore any opportunities for collaboration.
- Staff has been working with Wasco County to explore an application to the Oregon State Parks Local Government Grant Program related to property acquisition for the new potential ball fields.
- Staff met with Wasco Electric Co-Operative to discuss upcoming efforts with the Co-Op as well as opportunities for partnership as Q-Life seeks to expand broadband access.
- Staff presented to The Dalles Area Chamber's Government Affairs group about activities for MCEDD and the Wasco County Economic Development Commission.
- Staff drafted letters of support for the Dufur CTE program, Wy'East's Energy efficiency access work, and CGCC's participation in the Center on Rural Innovation's EDA Good Jobs Challenge application.
- Staff is exploring a request for grant applications from Business Oregon focused on developing plans for Rural Innovation Hubs.
- Staff supported the March EDC meeting. The main focus was on the workplans and review of the draft Strategic Action Plan. There was interest in shifting back to in person meetings starting in June and depending on current COVID-19 conditions. Staff is working to identify a potential location and incorporate a tour into the meeting times in June and September.

### **By The Numbers**

*Source: Oregon Employment Department*

- Unemployment rate (seasonally adjusted)

	<b>Jan 2022</b>	<b>Dec 2021</b>	<b>Jan 2021</b>
<b>Oregon</b>	4.3%	4.2%	6.4%
<b>Wasco County</b>	4.4%	4.5%	6.0%

- Total Nonfarm Payroll Employment (Not Seasonally Adjusted)

	<b>Jan 2022</b>	<b>Dec 2021</b>	<b>Jan 2021</b>	<b>Change -month-</b>	<b>Change -year-</b>
<b>Oregon</b>	1,895,300	1,924,400	1,791,600	-29,100	103,700
<b>Wasco County</b>	9,860	10,030	9,470	-170	390





# 2022-2027 Economic Development Strategic Action Plan



Wasco County Economic Development Commission







PHOTO CREDIT: MARQUEZ

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## SPECIAL THANKS TO THE FOLLOWING:

### Wasco County Board of County Commissioners

Scott Hege  
Steve Kramer  
Kathy Schwartz

### EDC Members

Position 1 – Northern: Brian McCormick  
Position 2 – Central: Tonya Brumley  
Position 3 – Southern: Amy McNamee  
Position 4-Port Of The Dalles: Jennifer Toepke  
Position 5-City Of The Dalles: Rich Mays  
Position 6-Chambers Of Commerce: Lisa Farquharson  
Position 7-At Large (Agriculture-Wheat, Cattle): Bob Krein  
Position 8-At Large (Agriculture-Fruit Growers): Megan Thompson  
Position 9-At Large: Fritz Ellett  
Position 10-At Large: Nan Wimmers  
Position 11-At Large (Utilities): Justin Brock

### EDC Staff

Carrie Pipinich, Mid-Columbia Economic Development District



# ECONOMIC DEVELOPMENT COMMISSION OVERVIEW

The Wasco County Economic Development Commission is a County appointed Commission that works for an economically robust Wasco County. The EDC is a representative body made up of 11 Commissioners, each of whom represents a different constituency geographically and from key industries.

The EDC acts as the economic development arm of Wasco County. Its activities focus on job creation, supporting foundational infrastructure to create economic opportunity, and increasing capacity throughout the County. The EDC is directly responsible for the following activities:

1. **Information Source:** Keeping the Board of County Commissioners and partners apprised of economic development activity, opportunities, and needs throughout the County.
2. **Community Capacity Building:** Collaborating with, and providing technical assistance to, local entities to accomplish projects focused on the above outcomes and to bring further investment into Wasco County.
3. **Leadership:** Providing leadership on countywide economic and long-term development efforts.

To fulfill this role, the EDC meets quarterly with working groups focused on moving specific projects or topic areas coming together in the interim and staff supported actions.



# STRATEGY AND PROCESS

This plan is intended to guide the work done by the Wasco County Economic Development Commission in the coming five years. It provides an overview of the EDC's vision for Wasco County supported by the County's demographic and economic profiles and an assets-strengths-weaknesses-opportunities-and-threats analysis. The information provided builds on work done at the regional level and seeks to align the EDC's efforts with the regional strategy where relevant to leverage additional capacity. These foundations provided the framework for the specific goals and strategies developed as well as directed the formation of the EDC's action plan for the coming year.



In order to draft this economic development strategy and its accompanying action plan, the Economic Development Commission moved through a nine-month process started in June of 2021. At each EDC meeting a specific portion of the material for the plan was reviewed and input provided by the EDC Commissioners (detailed to the right). A committee was formed around each goal area to refine strategies and develop actions.

The full strategy and action plan was adopted by the EDC in March of 2022. It will provide a clear framework for the EDC for the coming five years with minor annual updates incorporated into the action plan to reflect current activities and any significant changes to the economic development landscape.

## PROCESS OVERVIEW

**JUNE 2021:** REVIEW EDC'S CURRENT ROLE, DEMOGRAPHIC AND ECONOMIC TRENDS, ASSET MAPPING, AND SWOT.

**SEPTEMBER 2021:** MISSION, VISION AND GOALS

**DECEMBER 2021:** COMMUNITY ENHANCEMENT PROJECT PRIORITIZATION, STRATEGY DEVELOPMENT, COMMITTEE FORMATION.

**JANUARY TO FEBRUARY 2022:** COMMITTEES, EDC LEADERSHIP, AND STAFF DEVELOPED ANNUAL ACTION PLANS BASED ON MISSION, VISION, AND STRATEGIES.

**MARCH 2022:** EDC ADOPTS DRAFT ECONOMIC DEVELOPMENT STRATEGIC ACTION PLAN



# DEMOGRAPHIC AND ECONOMIC TRENDS

Wasco County is one of Oregon's oldest counties, established in 1854 by the Oregon Territorial Legislature. The county seat is the City of The Dalles with other incorporated cities including Antelope, Dufur, Maupin, Mosier and Shaniko. The County is approximately 2,392 square miles with approximately 59% held in private ownership, 25% in Tribal lands, and the remaining in a variety of public ownerships with the largest being US Forest Service land. The County is bounded by the Columbia River to the North, the Deschutes to the East and the Mt Hood National Forest on the West.

The Dalles area holds the majority of the County's population with approximately 16,000 of the almost 26,670 residents in the County. Wasco County's population has grown at a rate of approximately 5% since 2010, whereas Oregon has grown 10% in the same period. This is almost double the 2.2% growth from 2010 to 2015, but not close to the significant growth rate in The Dalles. Wasco County's population has a smaller percentage of younger residents and a larger percentage of residents over 65 than Oregon as a whole or The Dalles. In addition to this shifting age distribution, Wasco County's Latinx population has grown significantly over the last few decades with its percentage increasing from 9.3% in 2000 to 19.2% in 2019. These shifts will impact required services, the types of businesses in demand, and workforce skills needed in the coming years.

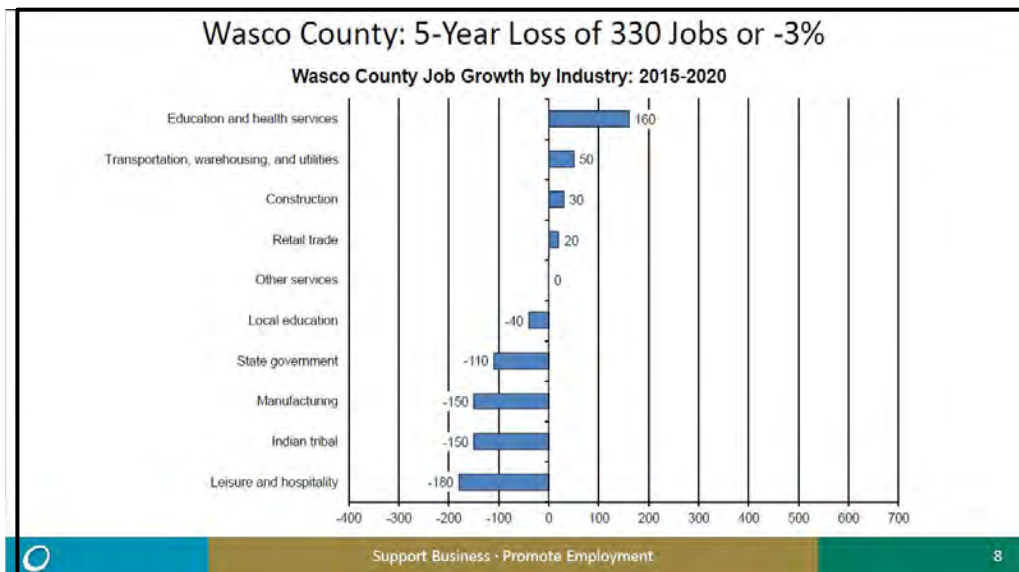
Educational attainment can be an important indicator for workforce skills. For those over 25 in Wasco County, 19.6% of the population has a bachelor's degree or higher, compared to 32% nationally and 33.7% in Oregon. Median income increases and poverty rate decreases as educational attainment rises locally as well as nationally as education impacts the types of jobs available to residents.

Prior to COVID-19, median household income in Wasco County grew to \$53,105 in 2019 from \$43,422 in 2015. Approximately 12% of residents remained in poverty despite overall income growth. This is a significant decrease from the poverty rate in 2015 at 17%. Per capita, the income for 2019 was \$27,445, which is lower than Oregon as a whole (\$33,763). These shifting demographics could reflect a variety of factors. These could include job growth in the County, wealthier retirees moving into the area, or increases in housing costs pushing lower income residents into outlying communities.





The main driver of Wasco County's economy remains agricultural production. The County produced almost \$96 million in agricultural products sold, with most of this being in crop sales and 15% in livestock sales reported for the 2017 Census of Agriculture. The main products include a variety of types of wheat, sweet cherries, and forage. Wasco County remains a leader in production for both dryland wheat and sweet cherries.



Wasco County's non-farm economy is still recovering from the pandemic. From 2015-2020, Wasco County lost 3% jobs, most of which were in the leisure and hospitality, a sector that had experienced large gains in 2015. As of May 2021, Wasco County has regained 68% of the jobs lost at the onset of the pandemic, according to the Oregon Employment Department. Despite this, job gains have started to slow compared to the beginning of the year due to labor shortages, particularly for the in-person service jobs. The largest industries for the county continue to be education and health services, trade, transportation, and utilities, and local government employment. Total payroll in Wasco County for 2020 came to almost \$511 million from \$453 million in 2016. Only about 60% of the jobs in Wasco County are held by in-county workers, with more workers leaving

the county for employment in 2019 than both working and living within the County. Commuters head in many directions, with the largest concentrations to Portland and Hood River.

In addition to recovering jobs and income during the pandemic, the real estate market has seen the value of homes increase significantly in the past few years, which has led to housing shortages for middle to low-income workers and will have serious implications for the economy moving forward. Supply chain issues for commodities like lumber has also impacted housing prices and construction.

These indicators point toward a recovering economy, with some significant challenges around addressing income inequality, providing housing for the local workforce, and supporting a growing region.

# SWOT ANALYSIS

The EDC developed an assets-strengths-weaknesses-opportunities-threats analysis. This analysis provides an opportunity to think of the broader landscape impacting the EDC's work in economic development. It also allows for consideration of key partnerships to engage with in support of efforts that align with the EDC's vision for the community that might be outside of its mission.

	Strengths/Assets	Weaknesses	Opportunities	Threats
Natural Resources	<b>Natural Resources and Climate</b> <ul style="list-style-type: none"> <li>Natural Resource Base</li> </ul>	<b>Management Resources</b> <ul style="list-style-type: none"> <li>Decreasing budgets for natural resource management</li> </ul>	<b>Leverage Natural Assets</b> <ul style="list-style-type: none"> <li>Wood and Forestry Products Innovation</li> <li>Renewable Energy</li> <li>Fishing Industry</li> <li>Active Forest Collaborative</li> </ul>	<b>Natural Disasters/Hazards</b> <ul style="list-style-type: none"> <li>COVID-19 challenges – (workforce, mental health, income inequality,)</li> <li>Wildfire, ice storms and other natural disasters</li> <li>Aging emergency response systems</li> </ul>
Agriculture	<b>Agricultural Foundation</b> <ul style="list-style-type: none"> <li>Nationally known agricultural region (cherry, wheat)</li> <li>Strong agricultural heritage and expertise</li> <li>Management of water resources</li> </ul>	<b>Changes in Agricultural Landscape</b> <ul style="list-style-type: none"> <li>Average age of farmers continues to rise</li> <li>Difficult to find needed labor</li> <li>Unpermitted events and other activities on ag land can cause conflicts with current uses</li> </ul>	<b>Diversification Ag and Ag Tech</b> <ul style="list-style-type: none"> <li>Value-Add and Food Processing Sector</li> <li>New specialty crops in areas with water resources to support them</li> <li>Growing ag/tech partnerships</li> <li>Appropriate agritourism</li> </ul>	<b>Water Access, Regulations, Markets</b> <ul style="list-style-type: none"> <li>Drought impacts</li> <li>Water access issues</li> <li>Aquifer concerns</li> <li>Major fluctuations in commodity pricing</li> </ul>
Demographic Shifts	<b>Culture</b> <ul style="list-style-type: none"> <li>10,000+ years of Indigenous Culture</li> <li>Increased diversity</li> <li>Strong sense of community</li> </ul>	<b>Demographics</b> <ul style="list-style-type: none"> <li>Aging population</li> <li>High poverty rate</li> <li>Disparities between communities</li> <li>Planning for increased community capacity</li> </ul>	<b>Increasing Diversity</b> <ul style="list-style-type: none"> <li>Growing Hispanic/Latino population</li> <li>Retirees bringing in experience, perspective, and capacity</li> </ul>	<b>Impacts of Continued Population Growth</b> <ul style="list-style-type: none"> <li>Pressure on housing prices</li> </ul>

	Strengths	Weaknesses	Opportunities	Threats
Infrastructure	<b>Infrastructure</b> <ul style="list-style-type: none"> <li>Abundant, clean power</li> <li>Telecommunication and broadband capacity</li> <li>Dog River Pipeline</li> <li>Infrastructure for small manufacturers</li> </ul>	<b>Infrastructure</b> <ul style="list-style-type: none"> <li>Small systems with significant maintenance burdens</li> <li>Aging basic infrastructure</li> <li>Broadband limited in areas</li> <li>Energy capacity challenges</li> </ul>	<b>Connectivity</b> <ul style="list-style-type: none"> <li>Market and use the increased high speed fiber optics</li> <li>Significant federal investment in broadband accessibility, basic infrastructure</li> </ul>	<b>Infrastructure Limitations</b> <ul style="list-style-type: none"> <li>Water/Wastewater capacity challenges</li> <li>Limited existing buildings and industrial land</li> </ul>
Business Development	<b>Diverse Industry Sectors and Growing Business Sectors</b> <ul style="list-style-type: none"> <li>Diverse industries</li> <li>Growing regional industry sectors (tech, value added ag, manufacturing, healthcare)</li> </ul>	<b>Lack of Business Expansion Space</b> <ul style="list-style-type: none"> <li>No large lot industrial land available</li> <li>Many commercial and light industrial spaces need investment for occupation</li> </ul>	<b>Focus on Local</b> <ul style="list-style-type: none"> <li>Available commercial and light industrial spaces</li> <li>Improved business resilience resources and connected support systems</li> <li>Supply chain development</li> </ul>	<b>Industry Diversification</b> <ul style="list-style-type: none"> <li>Recovery for small businesses</li> <li>Loss of any major employer</li> <li>Concentration risk</li> </ul>
Workforce	<b>Human Capital</b> <ul style="list-style-type: none"> <li>Diverse skill sets in the area</li> <li>Unique educational programs supported by businesses</li> <li>New Advanced Skills Center at CGCC</li> </ul>	<b>Education, Skilled Workforce</b> <ul style="list-style-type: none"> <li>Access to advanced degrees</li> <li>Childcare access/affordability</li> <li>Limited Skilled Labor</li> <li>Necessity of continually evolving CTE educational opportunities to fill jobs</li> </ul>	<b>Business/Workforce development</b> <ul style="list-style-type: none"> <li>skill up residents to meet company needs</li> <li>Attract human and business talent based on quality of life and remote work opportunities</li> </ul>	<b>Education Quality/ Opportunity and Workforce</b> <ul style="list-style-type: none"> <li>Labor shortages</li> <li>Statewide educational system challenges</li> <li>Meeting employers needs today and in the future</li> </ul>
Housing	<b>Relative Affordability for Housing</b> <ul style="list-style-type: none"> <li>Compared to housing throughout the Gorge, Wasco County remains relatively less expensive</li> <li>Updated housing plans, development ordinances</li> </ul>	<b>Insufficient Housing Stock</b> <ul style="list-style-type: none"> <li>Insufficient attainable housing for local employees</li> <li>Aging housing stock</li> </ul>	<b>Housing Rehabilitation + Infill</b> <ul style="list-style-type: none"> <li>Vertical Housing Zone in The Dalles</li> <li>Additional capacity for housing created through zoning</li> </ul>	<b>Housing Shortage Impacts</b> <ul style="list-style-type: none"> <li>Availability/ affordability reduces ability to attract/retain workers</li> <li>Increasing homeless population with limited resources to address needs</li> <li>Increasing costs of building materials</li> </ul>

	Strengths	Weaknesses	Opportunities	Threats
Transportation	<b>Availability of Transportation Systems/Modes</b> <ul style="list-style-type: none"> <li>Hub for region</li> <li>Many modes (Highways, Airports, Rail Service, River</li> <li>Proximity to Portland, major markets</li> </ul>	<b>Transportation</b> <ul style="list-style-type: none"> <li>Gaps in transportation options</li> <li>Capacity of roads, airports, rail, etc.</li> </ul>	<b>Address Public Transportation + Multi-Modal Needs</b> <ul style="list-style-type: none"> <li>Further Development of Columbia Gorge Regional Airport</li> <li>Expanding fixed routes and regional transit connections</li> </ul>	<b>Maintaining and Enhancing</b> <ul style="list-style-type: none"> <li>Severely limited resources for maintaining transportation infrastructure</li> </ul>
Regulatory and Legislative	<b>Advocates for Wasco County and the Region</b> <ul style="list-style-type: none"> <li>The Dalles Outreach Team</li> <li>Regional Solutions</li> <li>Relationships with state and federal agency partners</li> <li>Strong collaboration</li> </ul>	<b>Regulatory Environment:</b> <ul style="list-style-type: none"> <li>National Scenic Area creates an additional layer of regulation</li> <li>Complex and varying land use requirements can be challenging to understand</li> </ul>	<b>Legislative Engagement</b> <ul style="list-style-type: none"> <li>State/Federal resources for COVID-19 recovery</li> <li>Strong relationships with federal legislative delegation</li> <li>Increasing engagement with State legislative delegation</li> </ul>	<b>Funding</b> <ul style="list-style-type: none"> <li>Uncertainty about federal resource allocation and competitive nature of funding</li> <li>Shrinking local government budgets for some</li> </ul>
Tourism and Recreation	<b>Scenic Beauty, Recreation, Brand and Tourism Industry</b> <ul style="list-style-type: none"> <li>Four Season Recreation (hiking, biking, snow sports, fishing, etc)</li> <li>Tourism destinations throughout Wasco County</li> <li>Natural landscape diversity</li> </ul>	<b>Variation in Tourism Impacts</b> <ul style="list-style-type: none"> <li>No comprehensive approach to tourism planning throughout the County</li> <li>Concern about impacts on voluntary emergency services</li> </ul>	<b>Expanding Tourism</b> <ul style="list-style-type: none"> <li>Increasing year-round opportunities</li> <li>Leverage new Deschutes Rim Athletic Complex</li> <li>Increase small business planning to leverage tourism influx to support operations</li> </ul>	<b>Tourism Challenges</b> <ul style="list-style-type: none"> <li>Seasonality can be challenging for communities and businesses</li> <li>Changes in natural resources (fisheries, forest, etc) impact visitor experience</li> </ul>
EDC	<b>EDC Relationships, Reputation</b> <ul style="list-style-type: none"> <li>Positive momentum</li> <li>Strong relationships with many communities and organizations</li> <li>Support from Wasco County BOCC and staff</li> <li>Access to funding sources</li> <li>Diverse knowledge base</li> </ul>	<b>EDC Capacity</b> <ul style="list-style-type: none"> <li>Limited capacity/staff time</li> <li>Low profile for the work accomplished</li> </ul>	<b>EDC Accomplishments, Assets</b> <ul style="list-style-type: none"> <li>Further leverage EDC Commissioners as resource</li> <li>Improve tracking of outcomes and better share accomplishments</li> <li>Further develop approach to fulfilling leadership role</li> </ul>	<b>EDC Stability</b> <ul style="list-style-type: none"> <li>Annual funding cycle tied to County budgeting process</li> <li>Explore diversification of funding for activities</li> </ul>



## Mission

The EDC collaborates with and supports partners and local communities to cultivate sustainable economic and business development in Wasco County.



## Vision

Wasco County and its communities should be economically robust, livable, and continue to enhance strong rural character.



### Robust Infrastructure:

Support communities throughout Wasco County in efforts to provide adequate infrastructure to enhance community livability and economic opportunity.

### Community Capacity:

Work with local partners to provide meaningful technical assistance, bring in additional resources, and complete projects that enhance their community's capacity for appropriate economic development

### Information Source and Advocacy:

Ensure the Board of County Commissioners, partners, funders, and companies have up-to-date information on economic conditions, activities, and projects that support a resilient local economy in Wasco County.

# Goals

### Vibrant and Diverse Local Economy:

Develop and implement short- and long-term strategies that build and diversify the economy in Wasco County and its communities.

### Strong and Sustainable EDC:

Strengthen relationships with partners, diversify funding streams, and provide professional, effective services to communities and businesses in Wasco County.

# STRATEGIES

This plan below provides the EDC's roadmap for moving toward its vision of strong, livable communities with robust economies throughout Wasco County. It is organized by goal area. Strategies and actions will continue to evolve as progress is made or in reaction to changing conditions and resources.

## **GOAL: VIBRANT AND DIVERSE LOCAL ECONOMY. DEVELOP AND IMPLEMENT SHORT-AND LONG-TERM STRATEGIES THAT BUILD AND DIVERSIFY THE ECONOMY IN WASCO COUNTY AND ITS COMMUNITIES.**

### **Strategy: Create a strong, connected support system for businesses that can help community members start and grow companies.**

- Work with partners to ensure information about business resources, incentives, and financing is readily available to those looking to start or grow a business in Wasco County. Maintain up to date business development guides for interested communities around the County. Note: suggested update 2023.
- Support businesses in connecting with resources to site or grow their firms.
- Continue to serve as Wasco County's representative with the Brownfield Coalition grant to support reducing barriers to development in Wasco County.
- Engage with service providers, communities and local businesses to identify and address key business needs throughout Wasco County. Complete interviews with businesses in the County to better understand needs. (Grant Resource: Business Oregon Rural Opportunity Initiative)
- Work with partners (Chambers, Port, SBDC, MCEDD) to host Pub Talk type networking events and other programming identified through the interviews to create a strong community around entrepreneurship. (Grant Resource: Oregon Community Foundation Thriving Entrepreneurs Grant)

### **Strategy: Support development of key industry clusters in Wasco County that leverage strengths in the County and region.**

- Work with the Port, Community College, local chambers, regional industry associations, and other partners to identify and develop next steps from the Wasco County Innovation Strategy developed with Center on Rural Innovation. Ensure engagement with traditional as well as new sectors. (Grant Resource: Business Oregon Rural Opportunity Initiative)



**Strategy: Work with partners to support connecting workforce, education and training opportunities to employer identified skills.**

- Complete interviews with businesses in the County to better understand needs.
- Explore opportunities to support partners in hosting career or job fairs.

## **GOAL: ROBUST INFRASTRUCTURE. SUPPORT COMMUNITIES THROUGHOUT WASCO COUNTY IN EFFORTS TO PROVIDE ADEQUATE INFRASTRUCTURE TO ENHANCE COMMUNITY LIVABILITY AND ECONOMIC OPPORTUNITY.**

**Water/Wastewater Strategy: Work with communities and partners to address water and wastewater system constraints to community and economic development.**

- Continue to host training sessions like the Infrastructure Planning and Finance Workshop held in partnership with RCAC in 2021 that increase local capacity for infrastructure project development. Connect local systems to existing training opportunities.
- Host a mock one stop where local systems can familiarize themselves with the process.
- As capacity allows, provide technical assistance to water and wastewater systems in the county to increase access to funding and move planning and projects forward.
- Build an inventory of system conditions within the county to understand current conditions and needs. Connect systems to resources that can support addressing challenges.

**Broadband Strategy: Form and support a Wasco County Broadband Action Team (BAT) with representatives from organizations and communities around the region to support closing the digital divide.**



- Work with the BAT to support a gaps analysis leveraging the Faster Broadband Oregon mapping project as well as a local survey and interviews with key stakeholders. This will focus on infrastructure gaps but also explore opportunities to support enhanced utilization.

- Identify robust next steps from information gathered through this effort and begin implementing them with relevant partners.

**Broadband Strategy: Collaborate with public and private sector partners to address middle and last mile telecommunications infrastructure gaps and increase redundancy in communications networks.**

- Share information on grant resources available through State and Federal programs with public and private sector stakeholders interested in improving broadband access and utilization in Wasco County. Where appropriate, support applications that meet a community identified need.

- Engage with Q-Life's efforts to grow middle mile or last mile infrastructure to close access gaps.
- Support the Cascadia East Interconnection project to build more resilience into local networks.
- Identify opportunities to leverage "dig once" efforts to support reducing the cost of broadband infrastructure deployments in the County.

**Business Development Infrastructure Strategy: Support development of other business infrastructure. For example, transportation, housing, childcare, and community livability.**

- Engage with CGCC's Childcare Center feasibility work, the Four River's Early Learning Hub's study around innovative models for childcare, and support next steps from each.
- Track housing market data and share with decision makers.
- As appropriate, support communities in accessing resources to plan for housing and make necessary code amendments to support meeting housing needs.
- Participate in local and regional discussions on housing strategy representing economic development interests in Wasco County.
- With the next update of the Business Siting Guides, explore interest in creating a housing development guide.

**GOAL: COMMUNITY CAPACITY. WORK WITH LOCAL PARTNERS TO PROVIDE MEANINGFUL TECHNICAL ASSISTANCE, BRING IN ADDITIONAL RESOURCES, AND COMPLETE PROJECTS THAT ENHANCE THEIR COMMUNITY'S CAPACITY FOR APPROPRIATE ECONOMIC DEVELOPMENT.**

**Strategy: Work with local communities to build their capacity for developing and implementing priority projects that align with the EDC's vision and goals.**

- Identify partners within each community to support in developing additional capacity. Connect across communities where there are similar issues.
- Develop resources for shared issues, e.g. a communication plan example for infrastructure projects. Identify these opportunities through engagement with communities.
- Identify and share resources to support capacity building, like opportunities for board training, HR resources like the BOLI Technical Assistance services, etc.

**Strategy: Provide or facilitate training as needed to increase organizational capacity for economic development.**

- Support a grant writing training in Spring of 2022.
- Develop info for ongoing business grant and assistance resources to share with communities and businesses.
- Connect partners with training resources from other agencies, e.g. RCAC, LOC, etc.



**GOAL: INFORMATION SOURCE AND ADVOCACY. ENSURE THE BOARD OF COUNTY COMMISSIONERS, PARTNERS, FUNDERS, AND COMPANIES HAVE UP-TO-DATE INFORMATION ON ECONOMIC CONDITIONS, ACTIVITIES, AND PROJECTS THAT SUPPORT A RESILIENT LOCAL ECONOMY IN WASCO COUNTY AND INCREASE INVESTMENT IN ITS COMMUNITIES.**

**Strategy: Gather information on economic development related projects and strategies from throughout Wasco County.**

- Complete the Community Enhancement Project process annually.

**Strategy: Maintain up-to-date information on economic and demographic trends, land availability, and major employers.**

- Develop a cycle for updating major items with one occurring annually: major employers, land/building availability, business development guides, strategic action plan, etc. Focus for this year: Explore Land availability resources.

**Strategy: Develop a strong web presence focused on business and economic development that highlights key business resources and opportunities as well as shares EDC activities in a meaningful way.**

- Review and update the EDC's webpage. Support more connections with Chamber and partners' web presence to ensure consistent information is being shared with businesses.
- Explore opportunities to connect with and support content with partners around business resources.

**Strategy: Support communities in connecting with their State and Federal elected officials to talk about community priorities, projects and funding needs.**

- Share information on who elected officials are to support further engagement.
- Explore annual engagement with the State and Federal delegations around the annual Community Enhancement Project list and priority issues to better share our community's successes and needs. Share these locally as well.
- Engaging with local leaders about processes for starting or growing a business in Wasco County and work with partners to be a conduit for feedback from businesses on these processes.



## **GOAL: STRONG AND SUSTAINABLE EDC. STRENGTHEN RELATIONSHIPS WITH PARTNERS, DIVERSIFY FUNDING STREAMS, AND PROVIDE EFFECTIVE SERVICES TO COMMUNITIES AND BUSINESSES IN WASCO COUNTY.**

### **Strategy: Explore diversification of funding streams to support the EDC's efforts.**

- Continue to seek grant funding to expand services in program areas where there are resources available to develop new programming (e.g. Rural Opportunity Initiative grant funding for entrepreneurship system development and programming). Engage with partners to develop these opportunities to ensure alignment and collaboration.
- Where efforts are successful, work to develop sustainable funding resources to maintain grant funded programming.

### **Strategy: Maintain and implement a long-term economic development strategy as well as intentional annual work plans to guide the EDC's activities.**

### **Strategy: Create measurements and track outcomes for the EDC's work.**

- Develop measurements to track over time to better understand and communicate the EDC's impact.

### **Strategy: Connect the EDC's work to strategies grounded in community economic development best practices.**

- When opportunities arise, participate in conferences and trainings focused on enhancing staff knowledge and sharing resources with the Commission to enhance capacity.



# 2022 COMMUNITY ENHANCEMENT PROJECTS

Each year the Wasco County EDC gathers information about key community economic development projects and activities throughout Wasco County. The EDC then develops a project prioritization ranking and presents it to the Board of County Commissioners for acknowledgement.

Prioritization is then annually incorporated into this Strategic Action Plan for the EDC and included in the Mid-Columbia's regional Comprehensive Economic Development Strategy (CEDs) which further highlights projects with regional significance. These documents can be used by project proponents to show local support when seeking funding sources.

## PRIORITIZATION CRITERIA

1. ADDRESS SPECIFIC ECONOMIC DEVELOPMENT CHALLENGE OR OPPORTUNITIES
2. CRITICAL INFRASTRUCTURE FOCUS
3. READINESS TO PROCEED
4. IMPACT OF INCLUSION IN RANKING PROCESS.

In 2022, Wasco County EDC prioritized the 35 new or ongoing projects submitted by 22 entities into the list below. The EDC ranks the top 10 projects and includes the others un-ranked in Attachment A. This list was acknowledged by the Wasco County Board of Commissioners at their January

5, 2022 meeting and will be incorporated into the CEDs at MCEDD's March 17, 2022 Board Meeting.

1. City of The Dalles- Dog River Pipeline
2. White River Health District-Deschutes Rim Health Clinic Expansion
3. City of Mosier-Joint Use Facility
4. City of Dufur-Drinking Water System Improvements
5. Q-Life Cascadia East Interconnection and Colocation Facility
6. Columbia Gorge Community College-Child Care Center
7. Maupin Area Chamber of Commerce-Deschutes Rim Athletic Complex
8. Northern Wasco County Park and Recreation District-Sorosis Park Redevelopment
9. Q-Life-South Wasco County Fiber Expansion
10. Wy'East Resource Conservation and Development – Dufur Rural Innovation Hub



## AGENDA ITEM

### State Homeland Security Applications

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[WASCO COUNTY COMMUNICATIONS PROJECT APPLICATION](#)

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[WASCO COUNTY MASS CARE TRIAGE PROJECT APPLICATION](#)

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# Fiscal Year 2022 State Homeland Security Program Project Application

## Overview

This project application is for jurisdiction applying for the FY2022 State Homeland Security Program (SHSP) grant. Every project submitted by a county or tribe must complete this application. No more than 10 project applications may be turned in per county or tribe.

**Type of Grant Funding:** Allocation Based

## I. General Project Information

County/Tribe  
Wasco County

Applicant Agency (agencies)  
Wasco County Sheriff's Office

Project Priority Rank (See your Combined  
Cover Sheet) 1

Federal Funds Requested  
\$29003.67

Project Title  
Wasco County Communications

Amount of Project Funding Dedicated to  
LETPA  
25791.30

Project Budget Defined by POETE

Planning	\$
Organization	\$
Equipment	\$29003.67
Training	\$
Exercises	\$

State Investment Justification  
Emergency Communications [SIJ]

Project Core Capability  
Operational Communications

State Strategy **GOAL #**  
**Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.**

State Strategy **OBJECTIVE #**  
Maintain and upgrade current equipment; invest in new and redundant equipment. Invest in development of infrastructure.

Will this project result in a NIMS-Typed resource?

If yes, will this be a Tier I or Tier II

## II. Requirements

resource?  
Yes

Tier I

Clearly describe the terrorism nexus of this project.

How will this project allow you to prepare for, respond to, or recover from acts of terrorism?

The 2 partner agencies in this project have observed a steady rise in, unrest, protest, terrorism, vandalism throughout the United States. These disruptions have the potential to cause vandalism, violence and mass casualty events in Wasco County. A response to such an event would involve mutual aid of all of the Wasco County First Responder agencies as well as State and Federal Public Safety Agencies. It is through protest and vandalism and wildfires these past two years that have further underscored the communications gaps that are identified and addressed in this project. The terrorism nexus of this project is a mass shooting at the SOAK Festival during the Memorial Day Weekend. SOAK is the annual regional Burning Man in Oregon.

Clearly describe how the project ties to THIRA/SPR.

How will this project address the core capability gap identified your THIRA/SPR and selected above?

A comparison between the State of Oregon THIRA/SPR and Wasco County THIRA indicates a number of direct ties between the capability targets and the associated objectives of this project. The Phase 1 Wasco Communications Upgrade impacts the following specific THIRA Capability Targets:

Operational Coordination

- Incident Command, Fire, EMS and Law Enforcement
- Incident Management during wildfires, protests or any other large scale events requiring response from multiple agencies ( Wildfire events, Protests, Festivals)

Intelligence and Information Sharing

- Disseminating Intelligence and Information during upcoming protests, potential suspects in county, mutual aid Search and Rescue, or large search for suspects involving multiple agencies (several incidents during 2021)

Interdiction and Disruption

- Tactical Law Enforcement Operations
- Wide Area Search -- mutual aid Search and Rescue, or large search for suspects involving multiple agencies (several incidents during 2021)

Operational Communications

- Law Enforcement Operations
- Interoperable communications systems

Situational Assessment

- Law Enforcement Operations -
- Medical and Public Health Assessments - COVID-19 response

### III. IJ Specific Requirements

**Complete ONLY the section which ties to your chosen IJ  
[Planning, Emergency Communications, Emergency Operations Center, Cyber  
Security]**

#### **Planning**

Will this project result in a new/revised  
plan?

No

If Yes, what type of Exercise will be held  
to test the plan

If No, what is the deliverable of this project?

Does this project support the Cascadia Rising 2022 exercise?

No

#### **Communications**

Does the Jurisdiction have a current  
Communications Plan?

Yes

Provide the page and paragraph of the  
communications plan to which this project  
ties. Include the language in the  
appendices

6.3. Wasco County – Interoperable  
Communications Plan

Wasco County needs operability first  
before it can consider interoperability.  
They have many outstanding issues  
that affect their ability to support their  
own internal operations and their  
community. New and updated  
systems need to be put in place to  
support their primary operations  
before they can consider how best to  
work with their neighbors. pg 71

Project Name: Wasco County Radio



and Dispatch Systems Plan and Specifications  
Background Information  
Wasco County needs improvements to their primary radio system, associated tower sites, and technology systems in their primary and backup dispatch centers. Wasco County Sheriff's Office, Fire/EMS Departments/Districts, and The Dalles Police Department operate First Responder single and multi-site standalone VHF repeaters throughout the County. The Sheriff's Office repeaters all operate on the same VHF repeater pairs using separate uplink CTCSS. pg 57

Is the project P25 compliant?  
Yes

If P25 is not applicable to the project, describe why.

Does the project tie to the Oregon SCIP?  
Yes

Provide the page and paragraph of the SCIP the project ties to.  
Marker 13 - Radio programming.  
Radios programmed for National/Federal, SLTT interoperability channels and channel nomenclature consistency across a state / territory. Page 17  
Marker 15 - NG911 implementation.  
NG911 implementation underway to serve state / territory population. Page 18  
Marker 23 -Sustainment assessment.  
Identify interoperable component system sustainment needs;(e.g. communications infrastructure, equipment, programs, management) that need sustainment funding. Page 20

Does the project tie to SAFECOM?  
Yes

Describe how the project ties to SAFECOM.  
This project ties into Priority 4 and 5

of the SAFECOM Emergency  
Communications Priorities  
Priority 4: Activities that Enhance  
Communications Coordination  
Priority 5: Standards-based  
Technology and Infrastructure

Does the jurisdiction have a radio repair  
and replacement plan?

Yes

If Yes, describe the radio repair and  
replacement plan.

All agencies have set aside funds for  
radio repair and replacement as  
needed.

Have you coordinated with the OEM Communications Expert, the state SWIC, or the  
State SIEC in the development of this project?

Choose One

### **Emergency Operation Centers**

Is this project for the jurisdiction's primary  
EOC?

No

Is this project for the jurisdiction's  
secondary EOC?

Choose One

Provide the Emergency Operation Plan (EOP) page and paragraph which identifies  
the project location as the primary or secondary EOC. Include the language in the  
appendices

### **Community Resilience and Engagement // Mass Care and Mass Casualty**

Does the jurisdiction have a mass care or  
mass casualty plan

Provide the page and paragraph of the  
plan which this project is implementing.  
Include the language in the appendices

No

### **Cyber Security**

Has the jurisdiction performed a formal assessment?

Yes

If the jurisdiction has not performed a formal assessment, does the jurisdiction have a  
formal cyber security plan/strategy?

Choose One

Please provide the page and paragraph number where this project is referenced in the assessment or plan. Include the language in the appendices

Not applicable to this project

#### **IV. Project Details**

**20pts**

Are there multiple counties/tribes/jurisdictions/agencies involved in this project, if yes list here

Wasco County Sheriff's Office

The Dalles Police Department

Wasco County Sheriff's Office Search and Rescue

Describe the project. What will this project do? Please be as clear and direct as possible in your first paragraph. Supporting details may be provided in 2<sup>nd</sup> or 3<sup>rd</sup> paragraphs.

The 2 partner agencies in this project have observed a study rise in, unrest, protest, terrorism, vandalism throughout the United States. These disruptions have the potential to cause vandalism, violence and mass casualty events in Wasco County. A response to such an event would involve mutual aid of all of the Wasco County First Responder agencies as well as State and Federal Public Safety Agencies. It is through protest and vandalism and wildfires these past two years that have further underscored the communications gaps that are identified and addressed in this project. The terrorism nexus of this project is a mass shooting at the SOAK Festival during the Memorial Day Weekend. SOAK is the annual regional Burning Man in Oregon.

List equipment or products purchased through the project. If, applicable, specify which are NIMS-Typed resources and whether it is Tier-I or Tier-II resources.

Sheriff's Office - 8 APX 4000 VHF Model 2 Portable, with P-25 capabilities

The Dalles PD - 2 APX 4000 VHF Model 2 Portable, with P-25 capabilities

Sheriff's Office Search and Rescue- 15 Minitor VI Pager - Standard MIL-STD 810G

Have you received quotes for the costs of the items, training, or services described above?

Yes

#### **V. Project Impact**

**30pts**

Describe who in the community will be directly impacted by this project and how.

There has been a rise in unrest, vandalism, and protests in the USA and Oregon

since 2019. These large gatherings with the potential for violence have put an enormous strain on responding agencies. In addition to these protests, Public safety agencies, and Fire/EMS agencies responded to wildfires that burned over thousands of acres and cause more than 1000 citizens to be evacuated or put on alert including portions of the city of The Dalles.

Wasco County is strategically located with 7 main transportation arteries consisting of two Type 1 railroads, one interstate, 3 main highways, and one waterway. As such, if there is a Cascadia event, large protests causing damage to infrastructure in Portland or wildfires, Wasco County would be one of the main areas for staging or evacuations.

To address communications shortcomings and interoperability needs, the Sheriff's Office teamed up with all the First Responder agencies and 911 Dispatch in Wasco County to identify communications needs. Wasco County will be doing a phased approach to upgrade communications equipment for all First Responder agencies in the County for interoperability and P25 compliance

Describe what impact this project will have on the whole community.

Those primarily impacted will be the First Responders and the community or citizens in the vicinity of the event or incident. The citizens and communities safety, protection and their medical treatment will be greatly enhanced through the improved capacity for first responders to receive the initial call and to able to communicate with other agencies to quickly neutralize the threat and/or secure the area.

The whole community will be better served by improved communications and interoperability in a mutual aid event due to the ability to request the appropriate resources in a timely manner without pulling unnecessary resources from other areas.

Describe how the project will enhance the core capability for the jurisdiction

Communications are mission-critical for public safety agencies. Wasco County First Responder agencies perform mutual aid on an almost daily basis. With their current capabilities, response time and effective interoperability and communication are severely limited. With the new communications, interoperability and basic communications will be greatly enhanced, enabling a better more timely response with the correct resources.

## **VI. Capability History**

**5pts**

Describe the jurisdictions current functionality in the chosen core capability

Currently, Wasco County Sheriff's Office has radio equipment that is P-25 compliant but is nearing the end of their service life and are no longer supported. Sheriff's Office and TDPD has begun to replace using their radio/repair replacement program. Also, Wasco County Search And Rescue are in the process of upgrading their equipment to be P-25 compliant and for greater interoperability. Wasco County has completed a regional communications study that has identified the areas that Wasco County needs to improve or upgrade to be able to provide



interoperability communications with its sister units in neighboring counties.

Was the current functionality developed using any federal funds?

Yes

## **VII. Gap Information**

**20pts**

Describe the current gap in the capability.

Currently, the radio communications technology that is being used in Wasco County is outdated and is no longer supported with replacement parts. Wasco County Sheriff's Office and The Dalles Police Department are not using the same type of radios which severely hampers interoperability and communications in an event requiring mutual aid. Wasco's County Search and Rescue Volunteer communications equipment that have intermittent failures which severely hamper response.

Describe how the gap was identified (real event, exercise, assessment).

The gap has been identified during the recent Wildfire events, Search and Rescue events and during the 2019 Regional Communications Study

Describe what the agency/community has done to fill the gap so far.

All agencies have been using their radio repair replacement plan to update/upgrade/replace radio equipment

Describe how the proposed project will fill the gap.

Wasco County First Responder agencies will be performing a phased approach to update all communications equipment for P-25 compliance, interoperability and coverage. This will be Phase Two of the communications upgrade

## **VIII. Sustainment**

**15pts**

Describe the jurisdiction's plan to sustain the capabilities built by this project

The partner agencies in this project perform monthly and quarterly training activities. The training includes usage of communications equipment. We will seek to identify further funds sources for the continued phased approach to upgrade Wasco Counties communication infrasture and mobile radio communicastions. The purchase of this communicatiosn equipment will allow the county agencies to upgrade the radios and other communications equipment with new technology without the need to replace of the radio itself. All agencies will be setting asside funding for the repair and replacement of the radios and equipment

## **IX. Milestones**

**10pts**

Quarter 1	<ol style="list-style-type: none"> <li>1. Complete agreement with OEM for Project Funding.</li> <li>2. Finalize and order equipment per quotes received.</li> <li>3. Complete and file first quarter grant performance report with OEM</li> </ol>
Quarter 2	<ol style="list-style-type: none"> <li>1. Receive equipment as ordered</li> <li>2. Distribute equipment to agencies</li> <li>3. Program of mobile radio equipment and pagers and test</li> <li>4. Install Repeater antenna and test</li> <li>5. Complete and file second quarter grant report</li> </ol>
Quarter 3	<ol style="list-style-type: none"> <li>1. Train Staff on proper usage of equipment</li> <li>2. Adjust any needed programming</li> <li>3. File third quarter report to OEM</li> </ol>
Quarter 4	<ol style="list-style-type: none"> <li>1. Complete all final testing and training as needed</li> <li>2. Submit Board of Commissioner report on successful implementation of equipment</li> <li>3. Complete and file final Grant Performance Report with OEM.</li> </ol>
Quarter 5	
Quarter 6	
Quarter 7	
Quarter 8	

# Fiscal Year 2022 State Homeland Security Program Project Application

## Overview

This project application is for jurisdiction applying for the FY2022 State Homeland Security Program (SHSP) grant. Every project submitted by a county or tribe must complete this application. No more than 10 project applications may be turned in per county or tribe.

**Type of Grant Funding:** Competitive Award

## I. General Project Information

County/Tribe  
Wasco County

Applicant Agency (agencies)  
Wasco County Emergency  
Management

Project Priority Rank (See your Combined  
Cover Sheet) 1

Project Title  
Wasco County Mass Care Triage

Federal Funds Requested  
\$50370

Amount of Project Funding Dedicated to  
LETPA

Project Budget Defined by POETE

Planning	\$
Organization	\$
Equipment	\$50370
Training	\$
Exercises	\$

State Investment Justification  
Addressing Emerging Threats [FPA]

Project Core Capability  
Mass Care Services

State Strategy **GOAL #**  
**Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical, and behavioral health support, and products to all affected**

State Strategy **OBJECTIVE #**  
Maintain and upgrade current equipment; invest in additional and new equipment.

populations

## II. Requirements

Clearly describe the terrorism nexus of this project.

How will this project allow you to prepare for, respond to, or recover from acts of terrorism?

Wasco County and communities have observed a steady rise in, unrest, protest,

Will this project result in a NIMS-Typed resource?

resource?

Yes

If yes, will this be a Tier I or Tier II

Tier I



terrorism, vandalism throughout the United States. These disruptions have the potential to cause vandalism, violence and mass casualty events in Wasco County. A response to such an event would involve mutual aid of all of the Wasco County First Responder agencies as well as State and Federal Public Safety Agencies. It is through protest and vandalism and wildfires these past years that have further underscored the mass care gaps that are identified and addressed in this project. The terrorism nexus of this project is a mass shooting at the SOAK Festival during the Memorial Day Weekend. SOAK is the annual regional Burning Man in Oregon.

Clearly describe how the project ties to THIRA/SPR.

How will this project address the core capability gap identified your THIRA/SPR and selected above?

A comparison between the State of Oregon THIRA/SPR and Wasco County THIRA indicates a number of direct ties between the capability targets and the associated objectives of this project. The Wasco County Mass Care Triage project impacts the following specific THIRA Capability Targets:

Mass Search and Rescue Operations:

Deliver traditional and atypical search and rescue capabilities, including personnel, services, animals, and assets to survivors in need, with the goal of saving the greatest number of endangered lives in the shortest time possible

Public Health, Healthcare and Emergency Medical Services

Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical, and behavioral health support, and products to all affected populations.

### III. IJ Specific Requirements

**Complete ONLY the section which ties to your chosen IJ  
[Planning, Emergency Communications, Emergency Operations Center, Cyber  
Security]**

#### **Planning**

Will this project result in a new/revised plan?

No

If Yes, what type of Exercise will be held to test the plan

If No, what is the deliverable of this project?

Does this project support the Cascadia Rising 2022 exercise?

No

### **Communications**

Does the Jurisdiction have a current Communications Plan?

Choose One

Provide the page and paragraph of the communications plan to which this project ties. Include the language in the appendices

Is the project P25 compliant?

Choose One

If P25 is not applicable to the project, describe why.

Does the project tie to the Oregon SCIP?

Choose One

Provide the page and paragraph of the SCIP the project ties to.

Does the project tie to SAFECOM?

Choose One

Describe how the project ties to SAFECOM.

Does the jurisdiction have a radio repair and replacement plan?

Choose One

If Yes, describe the radio repair and replacement plan.

Have you coordinated with the OEM Communications Expert, the state SWIC, or the State SIEC in the development of this project?

Choose One

### **Emergency Operation Centers**

Is this project for the jurisdictions primary EOC?

No

Is this project for the jurisdictions secondary EOC?

Choose One

Provide the Emergency Operation Plan (EOP) page and paragraph which identifies the project location as the primary or secondary EOC. Include the language in the

appendices

### **Community Resilience and Engagement // Mass Care and Mass Casualty**

Does the jurisdiction have a mass care or mass casualty plan

Provide the page and paragraph of the plan which this project is implementing. Include the language in the appendices

Yes

ESF 6 in WCEOP  
4.1.2  
- Open designated mass care shelter and stock those facilities with food, water, medical supplies..  
- provide trained staff  
ESF-13 in WCEOP  
ESF 13-5 Mobilize appropriate emergency personnel and first responders. Determine responder activities and establish non-contaminated areas prior to mobilizing resources

### **Cyber Security**

Has the jurisdiction performed a formal assessment?

No

If the jurisdiction has not performed a formal assessment, does the jurisdiction have a formal cyber security plan/strategy?

Choose One

Please provide the page and paragraph number where this project is referenced in the assessment or plan. Include the language in the appendices

Not applicable to this project

## **IV. Project Details**

**20pts**

Are there multiple counties/tribes/jurisdictions/agencies involved in this project, if yes list here

Wasco County Sheriff's Office  
Wasco County  
The Dalles Police Department  
North Central Public Health

City of Dufur  
City of Maupin  
City of Mosier  
Tygh Valley  
Wamic

Describe the project. What will this project do? Please be as clear and direct as possible in your first paragraph. Supporting details may be provided in 2<sup>nd</sup> or 3<sup>rd</sup> paragraphs.

Those primarily impacted will be the First Responders and the community or citizens in the vicinity of the event or incident. The citizens and communities safety, protection and their medical treatment will be greatly enhanced through the improved capability of the first responders on scene. 5 of the 7 Ambulance Providers are volunteer organizations in Wasco County. Due to the size and remote locations in Wasco County makes it a priority to give First Responders (LE) the right tools for life saving thereby increasing the chance for the survival of the victim. Response from the Ambulance provider could be as long as 15/20 min making it imperative that we equip our first responders with the right tools.

List equipment or products purchased through the project. If, applicable, specify which are NIMS-Typed resources and whether it is Tier-I or Tier-II resources.

Type 1 resource  
30 Zoll AED 3 - Full Auto

Have you received quotes for the costs of the items, training, or services described above?

Yes

## **V. Project Impact**

**30pts**

Describe who in the community will be directly impacted by this project and how.

Wasco County and Communities have observed a study rise in, unrest, protest, terrorism, vandalism throughout the United States. These disruptions have the potential to cause vandalism, violence and mass casualty events in Wasco County. A response to such an event would involve mutual aid of all of the Wasco County First Responder agencies as well as citizens on scene. It is through protest and vandalism and wildfires these past years that have further underscored the mass casualty gaps that are identified and addressed in this project. The terrorism nexus of this project is a mass shooting at the SOAK Festival during the Memorial Day Weekend. SOAK is the annual regional Burning Man in Oregon. Having AED with the first responders and located in strategic places will provide injured people a better chance in making it to the hospital.

Describe what impact this project will have on the whole community.

Those primarily impacted will be the First Responders and the community or



citizens in the vicinity of the event or incident. The citizens and communities safety, protection and their medical treatment will be greatly enhanced through the improved capability of the first responders on scene.

The whole community will be better served by improved medical equipment in a mutual aid event due to the ability to request the appropriate resources in a timely manner without pulling unnecessary resources from other areas.

Describe how the project will enhance the core capability for the jurisdiction

Triage medical equipment are mission-critical for public safety agencies. Wasco County First Responder agencies perform mutual aid on an almost daily basis. With their current capabilities, response time is severely limited due to limited resources. With the new medical equipment (AED) triage will be greatly enhanced, enabling a better response with the correct resources.

## **VI. Capability History**

**5pts**

Describe the jurisdictions current functionality in the chosen core capability

Currently, Wasco County and communities have limited AED located in strategic locations.

Was the current functionality developed using any federal funds?

Yes

## **VII. Gap Information**

**20pts**

Describe the current gap in the capability.

Currently, AED locations are limited due to the High cost of the equipment.

Describe how the gap was identified (real event, exercise, assessment).

The gap has been identified during the recent motor vehicle accidents, Search and Rescue events and during large events like the annual Fair.

Describe what the agency/community has done to fill the gap so far.

Wasco County and communities have purchased limited AED and have them centrally located.

Describe how the proposed project will fill the gap.

Wasco County First Responder agencies will be first on site during a accident and citizens will have access to AED which will be placed in strategic and easy accessible locations.

## **VIII. Sustainment**

**15pts**

Describe the jurisdiction's plan to sustain the capabilities built by this project  
 The partner agencies in this project perform normal maintenance and give yearly training to its first responders, city, county and community staff

IX.	Milestones	10pts
Quarter 1	<ol style="list-style-type: none"> <li>1. Complete agreement with OEM for Project Funding.</li> <li>2. Finalize and order equipment per quotes received.</li> <li>3. Complete and file first quarter grant performance report with OEM</li> </ol>	
Quarter 2	<ol style="list-style-type: none"> <li>1. Receive equipment as ordered</li> <li>2. Distribute equipment to agencies/communities</li> <li>3. Complete and file second quarter grant report</li> </ol>	
Quarter 3	<ol style="list-style-type: none"> <li>1. Train Staff on proper usage of equipment</li> <li>2. File third quarter report to OEM</li> </ol>	
Quarter 4	<ol style="list-style-type: none"> <li>1. Complete all final testing and training as needed</li> <li>2. Submit Board of Commissioner report on successful implementation of equipment</li> <li>3. Complete and file final Grant Performance Report with OEM.</li> </ol>	
Quarter 5		
Quarter 6		
Quarter 7		
Quarter 8		

## **Hazard Mitigation Grant Program Cost Share Assistance**

Submitting this form articulates a jurisdictions need for Non-Federal cost share assistance for Hazard Mitigation Grant Program projects for Post Fire 5327 and 2020 Wildfire Disaster 4562. By submitting this form alone, it **does not guarantee funding**. FEMA funding generally takes 12 to 18 months from FEMA review to award depending on complexity of submitted activity. To be considered for cost share assistance, complete this form and submit it to [shmo@mil.state.or.us](mailto:shmo@mil.state.or.us). This form will also be used for the Interagency Hazard Mitigation Team (IHMT) review panel when activated.

### **Subapplicant Information**

1. Select the type of entity you fall under that is seeking HMA funding (*select one*):

- ☐ State Government                      ☐ Tribal Government  
☒ Local Government                      ☐ Private Nonprofit (PNP)

2. Subapplicant: [Wasco County](#)

Grant Round (choose one): ☐ 4562    ☒ 5327

Project Name: [Wamic Community center generator, Wamic Fire and EMS generator, Barlow Water generator](#)

County: [Wasco](#)

Point of Contact Name and Job Title: [Sheridan McCellan](#)

Phone Number: 541-506-2790    E-mail Address: [sheridanm@co.wasco.or.us](mailto:sheridanm@co.wasco.or.us)

Street Address: 511 Washington St. Suite 102

City: [The Dalles](#)                                      State: [Oregon](#) Zip: [97058](#)

### **Cost Share Assistance Request**

Are you requesting Cost Share Assistance for Hazard Mitigation Grant Program?

☒ YES    ☐ NO

How much cost share are you requesting? 1-100% of total 25% state cost share: [100%](#)

Amount: [\\$58731](#)

Provide brief description of why cost share assistance is requested? [Budgetary restraints due to Wamic Community Center and Wamic Fire and EMS are strictly donation driven. With no way of fundraising due to COVID 19 protocols for fundraising events.](#) Barlow Water is a small water district with limited income only to cover operations

5. HB5006 cost share funds must be spent no later than December 31, 2023. Provide a timeline of how the cost share will be expended by December 31, 2023. [As soon as approval is given to](#)

move forward with the generator projects, new bids will be requested and issued as soon as possible. The work will begin at the earliest possible time due to expected fire season coming shortly.

6. Please mark each item that applies. These items do not determine eligibility of a project under Hazard Mitigation Assistance.

☒ No Previous HMGP Awarded Projects

☐ Previous HMGP Awarded Project 6 or more years ago

☐ Previous HMGP Awarded Project 1-5 Years

☒ Disadvantaged Community (FEMA Definition\*)

☐ Received Individual Assistance and Public Assistance as a result of the 2020 Wildfires

☐ Natural Hazard Mitigation Plan Subapplication

☒ Wildfire Mitigation Project, Non-Affected Area

\* A Disadvantaged Community may be characterized by variables including, but not limited to: low income, high and/or persistent poverty, high unemployment and underemployment, racial and ethnic segregation, particularly where the segregation stems from discrimination by government entities, linguistic isolation, high housing cost burden and substandard housing, distressed neighborhoods, high transportation cost burden and/or low transportation access, disproportionate environmental stressor burden and high cumulative impacts, limited water and sanitation access and affordability, disproportionate impacts from climate, high energy cost burden and low energy access, jobs lost through the energy transition, access to health care, and all geographic areas within Tribal jurisdictions.

### **Community Lifelines- Check all that apply**

☒ **Safety and Security** (law enforcement/security, fire services, search and rescue, government services, and community safety)

☒ **Food, Water, Shelter** (food, water, shelter, agriculture)

☒ **Health and Medical** (medical care, patient movement, public health, fatality management, medical supply chain)

☒ **X Energy** (power (grid) and fuel)

☒ **X Communications** (infrastructure, alerts, warnings, and messages, 911 and dispatch, responder communications, finance)

☒ **X Transportation** (highway, roadway, motor vehicle, mass transit, railway, aviation, maritime)

☐ **Hazardous Material** (facilities, HAZMAT, pollutants, contaminants)

☐ **Not Applicable**

### **Natural Hazards- Check all that apply**



☐ Coastal Erosion  
☒ Drought  
☒ Earthquake  
☐ Flood

☒ Heat Wave  
☐ Landslide  
☐ Tsunami  
☒ Volcano

☒ Wildfire  
☒ Windstorm  
☒ Winter Storm  
☐ Other: [Please specify](#)

Oregon has some of the most productive soil in the world. Soil mapping done by the USDA Natural Resources Conservation Service (NRCS (<https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>)) is the most common tool used for identifying the types of soils in an area. The NRCS provides a rating for each soil type that indicates how suited the soil is for agriculture. Oregon's land use laws help keep the best soils for crop cultivation and agricultural use. Soils that are less productive have more opportunities for development than higher quality soils.

NRCS does not have the ability to map each parcel of land, so it looks at larger areas. This means that the map may miss a pocket of different soils. DLCD has a process landowners can use to challenge NRCS soils information on a specific property. Owners who believe soil on their property has been incorrectly mapped may retain a "professional soil classifier...certified by and in good standing with the Soil Science Society of America" (ORS 215.211 ([https://www.oregonlegislature.gov/bills\\_laws/ors/ors215.html](https://www.oregonlegislature.gov/bills_laws/ors/ors215.html))) through a process administered by DLCD. This soils professional can conduct an assessment that may result in a change of the allowable uses for a property.

## Applicability and Process

Soil capability is a measure the soil's productivity potential for farm crops and forests. The rules for an assessment of a soil's productivity apply to land zoned exclusive farm use or for mixed farm and forest use (OAR 660-033-0045 (<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3083>)). They also apply to rezoning forestland for non-resource use when the applicant relies on alternate soils information to show that the land should not be agricultural. The rules can apply to other changes as well, including those for comprehensive plan designations, zoning, non-farm land divisions, and certain dwellings.

DLCD maintains a list of soils professionals who are qualified to help landowners prepare a property-specific soil assessment. Other soil consultants may be qualified but are not allowed to take part in the program unless they apply to DLCD. A property owner must select a professional from the list below in order to use non-NRCS soils data in a land use application. The soils professional conducts a site investigation and prepares a soils assessment for review by DLCD.

DLCD will review the soils assessment upon receiving a completed application form ([/lcd/FF/Documents/soils\\_assessment\\_submittal\\_form\\_2020.pdf](/lcd/FF/Documents/soils_assessment_submittal_form_2020.pdf)) and the \$625 fee. Occasionally soils assessments are audited by a DLCD soils consultant who may need to go to the subject site to investigate. The owner's soils professional is given an opportunity to correct any issues identified by DLCD. DLCD does not submit a soils assessment to a local government without applicant consent and a completed Soils Assessment Release Form ([/lcd/FF/Documents/soils\\_assessment\\_release\\_form\\_2020.pdf](/lcd/FF/Documents/soils_assessment_release_form_2020.pdf)).

## Soils Professionals

Landowners who desire to use non-NRCS agricultural soil capability data in a land use application must retain a certified professional from the table below. This listing is not an endorsement, and those requesting a soil assessment should get references and bids from more than one person.

Name	Company	Address	Phone	
Andy V. Gallagher	Red Hill Soils	PO Box 2233 Corvallis, OR 97339	541-740-9508	+
Brian T. Rabe	Cascade Earth Sciences	3511 Pacific Blvd SW Albany, OR 97321	541-812-6639	+





# Oregon

Kate Brown, Governor

## Department of Forestry

Central Oregon District

The Dalles Unit

3701 West 13th

The Dalles, OR 97058

PHONE: 541-296-4626

FAX: 541-298-4993

[www.ODFcentraloregon.com](http://www.ODFcentraloregon.com)

March 10, 2022



"STEWARDSHIP IN FORESTRY"

Forest health and fuel reduction are key directives that the Oregon Department of Forestry manages and promotes throughout Oregon. Locally in Wasco and Hood River counties, the Oregon Department of Forestry works to promote forest health and fuel reduction best management practices. These best management practices include activities such as forest thinning, tree pruning, removal of insect and diseased trees, as well as slash and fuel reduction projects like mowing, mastication, and prescribed fire. Active landowner involvement and management is essential to making Oregon's forests healthy and fire resilient.

David Wilson has and is currently using a combination of these best management practices to promote forest health and reduce hazardous fuels on his approximately 40-acre parcel along 7-Mile Road. ODF recognizes that David mows to reduce fine/flashy fuels. He has completed individual tree pruning to reduce ladder fuels. David actively removes insect and disease killed conifer to reduce the spread and impact to not only his trees but his neighbor's trees. This proactive approach to land management is key to mitigating fire hazards and to the sustained health of our local forests.

Kristin Dodd  
Unit Forester, The Dalles  
Oregon Department of Forestry

March 15, 2022

Sheila Dooley  
3300 Vensel Road  
Mosier, OR 97040

**SUBJECT: Review of Order 1 Soil Survey of Property Located adjacent to 7100 Seven Mile Hill Road, also known as T2N, R12E, Section 22, Tax Lot 4400 (40.10 acres), West of The Dalles in Wasco County, Oregon (Site)**

Dear Ms. Dooley:

Valley Science and Engineering (Valley) was retained to conduct a review of the above referenced soil survey. The parcel is zoned Forest [F-2(80)], a resource zone, and is being considered for a comprehensive plan amendment and zone change to Farm-Forest [F-F(10)], a non-resource zone.

## RELEVANT CRITERIA

The Oregon Department of Land Conservation and Development (DLCD) requires a determination of whether any resource land is agricultural land as part of the process to change from a resource designation to a non-resource designation (OAR 660-033-0030(5)(c)(A) attached as Appendix A). This is determined using the Natural Resources Conservation Service (NRCS) Land Capability Classification (LCC) system whereby lands east of the Cascades are considered “agricultural land” if they are LCC I – VI. Although there are a few exceptions, lands that are LCC VII and VIII are not considered agricultural lands (non-resource). This standard applies to lands zoned for either exclusive farm use or forest use when requesting a change to a non-resource designation. The standard is that a site “predominantly consist” of land that is LCC VII or VIII (more than 50%).

The Order 1 Soil Survey report for this Site concluded that 51.8% of the 40.10-acre parcel (Parcel 4400 on tax lot map included as Appendix B) contained LCC VII and VIII soils. Our review is limited to what is presented in the Order 1 Soil Survey report that was provided (a copy of the DLCD-reviewed report with selected highlights and notes is attached as Appendix C).

In our review of the Order 1 Soil Survey report, Valley was unable to confirm the report’s findings that the Site qualifies as non-resource land. Valley has not visited the property, however, there are several inconsistencies throughout the report that are apparent and do not require a site visit. The inconsistencies include:

- Reference to the wrong Section (23C) in several places that was carried forward through the review by DLCD.



- Numerical test pit locations shown on the sketch in the Order 1 Soil Survey report do not match the GPS coordinates provided in the report (Appendix C).
- GPS coordinates do not match the visible test pits in the most recent Google Earth image (July 24, 2021) taken after the assessment was performed (Appendix D) and do not match the relative locations shown on the previously mentioned sketch.
- Both the sketch of the test locations and the Order 1 soils map appear to have been presented on an oblique view of an aerial image and no scale is shown on either so it is not possible to accurately measure and confirm acreages within any of the delineations.
- The terms “generally suited” and “generally unsuited” are used throughout the report but those terms are specific to assessments for non-farm dwellings and are not applicable in non-resource applications.

However, the primary issue that leads Valley to conclude that the Site does not qualify as non-resource land is based on the fact that the field data noted for several of the test pits do not support a designation as LCC VII or VIII.

The Guide for Placing Soils in Capability Classes in Oregon (USDA NRCS, Revised June 1977) is attached in Appendix E. The various criteria in the guide rely upon measurable soil characteristics, not taxonomy. The primary criteria relied upon in the Order 1 Soil Survey report for determining the LCC was the Available Water Capacity (AWC). The guide shows that soils with an AWC greater than or equal to 2 inches are LCC VI or better. Following the matrix, soils with an AWC less than 2 inches are either LCC VII or VIII.

AWC values are provided for each soil in the published soil survey by the NRCS. The values for any given soil are based on representative samples of the fine earth fraction, tested in a laboratory, and then adjusted based on coarse fragment content. The typical depths, textures, and coarse fragment content are from the official series descriptions (Appendix F). Unless laboratory analyses are performed, the NRCS values for a given texture (adjusted for pedon-specific coarse fragment content) need to be relied upon to estimate the numerical value for comparison to the LCC standard in the matrix.

Data from the NRCS for the 3 soils identified or referenced on the Site (Skyline, Wamic and Bodell) are presented in Appendix G1. These data show the base AWC values, coarse fragment adjustments, and net AWC values for typical profiles that correlate with the published AWC values in the web soil survey. Using those data and the pedon-specific coarse fragment content, the AWC for several of the soil profiles that were described in the report as being LCC VII are actually LCC VI or better (Appendix G2). Based on the AWC values calculated from the field data presented in the report, 11 of the soil test pits that were designated as LCC VII, appear to be LCC VI or better. Because of the inconsistencies in the report related to test pit location it is not possible for Valley to use the soil investigation and test pit coordinates to accurately estimate the actual acreage represented by the soil that is LCC VI or better and not LCC VII. However, it appears that the LCC VI or better soil represents substantially more than 50% of Parcel 4400.

## SUMMARY AND CONCLUSIONS

Valley has reviewed the data and conclusions presented in the Order 1 Soil Survey of property located adjacent to 7100 Seven Mile Hill Road, also known as T2N, R12E, Section 22, Tax Lot 4400 (40.10 acres), West of The Dalles in Wasco County, Oregon. Based on the observations in the Order 1 Soil Survey report and the available soil survey data from the NRCS Web Soil Survey, Valley concludes that 11 of the soil test pits represent soil that appear to be LCC VI or better instead of LCC VII. Based on Valley's review, it is reasonable to conclude that the LCC VI or better soils represent greater than 50% of the acreage. Therefore, the Site does not satisfy the criteria in OAR 660-033-0030(5)(c)(A) for conversion to a non-resource plan designation and zone.

Sincerely,  
**VALLEY SCIENCE AND ENGINEERING**



**Brian T. Rabe, CPSS, WWS**  
Managing Soil Scientist

BTR/mjb

Enc: Appendix A-G



Certified Professional  
Soil Scientist  
BRIAN T. RABE  
15239 Exp. 31DEC22  
Registered Wastewater Specialist  
No. EH-W-448430 Exp. 30SEP22



**Michael S. Sowers, CCA-WR, CPSS**  
Managing Soil Scientist



Certified Professional  
Soil Scientist  
MICHAEL SOWERS  
25019 Exp. 12/31/22

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## **APPENDICES**

<b>Appendix A.</b>	<b>OAR 660-033-0030</b>
<b>Appendix B.</b>	<b>Tax Lot Map</b>
<b>Appendix C.</b>	<b>Soil Report with notations</b>
<b>Appendix D.</b>	<b>Google Image of Site (July 24, 2021)</b>
<b>Appendix E.</b>	<b>Guide for Placing Soils in Capability Classes in Oregon</b>
<b>Appendix F.</b>	<b>Official Series Descriptions for Skyline, Wamic and Bodell</b>
<b>Appendix G1-G2.</b>	<b>Data Tables for available water capacity calculation</b>

**Appendix A.**

**OAR 660-033-0030**



# Land Conservation and Development Department

## Chapter 660

### Division 33 AGRICULTURAL LAND

#### 660-033-0030 Identifying Agricultural Land

(1) All land defined as "agricultural land" in OAR 660-033-0020(1) shall be inventoried as agricultural land.

(2) When a jurisdiction determines the predominant soil capability classification of a lot or parcel it need only look to the land within the lot or parcel being inventoried. However, whether land is "suitable for farm use" requires an inquiry into factors beyond the mere identification of scientific soil classifications. The factors are listed in the definition of agricultural land set forth at OAR 660-033-0020(1)(a)(B). This inquiry requires the consideration of conditions existing outside the lot or parcel being inventoried. Even if a lot or parcel is not predominantly Class I-IV soils or suitable for farm use, Goal 3 nonetheless defines as agricultural "Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands." A determination that a lot or parcel is not agricultural land requires findings supported by substantial evidence that addresses each of the factors set forth in 660-033-0020(1).

(3) Goal 3 attaches no significance to the ownership of a lot or parcel when determining whether it is agricultural land. Nearby or adjacent land, regardless of ownership, shall be examined to the extent that a lot or parcel is either "suitable for farm use" or "necessary to permit farm practices to be undertaken on adjacent or nearby lands" outside the lot or parcel.

(4) When inventoried land satisfies the definition requirements of both agricultural land and forest land, an exception is not required to show why one resource designation is chosen over another. The plan need only document the factors that were used to select an agricultural, forest, agricultural/forest, or other appropriate designation.

(5)(a) More detailed data on soil capability than is contained in the USDA Natural Resources Conservation Service (NRCS) soil maps and soil surveys may be used to define agricultural land. However, the more detailed soils data shall be related to the NRCS land capability classification system.

(b) If a person concludes that more detailed soils information than that contained in the Web Soil Survey operated by the NRCS, would assist a county to make a better determination of whether land qualifies as agricultural land, the person must request that the department arrange for an assessment of the capability of the land by a professional soil classifier who is chosen by the person, using the process described in OAR 660-033-0045.

(c) This section and OAR 660-033-0045 apply to:

(A) A change to the designation of a lot or parcel planned and zoned for exclusive farm use, forest use or mixed farm-forest use to a non-resource plan designation and zone on the basis that such land is not agricultural land; and

(B) Excepting land use decisions under section (7) of this rule, any other proposed land use decision in which more detailed data is used to demonstrate that a lot or parcel planned and zoned for exclusive farm use does not meet the definition of agricultural land under OAR 660-033-0020(1)(a)(A).

(d) This section and OAR 660-033-0045 implement ORS 215.211, effective on October 1, 2011. After this date, only those soils assessments certified by the department under section (9) of this rule may be considered by local governments in land use proceedings described in subsection (c) of this section. However, a local government may consider soils assessments that have been completed and submitted prior to October 1, 2011.

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(e) This section and OAR 660-033-0045 authorize a person to obtain additional information for use in the determination of whether a lot or parcel qualifies as agricultural land, but do not otherwise affect the process by which a county determines whether land qualifies as agricultural land as defined by Goal 3 and OAR 660-033-0020.

(6) Any county that adopted marginal lands provisions before January 1, 1993, may continue to designate lands as "marginal lands" according to those provisions and criteria in former ORS 197.247 (1991), as long as the county has not applied the provisions of ORS 215.705 to 215.750 to lands zoned for exclusive farm use.

(7)(a) For the purposes of approving a land use application on high-value farmland under ORS 215.705, the county may change the soil class, soil rating or other soil designation of a specific lot or parcel if the property owner:

(A) Submits a statement of agreement from the NRCS that the soil class, soil rating or other soil designation should be adjusted based on new information; or

(B) Submits a report from a soils scientist whose credentials are acceptable to the Oregon Department of Agriculture that the soil class, soil rating or other soil designation should be changed; and

(C) Submits a statement from the Oregon Department of Agriculture that the Director of Agriculture or the director's designee has reviewed the report described in paragraph (a)(B) of this section and finds the analysis in the report to be soundly and scientifically based.

(b) Soil classes, soil ratings or other soil designations used in or made pursuant to this section are those of the NRCS Web Soil Survey for that class, rating or designation, except for changes made pursuant to subsection (a) of this section.

(8) For the purposes of approving a land use application on high-value farmland under OAR 660-033-0090, 660-033-0120, 660-033-0130 and 660-033-0135, soil classes, soil ratings or other soil designations used in or made pursuant to this definition are those of the NRCS Web Soil Survey for that class, rating or designation.

**Statutory/Other Authority:** ORS 197.040

**Statutes/Other Implemented:** ORS 197.015, 197.040, 197.230, 197.245, 215.203, 215.243 & 215.700 - 215.710

**History:**

LCDD 6-2016, f. 3-22-16, cert. ef. 3-24-16

LCDD 3-2016, f. & cert. ef. 2-10-16

LCDD 6-2013, f. 12-20-13, cert. ef. 1-1-14

LCDD 7-2012, f. & cert. ef. 2-14-12

LCDD 10-2011, f. & cert. ef. 12-20-11

LCDD 4-2011, f. & cert. ef. 3-16-11

LCDD 3-2008, f. & cert. ef. 4-18-08

LCDD 5-2000, f. & cert. ef. 4-24-00

LCDC 6-1992, f. 12-10-92, cert. ef. 8-7-93

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## **Appendix B.**

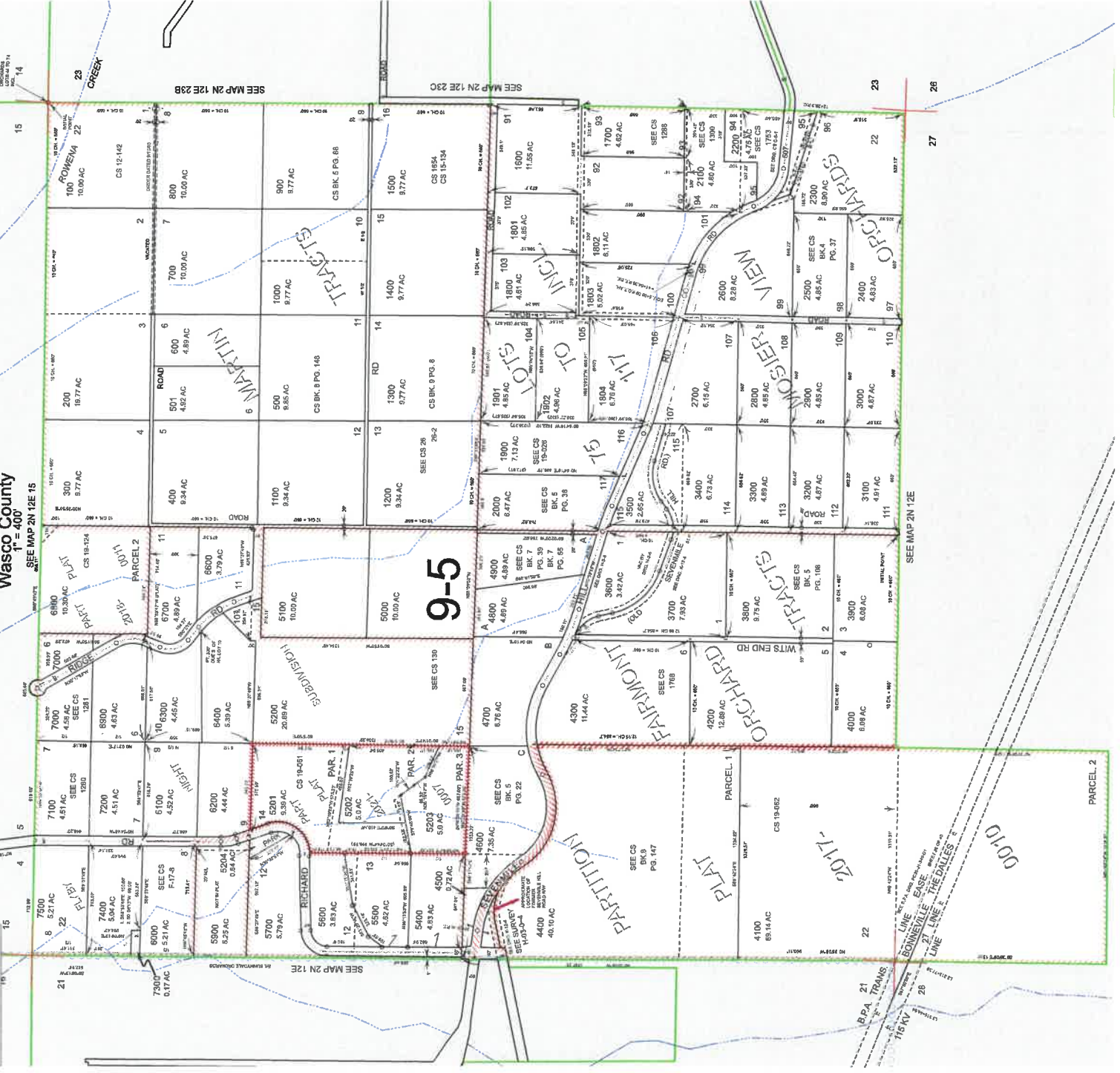
### **Tax Lot Map**

THIS MAP WAS PREPARED FOR  
ASSESSMENT PURPOSE ONLY

0 100 200 400 Feet

SECTION 22 T.2N. R.12E. W.M.  
Wasco County

1" = 400'



PRINTED ON  
Date: 4/30/2021

02N12E22



## **Appendix C.**

### **Soil Report with notations**



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soil Assessment Completeness Review

In accordance with OAR 660-033-0045(6)(a), the Department of Land Conservation and Development (DLCD) finds that this soils assessment is complete and consistent with reporting requirements for agricultural soils capability. The county may make its own determination as to the accuracy and acceptability of the soils assessment. DLCD has reviewed the soils assessment for completeness only and has not assessed whether the parcel qualifies as agricultural land as defined in OAR 660-033-0020(1) and 660-033-0030.

Hilary Foote  
DLCD Farm Forest Specialist  
March 29, 2001

The department will consider soil assessments under OAR 660-033-0030 to be complete if they meet the following standards:

(1) General information, to include:

- (a) Title of the report; Wildon – Order 1 Soil Survey
- (b) Person making request for soils assessment; David Wilson
- (c) Names of soil scientist/classifier conducting the field work and preparer of the report, along with their certification numbers; Gary Kitzrow, CPSC/CPSS #1741
- (d) Land use case file number (if available); n/a
- (e) County in which the assessment was conducted; Wasco
- (f) Location of the project site, including the township, range, section and tax lot numbers; Township 2N Range 12E Section 23 Taxlot 4400, Wasco County, Oregon
- (g) Present zoning designation; EFU **F-2 (80)**
- (h) Current land use; unknown
- (i) Parcel acreage: 40.13; evaluated: 40.13, and **40.10**
- (j) A description of the purpose of the assessment. Zone Change

(2) Previous Mapping or Background: The soil scientist/classifier shall provide a copy of the applicable and most current National Cooperative Soil Survey map(s) provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey, with the area of investigation outlined on the map(s). The scale of the map(s) shall be identified and a list of the map units under investigation shall be listed. The applicable

interpretations and minor components (inclusions) for the map units for which the investigation is being made shall also be provided. NRCS mapped soils include: Wamic loam, 5 to 12 percent north slopes (capability class 4e), Wamic loam, 12 to 20 percent slopes (capability class 4e) and Wamic-Skyline complex, 2 to 20 percent slopes (capability class 4e (Wamic components) and 7s (skyline components)). See pages 8-9.

(3) Methods Used by Soil Scientist/Classifier: The soil scientist/classifier shall describe the methodologies used for the preparation of the report and shall include the following:

- (a) The level of order of survey used in the field survey, scale and type of maps used for field investigations, number of sample locations and observation points all confirming or disagreeing with the NRCS mapping units. The survey shall be one or more level of order higher than the NRCS survey as described in the NRCS Soil Survey Manual, 1993. Note that an Order 1 survey is more detailed than an Order 2 or greater survey. Order 1 soil survey was conducted
- (b) The date(s) of the field investigation; December 18-19, 2020
- (c) The methods used for observations (backhoe, auger, shovel, etc.) and methods used for documentation (for slope, color, pH, etc.); Backhoe, field texturing, munsell chart comparison, soil pH, field assessment, etc as described on page 1.
- (d) The number and location of borings either shown on an aerial photograph base map of the parcel or provided in a table with latitude and longitude coordinates. In conducting Order 1 soil surveys, the scale of the base maps used for the survey needs to be large enough to enable the identification of polygons of soil map units as consociation map units. Soil map units identified as a complex, association, or undifferentiated group should be avoided as this defeats the purpose of an Order 1 survey. If, however, the soils are so intermingled that they cannot be mapped at a reasonable scale so as to identify consociation map unit polygons, then there should be sufficient sampling and documentation of the complex to demonstrate this soil component distribution. A percentage of each member of the complex will be used in determining area of extent and the reported percentages will be based on this sampling and its documentation, including soil profile descriptions, boring locations and, where useful, photographs. 23 locations. Coordinates listed on page 1 and mapped on page 10
- (e) Geomorphic and vegetation correlations supporting the interpretation of land capability classes of soils that differ from those in the official soil survey information; and Described on page 2.
- (f) A notation of any limitations encountered during the field investigation, such as soil depth, drainage, slope or inaccessibility. No limitations noted (page 2).

(4) Results, Findings, and Decisions: The soils report shall describe how the level of order of survey used in this investigation differs from that used by NRCS in the original soil survey. The soils report shall also include:

- (a) An overview of the geology or geologic setting, describing sources of parent material, bedrock and related factors; Described on page 2
- (b) A description of the landforms and topography, confirming the relationship of landforms to soil mapping units; Described on pages 2 and 3
- (c) A description of on-site and adjacent hydrology, including surface and subsurface features, intermittent versus perennial, floodplain and floodways and other related information; Described on page 3.
- (d) A description of the revised soil mapping units with their range of characteristics, explaining how and why they differ from NRCS soil mapping. The soils report shall include a summary of soil variability incorporating significance of preceding weather (above or below average), where known and crops and natural vegetation present; and Described on page 3
- (e) A tabulation of all previous and revised soil mapping units complete with their acreages and land capability classification. Pages 3, 8, 9 and 13

(5) Summary or Conclusion: The soils report shall contain a section reiterating the purpose of the investigation, explaining the significance of the revised soil mapping and describing any other significant issues related to the report's purpose. Page 3

(6) References: This section may list any manuals or publications utilized or referenced by the report. Page 3

(7) Attachments: Other informational materials provided as attachments, such as maps, figures or appendices shall include the following and shall be printed on 8 ½ x 11" wherever possible:

- (a) Vicinity map at a scale of 1:48,000 or smaller showing the project location; Map included on page 11
- (b) The NRCS soils map generated from Web Soil Survey at a scale of 1:20,000 or larger outlining the project site; Map included on page 7
- (c) Site condition map (aerial photo) at a scale of 1:5,000 or larger outlining the project site and showing the location of site investigations (borings) and other relevant features; Map included on page 10
- (d) Topography map at a scale of 1:24,000 or larger outlining the project site; Map included on page 11
- (e) Assessor's map at a scale of 1:5,000 or larger outlining the project site; Map included on page 12
- (f) Revised soils map of the project site at a scale of 1:5,000 or larger; Map included on page 13



- (g) Soil profile descriptions and site observation notes; and Pages 14-36
- (h) Representative soil profile descriptions of any soil type identified in the project area that is not described or identified in the published soil survey for the area mapped. Page 37

(8) Soils reports shall be submitted electronically to the department to [hilary.foote@state.or.us](mailto:hilary.foote@state.or.us), accompanied by a Soils Assessment Submittal Form. Payment of a non-refundable administrative fee of \$625 should be sent by check.



# Oregon

Kate Brown, Governor

Department of Land Conservation and Development

635 Capitol Street NE, Suite 150

Salem, Oregon 97301-2540

Phone: 503-373-0050

Fax: 503-378-5518

www.oregon.gov/LCD



## Soils Assessment Submittal Form

### Soils Professional Information

Soils professional\*: Gary A. Kitzrow

Certification number: 1741

### Property Information

Person who requested soils assessment: David Wilson

Mailing address: 7100 1 Mile Hill Rd The Dalles OR 97058

Email address: None

Telephone number: 541-490-3730

Property owner (if different):

Property address (if different): 7000 1 Mile Hill Rd The Dalles OR 97058

County: Wasco

Township: 2N Range: 12E Section: 22

Tax lot(s): 4400

Parcel Acreage: 40.15 Acres Evaluated: 40.13

Comprehensive Plan designation: —

Zone: EEU

Proposed land use action: Plan Amendment Zone change To RR10

The soils professional must submit an electronic copy of the soils assessment together with this form to Timothy Murphy, Farm and Forest Lands Specialist, at the above address. The person requesting the soils assessment or the property owner must submit a check for a non-refundable administrative fee of \$625 made out to the Department of Land Conservation and Development, to Timothy Murphy, at the same address.

Soils assessments must be consistent with the Soils Assessment Report Requirements and will be checked for completeness and be subject to audits as described in OAR 660-033-0030(9). Some soils assessments will additionally be subject to review and field checks by a DLCD-contracted soils professional as described in OAR 660-033-0030(9). Property owners and soils professionals will be notified of any negative reviews or field checks. Soils assessments will not be released to local governments without submittal of a signed release form by the property owner and person who requested the soils assessment; however, when released, any negative reviews or field checks will accompany the soils assessments.

The department and the Land Conservation and Development Commission will not be held liable for non-performance or information that is contained in soils assessments, or for negative reviews, field checks or audits of soils assessments. For the protection of the department and commission, we ask that you read and sign the following authorization and disclaimer:

*I hereby expressly give my consent, should I be notified by the department that the submitted soils assessment for my property is selected for a review and field check, to authorize timely*

access to my property by a DLCD-contracted soils professional to perform a field check to corroborate the information provided in the submitted soils assessment. I understand that failure to authorize access to the property may result in a negative review.

I hereby waive my right to pursue a claim for relief or cause of action alleging injury from the content of soils assessments or from any negative reviews, field checks or audits conducted by the department and any and all soils professionals used by the department under OAR 660-033-0030(5) and (9). I hold these entities harmless and release them from liability for any injury or damage that may occur in conjunction with the submitted soils assessment.

In exchange for the department's review of this submittal under the soils assessment program, I expressly agree to forever waive and give up all claims, suits, actions, proceedings, losses, damages, liabilities, awards and costs of every kind and description, including any and all federal and state claims, reasonable attorney's fees, and expenses at trial (collectively "claims") which I have or may have a right to bring against any agency, department, the state, or their agents, officials or employees arising out of or related to my participation and performance in the soil assessment program, including but not limited to claims for mistake or negligence of the department, the state of Oregon, and their officers, employees and agents. I further agree that the provisions of this Liability Waiver and Release from Federal and State Claims shall be effective and binding upon my heirs, executors, administrators, successors, assigns, beneficiaries, or delegates and shall inure to the benefit of the department, the State of Oregon, and their officers, employees and agents.

David Wilson  
Person who requested soils assessment

1/15/21  
Date

\_\_\_\_\_  
Property owner (if different)

\_\_\_\_\_  
Date

In addition to agreeing to the above, I hereby certify that the attached soils assessment that I performed for the property identified on this form is soundly and scientifically based and meets the reporting requirements established by the department.

[Signature]

\_\_\_\_\_  
Soils professional

1/10/21  
Date

\* Must be from the posted list of qualified soils professionals at: <http://www.oregon.gov/LCD/pages/soilsassessment.aspx>



Wilson- Order 1 Soil Survey Report

RE: OAR 660-033-0030

1). General Information

- a). Order 1 Soil Survey Report—Wilson Property, Oregon
- b). David Wilson
- c). Gary A. Kitzrow, M.S., CPSC/CPSS # 1741, Master of Science
- d). None
- e). Wasco
- f). RE: T2N R12E Sec. 23C TL# 4400
- g). EFU
- h). Zone change
- i). 40.13 Ac./40.13 acres
- j). complete a site-specific soil survey for the above parcel to determine if a preponderance of the property is comprised of generally unsuited soils. The goal is to secure a Plan Amendment Zone Change.

2). Enclosed

- a). Scale of enclosed USDA-NRCS Soil maps: 1:3170;—USDA Soil Legend: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs.
- a). We completed a total of 23 descriptions for the 40.13-acre study site.
- b). December 18-19, 2020
- c). A Backhoe was used to excavate the study area Field texturing was completed; Munsell color chart was used for soil colors; standard soil pH kit was used; field assessment for structure, consistence, pores, drainage class, root distribution, effective/absolute rooting depths and related morphology testing.
- d). Enclosed is a map showing all description locations.
  - 1). 45.63857' N -121.31456' W
  - 2). 45.63825' N -121.31395' W
  - 3). 45.63832' N -121.31380' W
  - 4). 45.63857' N -121.31344' W
  - 5). 45.63876' N -121.31392' W
  - 6). 45.63891' N -121.31370' W
  - 7). 45.64031' N -121.31458' W
  - 8). 45.63857' N -121.31456' W
  - 9). 45.64071' N -121.31207' W
  - 10). 45.64030' N -121.31235' W
  - 11). 45.64063' N -121.31125' W
  - 12). 45.64030' N -121.31113' W
  - 13). 45.64003' N -121.31100' W
  - 14). 45.63979' N -121.31075' W
  - 15). 45.63871' N -121.31071' W
  - 16). 45.63897' N -121.31229' W
  - 17). 45.63804' N -121.31140' W
  - 18). 45.63827' N -121.31133' W
  - 19). 45.63889' N -121.30940' W
  - 20). 45.63926' N -121.30998' W
  - 21). 45.63980' N -121.30980' W
  - 22). 45.64031' N -121.30998' W
  - 23). 45.63926' N -121.30991' W



Pg. 2 T2N R12E Sec. 23C TL# 4400

e). There are excellent correlations of soil mapping units and vegetation for this study area. The dominant Skyline and Bodell soil units are droughty due to shallow bedrock (< 20"), loamy matrices and very high rock content in the case of the Bodell soil mapping unit (10E). Grasses and hardwood are noted on the mapping units and have not been cultivated in perpetuity. The moderately deep Wamic mapping unit is droughty but does have an argillic horizon hence increased water holding capacities and increased clay content in the Control Section. This area is generally tree-free and has been growing grasses for many years. This particular property is very complex with the vegetative and soil communities NOT aspect related.

Regarding the geomorphic surfaces and soil mapping units; the determining factor for mapping No alluvium soils are present.

(f). No limitations were encountered in completing this Soil Survey. It is noteworthy; this portion of the *Wasco County Soil Survey Area* is apparently under-represented regarding USDA Order 3 Reporting Standards and the number and diversity of Soil Mapping Units on the Wasco County USDA Soil Legend. By completing offsite reviews of surrounding properties and detailed Order 1 Soil Survey for the current subject property, Wamic soils are over-represented mapping units given the confirmed diverse and wide range of landforms and geomorphic surfaces in this specific region. Wamic soils are mapped on virtually every landform in this area. Although a pervasive soil series, there are many other soils in this region and we would not expect only one soil to be mapped in such a large geographic domain. Oregon is an extremely diverse state and unlike states such as Iowa where indeed the same soil may be found over a many square mile area, that is not the case in Oregon. This current subject property is a good example of the natural complexity expected in most Oregon areas where hills, valleys and competing landscapes are confirmed.

#### (4) Results, Findings and Decisions:

- (a) The bedrock geology for this land base is basalt mixed with areas in the southwest portion of the property exhibiting a paralithic contact with and without a duripan which all occur at less than 20". Little direct hard rock is noted in this area transitioning from definable soil. Soil development is generally a function of the presence or absence of ejected ash moving into or out from the subject study area. The basalt itself yields very immature, shallow soils when soils erode *from* the site hence the Class 7 (Bodell and Skyline). Conversely, where soil accumulates via erosion (central area and central northern areas), soils deepen up, Soil Capability Class gets better and Wamic soils become dominant. The Wamic soils are more of a function of accretion NOT soil removal but basalt is a common thread underlying all areas on this parcel. Lithic verses paralithic geologic contacts are important on this subject property. Where paralithic contacts are present (SW ¼ and some SE ¼ ) of the ownership, soils shallow-up and the bedrock becomes a more dominant portion of the land capability.
- (b) The landforms present on this study site include planar to planar concave, non-colluvial lava plains and basins with local microsites. In the bottomland area (mid northern property) some mixed alluvium and terrace remnants may be present but are truncated and ill-defined. The soils we found strongly correlate to these landforms. Rolling convex

Pg. 3 T2N R12E Sec. 23C TL# 4400

areas in the northwest 1/4 (north of the developed infrastructure areas) are classified as indistinct uplands showing suited Wamic soils throughout. Contiguous areas due south exhibit ancient infrastructure dating back to the 1980s. The eastern 1/3 of the survey area shows harder bedrock and much rock in the soil profile as a function of the more sharply overt convex slopes some of which face west and northwest. These eastern areas show landforms which are much more dissected and abbreviated as compared with area in the western 1/3. The soils reflect these contrasting landforms. Much of the eastern 1/3 of the ownership exhibits harsh-growing conditions.

- (c) No natural drainageways are confirmed within the parcel. The nearest drainageway is about 2 miles southeast and 4 miles due east.
- (d) Our Order I Soil Survey confirms Skyline, Wamic, Bodell and Infrastructure are the only soil mapping units confirmed on the subject property. Presence or absence of a paralithic geologic contact combined with landscape position principally govern the soil series and mapping units present. The subject property is complex and diverse. Shallow Bodell and Skyline soils are consistently present but are spread out throughout the ownership. Wamic soils are found where ash has eroded from surrounding low hillslopes.
- (e) Previous USDA Survey: 49C Wamic 29.8 Acs.; 50D Wamic 10.5 Acs.; 51D Wamic-Skyline Complex 0.5 Acs. GSEA: Final Order I Soil Survey Mapping units: See attached Soil Map.

(5) Summary and Conclusions:

A slim majority, (preponderance) of this proposed lot is made up of the shallow, generally unsuited Class 7 Skyline, Bodell units and Class 8 Infrastructure. (irrigated and non-irrigated). The lithic, entic Bodell soil mapping units are shallow, very rocky with restrictive rooting capabilities and low water holding capacities. Skyline soils, which are very definable and modal, on this parcel similarly has shallowness due to a somewhat indurated paralithic contact beginning at less than 20 inches consistently. Conversely, Wamic soils are somewhat deeper, have thicker and more defined topsoils with more clay build-up (hence water holding capacity

This study area and legal lot of record is comprised of 51.8% ( 20.79 Ac.) of generally unsuited soils Capability Class 7 and Class 8 by Wasco County and DLCD definitions.

References: Official Soil Series Descriptions USDA NRCS-Wasco County: Bodell, Wamic and Skyline Soil Series

Soil Survey Report, Soil Survey, Wasco County  
Soil Survey Manual, USDA

(6) Attachments:

- (a) Vicinity Map
- (b) NRCS Soil Map for property
- (c) Site Condition map
- (d) Topography map outlining the subject property
- (e) Assessor's map outlining the study parcel
- (f) Revised Order I Soil Map
- (g) Soil Profile descriptions: Wamic, Skyline and Bodell Soils
- (h) Representative Soil profile descriptions

Pg. 4 T2N R12E Sec. 23C TL# 4400

Please call with questions,



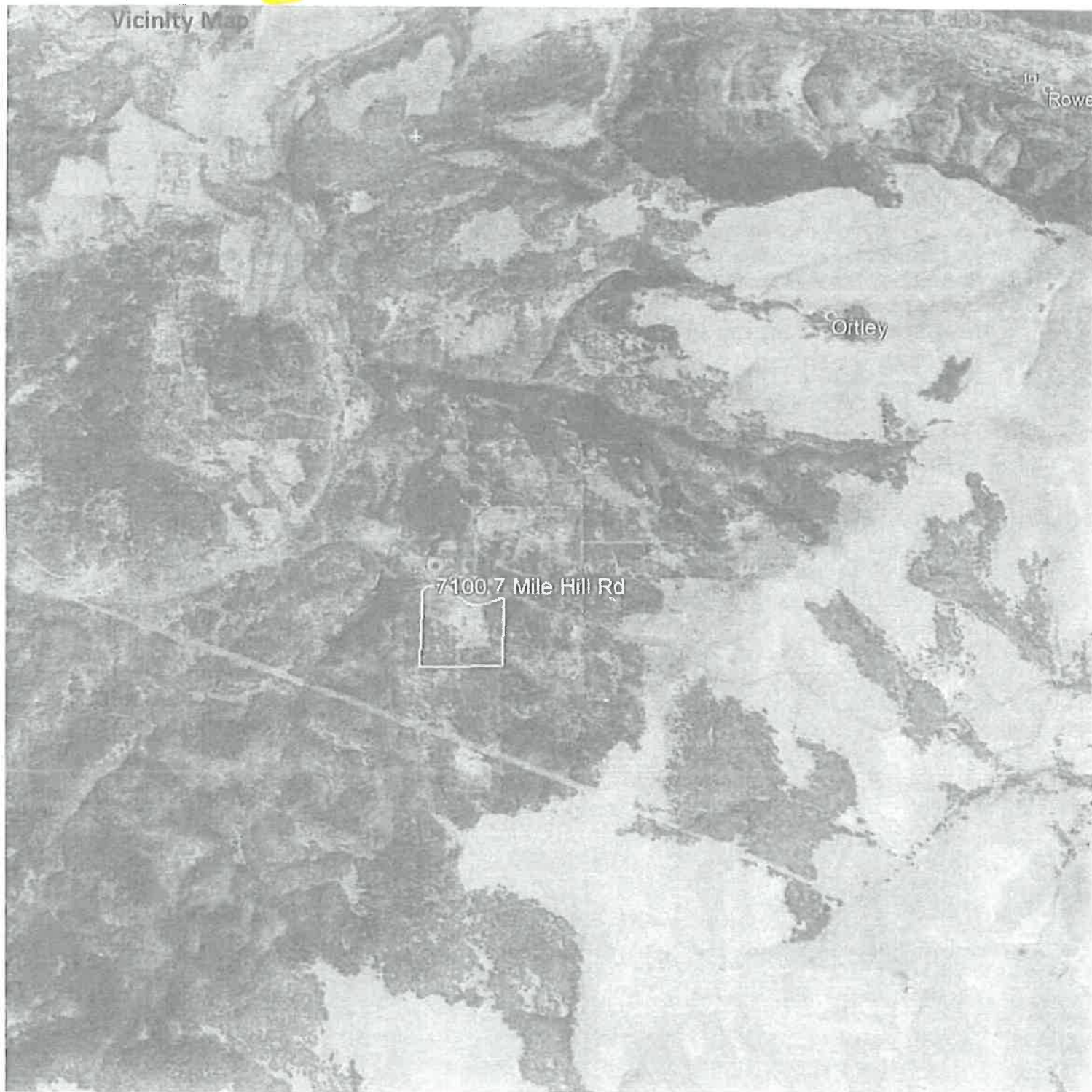
Gary A. Kitzrow, Master of Science  
Certified Professional Soil Classifier, Certified Professional Soil Scientist #1741  
Principal Soil Taxonomist  
GROWING SOILS ENVIRONMENTAL ASSOCIATES



Wilson

T2N R12E Sec. 23C TL# 4400

Vicinity Map



SCALE?





United States  
Department of  
Agriculture

**NRCS**

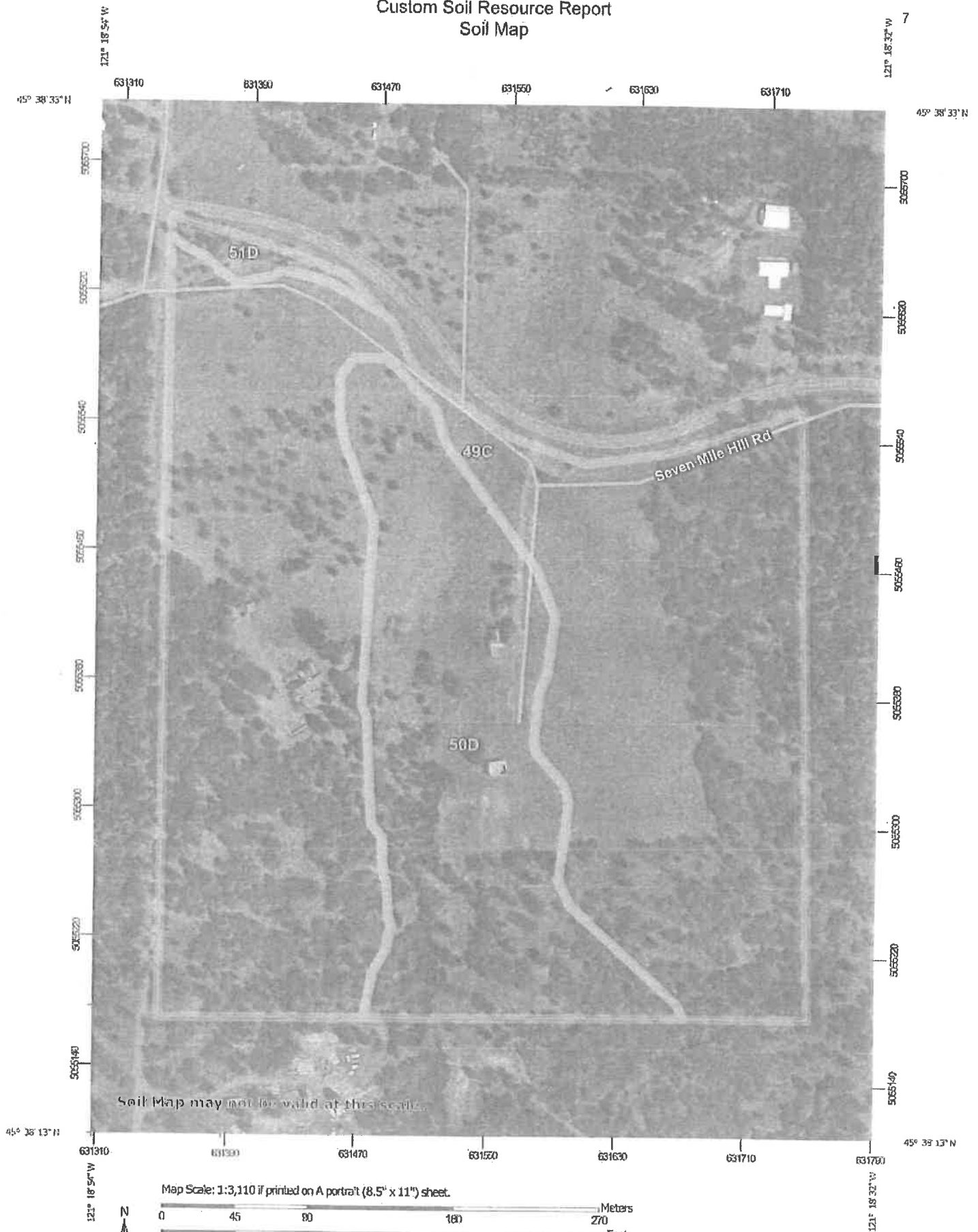
Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

<sup>6</sup>  
**Custom Soil Resource  
Report for  
Wasco County,  
Oregon, Northern  
Part**



# Custom Soil Resource Report Soil Map



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49C	Wamic loam 5 to 12 percent north slopes	28.6	72.0%
50D	Wamic loam, 12 to 20 percent slopes	10.7	26.8%
51D	Wamic-Skyline complex, 2 to 20 percent slopes	0.5	1.3%
Totals for Area of Interest		39.8	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

- Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion.

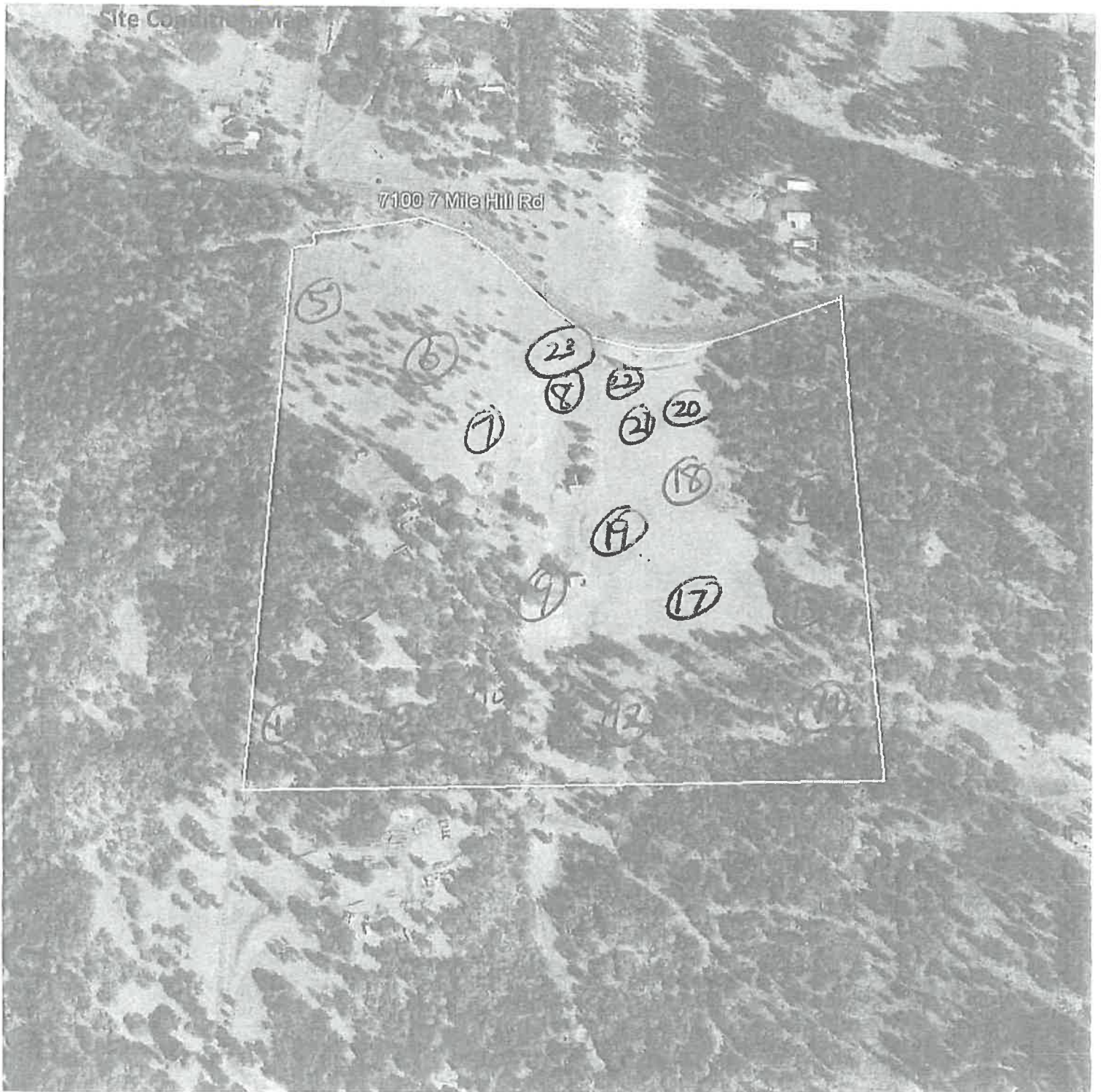
## Report—Land Capability Classification

Land Capability Classification—Wasco County, Oregon, Northern Part				
Map unit symbol and name	Pct. of map unit	Component name	Land Capability Subclass	
			Nonirrigated	Irrigated
49C—Wamic loam 5 to 12 percent north slopes				
	90	Wamic, north	4e	—
50D—Wamic loam, 12 to 20 percent slopes				
	90	Wamic	4e	—
51D—Wamic-Skyline complex, 2 to 20 percent slopes				
	60	Wamic	4e	—
	20	Skyline	7s	—



Wilson

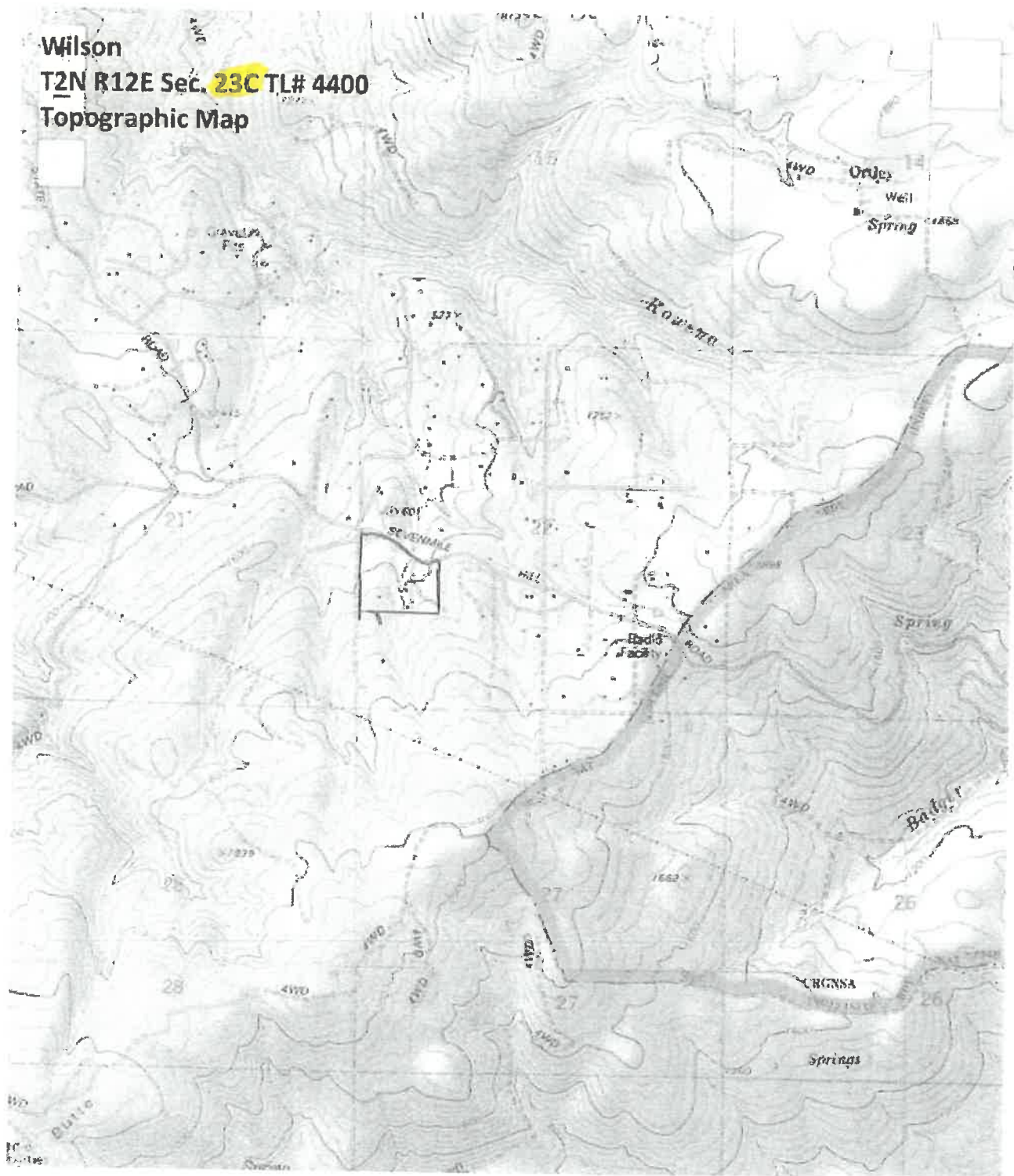
T2N R12E Sec. 23C TL# 4400



- OBLIQUE ANGLE
- SCALE
- SEVERAL POINTS UNREAD-  
ABLE

# The Dalles Topo Map in Wasco County Oregon

11



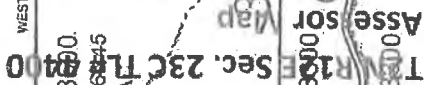
 [Print this map](#)

Map provided by TopoZone.com

## SCALE



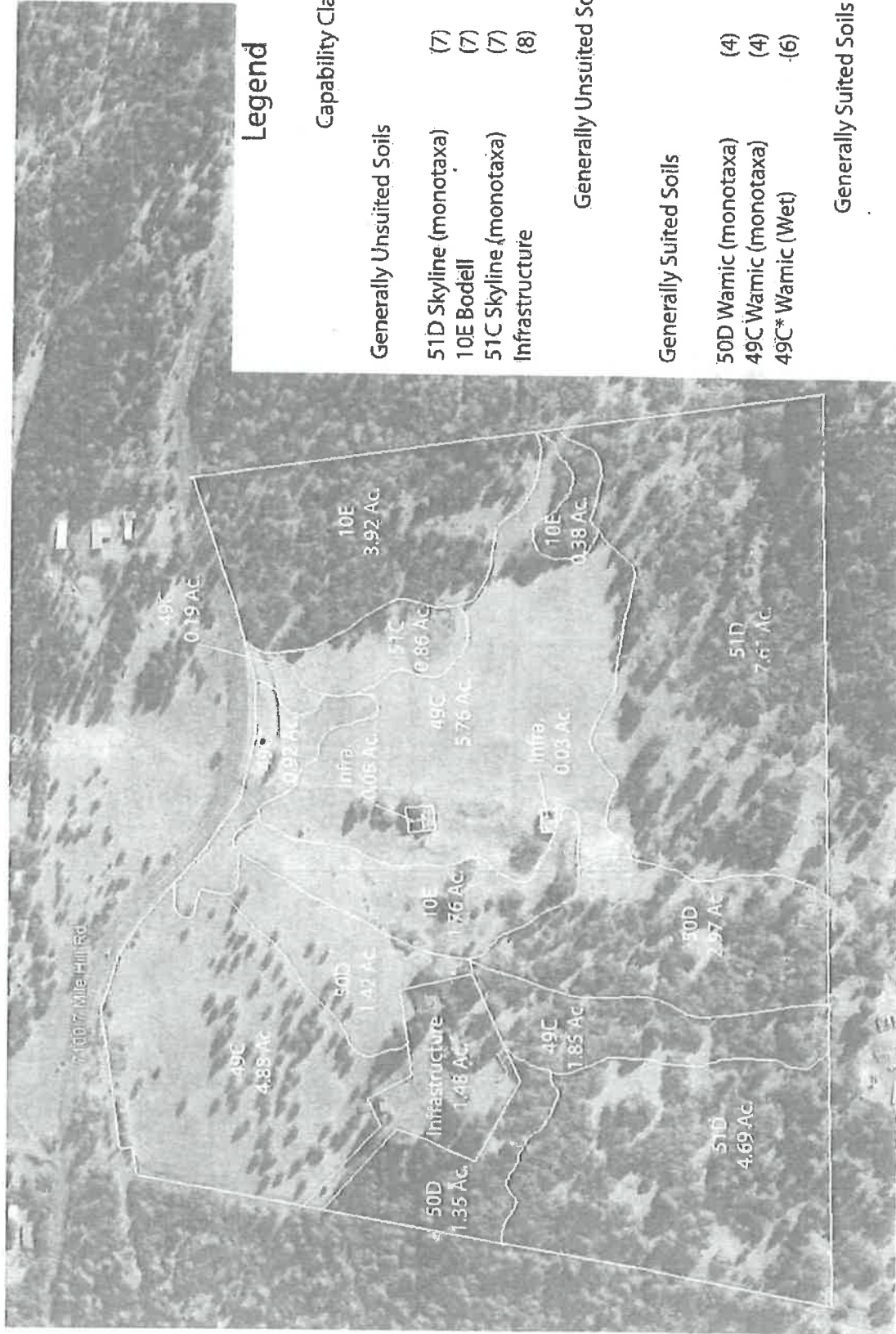
22122



# Wilson Property

Seven Mile Hill Rd  
The Dalles, Oregon  
T2N R12E Sec. 22 TL#4400

## Order 1 Soil Survey



Total Acres: 40.13 Acres  
Percentage of Generally Unsuitable Soils: 51.8%

**• SUITED/ NOT SUITED DOES NOT APPLY**

- OBLIQUE ANGLE
- SCALE?
- SLOPE PHASES NOT DEFINED





impenetrable below  
- 15" poor

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
Stop # (1) Location SW extreme corner  
GPS Coordinates see report  
Slope S Elevation " Landform uplands / hills  
Geology/Genesis ash over sediment  
Vegetation trees ~ 4W

good roots to 15"  
Then Abrupt stop

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR	A	L	1 <sup>st</sup>	10	cm 1-1.5	1 1/2	fr	A	A	X= mod.
BA	6-12	10YR	A	L	1C	7.6	cm 1	2 1/2	fi	A	A	X= mod
B	12-15	10YR	A	L	11	7.6	yes	2 1/2	fi	A	A	X= mod stn.
2CR	15"	+ Dense clay substatum									14 1/2	X= A - None
		Consolidated							Not cemented			X=

~~confidentially discuss~~

Remarks

V Poor Soil  
below 10"

LCC 6  
 Capability Class = Suitability = Gen. suited Gen. unsuited WPHC = >2" (<2")

Classification \_\_\_\_\_ Family Loamy  
Soil Drainage Class W Soil Erodibility Index +29+ Series SKyline  
Hydrologic Group D/K Depth to Mottles 0 Effective Rooting Depth <10 cm  
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to shallow paralithic contact  
Flooding Potential 0 Wetland Conditions 0

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (2) Location SW extreme corner Area  
 GPS Coordinates see report  
 Slope \_\_\_\_\_ Elevation \_\_\_\_\_ Landform uplands / hills / Plateau  
 Geology/Genesis ash over sediment  
 Vegetation HW trees, xerophyte

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-5	10YR 3/2	0	L	1+gr	10	cm 1-2	yes	1 1/2 fr	0	0	x= mod
AB	5-6	10YR 4/2	0	L	1+fin	10	cm 1	yes	1" fi	0	0	x= mod
BC	6-21	10YR 4/2	0	L	11	10	soft	yes	1" fi	0	0	x= mod
2CR	21"+				fractured + saprolitic						(1+)	x=
					Sediments (Alkrent?)							

Remarks

⊕ Abies. tal  
 ⊖ Andic

⊕ Elemental  
 ⊕ Indurated

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Abies. xerophyte Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index 2.7+ Series SKYline  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth <10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential 0 Wetland Conditions 0

## 16

Job Name Wilson / Turtle Hill Date 12/18/20 Preparer Kitzrow  
Stop # (3) Location SW corner  
GPS Coordinates see report  
Slope 1/6 Elevation — Landform uplands / hills  
Geology/Genesis ash over sediment  
Vegetation

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-4	10YR <sup>3/2</sup>	A	L	1591	10	cm <sup>1/2</sup>	yes	1 1/2 fi	A	A	x= Med
AB <sub>2</sub>	4-8	10YR <sup>4/3</sup>	A	L	1m 83	12	cm <sup>1/2</sup>	yes	1 1/2 fi	A	A	x= Med
BC	8-25	10YR <sup>4/4</sup>	B	L	11	10	yes	1 1/2 fi	A	A	x= med. s.l.w	
2CR	25"				highly weathered					14	x= 2+	
Saprolite - Mon ~ 2703												

Remarks \_\_\_\_\_

CC6

- ⊕ highly erodible
- ⊖ Diagnostic hor.
- ⊕ soft fings in control section

Classification \_\_\_\_\_ Family Loamy  
Soil Drainage Class WD Soil Erodibility Index 130+ Series SKyline  
Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"  
Depth Current Water Table A Est Depth Seasonal High Water Table A  
Runoff Potential mod due to shallow paralimic contact  
Flooding Potential A Wetland Conditions A

## 17

Job Name Wilson / 7 mile Hill Date 12/18/2009 Preparer Kitzrow  
Stop # (4) Location Western mid Limb  
GPS Coordinates see report  
Slope 7 Elevation 2 Landform uplands / hills  
Geology/Genesis ash over sediment  
Vegetation Trees - live & upland shrubs

freely drained



## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Brown  
 Stop # 5 Location NW 1/4, near access Rd  
 GPS Coordinates see enclosed report  
 Slope 7 Elevation  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	A	L	1+gr	<15	yes	1"	fr	+	+	mod
BW	6-17"	10YR 4/3	+	L	1m, f	<10	yes	1"	fr	+	+	mod
BW	17-24"	10YR 4/3	+	L	"	10	yes	1"	fr	+	+	mod
BC	24-29"	10YR 5/4	+	L	"	12	yes	1 1/2"	fr	+	+	mod
R	29"	basalt (fractured)										X
		⊕ Lithic										

Remarks

-AP

⊕ Bt but close

minimal medial properties  
No low BD

Capability Class 4 Suitability = (Gen. suited) Gen. unsuited WHC = >2" <2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index  Series Wamak  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth   
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rock  
 Flooding Potential + Wetland Conditions +

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

East facing slope  
somewhat protected

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Zou  
 Stop # 6 Location NW 1/4 - Above steeper drop off  
 GPS Coordinates see enclosed report  
 Slope 10% Elevation → Landform inland / low rolling hill / Basin  
 Geology/Genesis residuals / colluvium  
 Vegetation monocots, scattered trees (open grown)  
Hardwoods

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-8	10YR 5/2	+	L	1m	15	yes	1"	fr	+	+	mod
BW	8-16	10YR 4/3	+	L	1.5m	10	yes	1"	fr	+	+	mod
BW	16-31	10YR 4/4	+	L	"	15	yes	2"	fr	+	+	mod
BC	31-37	10YR 4/4	+	HL	"	10	yes	2"	fr	+	+	mod
R	37"	basalt										X

Remarks

-AP  
CBT

HL = ~ 28-30" clay

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification mesic Xerochrepts Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index → Series Wanam  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth →  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rock  
 Flooding Potential -A Wetland Conditions +

# Growing Soils Environmental Associates

20

1D slope" north of house (SOD)

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # 1 Location West central Edge  
 GPS Coordinates see report  
 Slope 7 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation tree - conifer + Hw

### BRIEF PROFILE DESCRIPTION

DNA

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-6	10YR	A	L		10	yes 1 1/2	fr		A	A	X= mol
AB	6-9	10YR	A	L		10	yes 1 1/2	fr		A	A	X= mol
BW	9-30"	10YR	A	L		10	yes 1 1/2	fr		A	A	X= mol
2CR	30"			Saprolitic							1+ X=	
				Sediment							2+	
											X=	
											X=	

Remarks

borderline

Wanna

LC6

Capability Class 7b Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification fine loamy, mixed, mesic Typic xerochryps Family Loamy

Soil Drainage Class wp Soil Erodibility Index 24-26 Series SKYLINE / wemy

Hydrologic Group A Depth to Mottles A Effective Rooting Depth <10"

Depth Current Water Table A Est Depth Seasonal High Water Table A

Runoff Potential mod due to shallow paralimic contact

Flooding Potential A Wetland Conditions A

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

*steep, dry East face slope*

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzenow  
 Stop # 8 Location North central portion  
 GPS Coordinates see report  
 Slope 14 Elevation ~ Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation few hardwoods & xerophytes - mostly open

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-3	10YR 3/3	D	CB L	1mR	25	cm L	yes	1/1	F <sub>r</sub>	0	0 x= mod
BC	3-11	10YR 4/3	D	CB L	1C	30	cm L	yes	1/1	F <sub>i</sub>	0	0 x= mod
BC	11-18	10YR 7/4	D	CB L	mass	35	yes	2/1	F <sub>i</sub>	0	0	mod slow
R	18" +	Basalt / Geo. contact										0 x=
												x=
												x=

Remarks

*→ A clay 2° to 1 in PM to basalt*

*LCC6*

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Family Lo-5/6/6/2

Soil Drainage Class WD Soil Erodibility Index .27 Series Bodell

Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to rocky, shallow soils

Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/18/20 Preparer K. Trow  
 Stop # (9) Location paid property  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 2/2	D	CB 1/9	1/9	25	cm 1-2	yes	1 1/2"	0	0	X= mod
BC	6-12	10YR 4/3	D	9/1	1/1	30	cm 4	yes	f	0	0	X= mod
BC	12-18	10YR 4/4	D	CB	1/1	35	yes	f	f	0	0	X= mod slow
R	18"			Basalt / Geo. contact							0	X=
												X=
												X=

Remarks

next to old house

LCC 6

skip microsit

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Family Lo-S/K/et2

Soil Drainage Class WD Soil Erodibility Index

Series Badell

Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5"

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to rocky, shallow soils

Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzrow  
 Stop # (10) Location mid south East  
 GPS Coordinates see report  
 Slope 10 Elevation " Landform uplands / hills  
 Geology/Genesis ash over sediment  
 Vegetation Trees w/ nat'l open area w/ forbes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	10YR <sup>3/2</sup>	0	L	1C	cm	1	yes	1 1/2 (fr)	10	0	x=
Bw	* 6-14	10YR <sup>4/3</sup>	0	L	1C	cm	1	yes	1 1/2 fi	10	0	x=
Bw	14-30	10YR <sup>4/3</sup>	0	L	1C	cm	1	yes	1 1/2 fi	10	0	x=
2CR	30"										1+ x=	0
											2+	
											x=	
											x=	

Remarks

Wanna on steep  
10' slope

Capability Class 7 Suitability = Gen. suited Gen. unsuited VHC = >2"

Classification fine-textured mixed mesic Family Loamy

Soil Drainage Class W.D. Soil Erodibility Index 24-2 Series Styke

Hydrologic Group B Depth to Mottles 0 Effective Rooting Depth <10 cm

Depth Current Water Table 0 Est Depth Seasonal High Water Table 0

Runoff Potential mod due to shallow paralimic contact

Flooding Potential 0 Wetland Conditions 0

A

# Growing Soils Environmental Associates

Clay content  $\bar{X} = 20-22\%$

Strong CC 7<sup>24</sup>

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 mile Hill Date 12/18/20 Preparer Kitzerow  
 Stop # (11) Location SE corner of property  
 GPS Coordinates see report  
 Slope 11 Elevation — Landform uplands / hills  
 Geology/Genesis ash over sedimentary Andesite basalt  
 Vegetation solid trees HW & a few conifers

284° ASPECT

### BRIEF PROFILE DESCRIPTION

PODSITE

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
-------	-------	-------------	------	------------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-4	10YR	+	L	149	cm	1	10	yes 1 1/2	fr	+	+	x= mod
---	-----	------	---	---	-----	----	---	----	-----------	----	---	---	--------

AB	4-6	7.5YR	+	L	1 fm	cm	55	10	yes 1 1/2	fi	+	+	x= mod
----	-----	-------	---	---	------	----	----	----	-----------	----	---	---	--------

BC	6-5	7.5YR	+	L	11	5	yes 1	fi	+	+	+	+	x= mod slow
----	-----	-------	---	---	----	---	-------	----	---	---	---	---	-------------

2CX vs 2CR	15				dist. d	CR	X	X			1+ x=	+	
------------	----	--	--	--	---------	----	---	---	--	--	-------	---	--

CR Mohr  
2 to 3

Duripin C 15"  
No rooting  
Ability

Remarks

reddish

Diagnostic

ARD = 15" !

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" (<2")

Classification Entic Abrupt Durochepts Family Loamy  
 Soil Drainage Class WD Soil Erodibility Index .24 Series SKyllike  
 Hydrologic Group D/C Depth to Mottles + Effective Rooting Depth <10"  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to shallow paralithic contact  
 Flooding Potential + Wetland Conditions +

BRE 22"

# Growing Soils Environmental Associates

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Small Inclusion  
slope Area

Compared into

Transition between 49C &  
50D

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer K. T. Z...  
Stop # 8(12) Location South central Area - 100' N of S. W. border  
GPS Coordinates see enclosed report  
Slope 16 Elevation --- Landform upland / Low rolling hill / Basin  
Geology/Genesis residuals only  
Vegetation trees mixed monocots - 15' tall hardwood

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Set Intake
-------	-------	-------------	------------	------	--------	------	-----------	----------	-----------	-------------	-----------	------------

A	0-6	10YR 3/3	0	L			cm <15	yes 1"	fr	0	0	x= mod
BW <sub>1</sub>	6-9	10YR 3/3	0	L			cm 5	yes 1"	fi	0	0	x= mod
BW <sub>2</sub>	9-15	7.5YR 5/4	0	9L			15	yes 1 1/4"	fi	0	0	x= mod
BC	15-20	7.5YR 5/4	0	9L			15	yes 2"	fi	0	0	x= mod
(2R) 20"		basalt								0	0	x= xstn

R begins @ 50" & between 20 & 50" xstn per m &

APPEARS TO BE INCLUDED IN AREA MARKED LCC7

Borderline Wamic + SKyline

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Fi-loamy Family Fi-loamy  
Soil Drainage Class WD Soil Erodibility Index --- Series Wamic/Skyline  
Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth ---  
Depth Current Water Table --- Est Depth Seasonal High Water Table ---  
Runoff Potential mod due to basalt rock  
Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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ARD=27" ~~mod~~ modd wamic but a little shallower  
SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. T. Zrow  
Stop # 13 Location SE Edge of hay field  
GPS Coordinates see enclosed report  
Slope 4-6 Elevation  Landform upland / low rolling hill / Basin  
Geology/Genesis residual - basalt  
Vegetation monocots

near steep "E" slope where there is a major soil change ??  
BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib bon	Con sist	Andic Smear	Indur Cem	Sat Intake
A	0-5	10YR 2/2	L	1 fm 95	cm 1-2	yes	1"	fi	mod	mod	mod	mod
BW <sub>1</sub>	5-14	10YR 4/3	L	1+ 5BK 10	cm 1"	yes	1"	fi	mod	mod	mod	mod
BW <sub>2</sub>	14-20	10YR 5/4	L	95	" 15	yes	1"	fi	mod	mod	mod	mod
BC	20-28	7.5YR 5/2	L	195	" 15	yes	1"	fi	mod	mod	mod	mod
2CR	28"	basalt - highly weathered - saprotitic										

Even distribution from top to bottom upper 15+"  
Remarks: good moderately deep soils  
possibly mottled in upper 1"

Even soil distribution top to bottom

Capability Class 4 Suitability = (Gen. suited, Gen. unsuited) WHC >2" <2"

Classification Vt. and Xerochrepts Family Fi-loamy  
Soil Drainage Class WD Soil Erodibility Index 2.4 Series Wamic  
Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
Runoff Potential mod due to basalt rock  
Flooding Potential 0 Wetland Conditions 0

Parallel, thin contact

# Growing Soils Environmental Associates

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Model B = dell

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. T. Zrow  
 Stop # 14 Location East Limits near opening  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes, dissipated

ARD = 22"

### BRIEF PROFILE DESCRIPTION

landscape =  
Floral Diversity

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat	
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake	
A	0-4	10YR 3/2	B	stony Hgr	L	25	cm 1	yes	2 1/4	f	0	0	x= mod
BC	4-17	10YR 3/4	D	CB	1 m	30	cm 1-2 1/4	yes	2 1/4	f	0	0	x= mod
BC	17-24	10YR 3/1	D	CB	1	35	yes	2 1/4	f	0	0	0	x= mod to slow
CR/R	21"	Basalt / Geo. contact									0	0	x= X
		Fractured large											x=
		Lithic contact boulders											x=

Remarks

Opacalithic

✓ CC 10

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lithic Abrisptic Family Lo-5/6/etel  
 Soil Drainage Class WD Soil Erodibility Index 25-30 Series Badel (10E)  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth <5 ft  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils, dissipated  
 Flooding Potential 0 Wetland Conditions 0 landscape

# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Trow  
 Stop # 15 Location NE 1/4 ~ 80' west of prop. limits  
 GPS Coordinates see report  
 Slope 15% Elevation ~ Landform Low Hillslopes (west face)  
 Geology/Genesis resistant basalt  
 Vegetation Dense Hardwoods, Xerophytes, no monocots  
Balsam root

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-6	10YR 3/2	Δ	VCB	1M9	cm	25	yes	24	Δ	Δ	x= mod
BC	6-14	10YR 4/3	Δ	CB	1C	cm	30	yes	Δ	Δ	Δ	x= mod
BC	14-20	16YR 4/4	Δ	stony	(DNA)	3.5	yes			Δ	Δ	x= mod slow
R	20"	Basalt / Geo. contact									Δ	x=
												x=
												x=

Remarks

ARD = 18"  
VCC 6 Diagnostic horizon

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Family

Soil Drainage Class WD Soil Erodibility Index 2.5 Series Bodol  
 Hydrologic Group A Depth to Mottles Δ Effective Rooting Depth <5"  
 Depth Current Water Table Δ Est Depth Seasonal High Water Table Δ  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential Δ Wetland Conditions Δ

# Growing Soils Environmental Associates

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highly skeletal :: CC 7 V Wt

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer K. Trow  
 Stop # 10 Location NE Extreme corner  
 GPS Coordinates see report  
 Slope 6-8 Elevation → Landform low hill slopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
<u>A</u>	<u>0-7 10YR</u>	<u>D</u>	<u>V&amp;B</u>	<u>L</u>	<u>25</u>	<u>yes</u>	<u>cm</u>	<u>fr</u>	<u>14</u>	<u>0</u>	<u>0</u>	<u>mod</u>
<u>BW</u>	<u>7-20 10YR</u>	<u>D</u>	<u>VCB</u>	<u>L</u>	<u>40</u>	<u>yes</u>	<u>cm</u>	<u>fr</u>	<u>14</u>	<u>0</u>	<u>0</u>	<u>mod</u>
<u>BC</u>	<u>20-25 10YR</u>	<u>D</u>	<u>VCB</u>	<u>L</u>	<u>35</u>	<u>yes</u>	<u>cm</u>	<u>fr</u>	<u>14</u>	<u>0</u>	<u>0</u>	<u>mod slow</u>
<u>R</u>	<u>25+</u>	<u>Basalt / Geo. contact</u>										

Remarks

Stringly skeletal

ARD = 25"

LCC 6

Overtly convex

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification Lo-skeletal Andic Xerodry Family Lo-skeletal  
 Soil Drainage Class WD Soil Erodibility Index 27 Series Bodell  
 Hydrologic Group A Depth to Mottles A Effective Rooting Depth 45"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



# Growing Soils Environmental Associates

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## SOIL PROFILE DOCUMENTATION SHEET

49C

Job Name Wilson Date 12/19/12 Preparer K. T. Brown  
 Stop # 17 Location SE 1/4 open hay field  
 GPS Coordinates See Report  
 Slope 5 Elevation  Landform upland  
 Geology/Genesis residual basalt  
 Vegetation no trees, dead grasses + mums

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-6	7.5YR 3/2		L	1M	5	cm	1/1	fr	wk		x=
Bw	6-11	4/3		L	1C	5	cm		fr	lt		x=
Bw	11-18	5/4		L	1M	5			fr			x=
BC	18-29			L	1C	5		2"	UG			x=
CR	29 1/4											x=

Remarks geologic contact close by  
medial ??

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" 2"

Classification Andic Xerochrepts Family fi lo  
 Soil Drainage Class WD Soil Erodibility Index 24 Series Wamuk  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth 10"  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential Low due to soil depth  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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hargh site

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/14/20 Preparer K. Zerow  
 Stop # 18 Location NE 1/4  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform low hillslopes microsite  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

Thin topsoil

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
<u>A</u>	<u>0-2</u>	<u>10YR</u>	<u>0</u>	<u>stony</u>	<u>L</u>	<u>25</u>	<u>yes</u>	<u>24</u>	<u>ifr</u>	<u>0</u>	<u>0</u>	<u>x= mod</u>
<u>BC</u>	<u>2-11</u>	<u>10YR</u>	<u>0</u>	<u>stony</u>	<u>L</u>	<u>30</u>	<u>yes</u>	<u>24</u>	<u>f</u>	<u>0</u>	<u>0</u>	<u>x= mod</u>
<u>B</u>	<u>11-17</u>	<u>10YR</u>	<u>0</u>	<u>stony</u>	<u>L</u>	<u>35</u>	<u>yes</u>	<u>24</u>	<u>f</u>	<u>0</u>	<u>0</u>	<u>x= mod slow</u>
<u>17YR</u>	<u>hard Basalt / Geo. contact</u>										<u>0</u>	<u>x=</u>
												<u>x=</u>
												<u>x=</u>

Remarks

Perched Hott  
table due to  
hard Rock

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Soil Drainage Class WD Soil Erodibility Index 12.0 Family Lo-S/G/le/2  
 Hydrologic Group A Depth to Mottles A Series Bodell  
 Depth Current Water Table 2.0 Est Depth Seasonal High Water Table 2.0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

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Sited

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/18/20 Preparer Kitzrow  
 Stop # 19 Location Mid Property  
 GPS Coordinates see enclosed report  
 Slope 3 Elevation 1 Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots only (slight depression nearby = localized relief)

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott	Text Clay%	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A	0-7	10YR 2/2	+	L	1 f, m	<15	yes	1"	f	+	+	mod
BW <sub>1</sub>	7-14	10YR 2/2	+	L	1 m	SBK	yes	1"	f	+	+	mod
BW <sub>2</sub>	14-21	7.5YR 5/4	+	L	1 m, c	f SBK	yes	1"	f	+	+	mod
BW <sub>3</sub>	21-29	7.5YR 5/4	+	L	mass is still	10	yes	1"	f	+	+	mod
CR	29"	basalt fractured -					X					X
R	>45"	borderline saprolitic										

Remarks:

ARD 225 to 30" Good Model Wanic  
 No Argillite but good cambic

Capability Class 4/6 Suitability = (Gen. suited, Gen. unsuited) WHC = >2" <2"

Classification \_\_\_\_\_ Family Fi-loamy  
 Soil Drainage Class WD Soil Erodibility Index \_\_\_\_\_ Series Wanic  
 Hydrologic Group A Depth to Mottles + Effective Rooting Depth \_\_\_\_\_  
 Depth Current Water Table + Est Depth Seasonal High Water Table +  
 Runoff Potential mod due to basalt rock  
 Flooding Potential + Wetland Conditions +

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / 7 Mile Hill Date 12/19/20 Preparer Kitzerow  
 Stop # 20 Location North end  
 GPS Coordinates see report  
 Slope 6-8 Elevation ~ Landform Low hillslopes  
 Geology/Genesis resistant basalt  
 Vegetation Hardwoods, Xerophytes

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
A	0-7	10YR 3/2	B	Stony		25	yes	2"	f	e	e	x= mod 22
BC	7-11	10YR 4/3	D	CB		30	yes		f	e	e	x= mod slow
BC	11-20	10YR 4/4	D	CB		35	yes		(f)	e	e	x= mod slow
CR	20-4	Basalt / Geo. contact					(Indurital)					
M.h.s hard $\approx$ 2.5-3												
can chip with tile spade												

Remarks

LCC 6

Capability Class 7 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Soil Drainage Class WD Soil Erodibility Index 24 Family Lo-S/K/lat  
 Hydrologic Group A Depth to Mottles A Series Bode / 1/5KX  
 Depth Current Water Table 0 Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to rocky, shallow soils  
 Flooding Potential 0 Wetland Conditions 0



**Wilson****T2N R12E Sec. 23C TL# 4400****Typifying Pedons****Wamic**

A 0-8" loam; 10YR 3/2; weakly smeary, low bulk density weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

Bw1 8-16" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

Bw2 16-26" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

BC 26-38" loam; 10YR 5/4; weak fine, coarse sub angular structure parting to blocky; firm; slightly sticky, non plastic; 5% cobbles; few fine roots; pH. 7.6

38"+ Paralithic contact, indurated but non-cemented basalt; non-calcareous

**Bodell**

A 0-5" stony loam, 10YR3/3, 20% gravels, 15% cobbles; friable, weak fine granular structure; few fibrous roots, non-sticky, non-plastic, clear wavy boundary pH=7.7

Bw 5-10" very cobbly loam, 10YR5/4, 10% gravels, 25% cobbles; friable consistence, weak fine, medium sub angular-blocky structure; no roots; slightly sticky, non- plastic, pH=7.9

BC 10-16" cobbly loam, 10YR5/4, 5% gravels, 25% cobbles; very firm consistence, weak medium subangular blocky structure; common interstitial and tubular pores; slightly-sticky, non- plastic, pH=7.9

16"+ hard, Massive Basalt; non-saprolitic, lithic

**Skyline**

A 0-3" loam; 10YR 3/2; non-smeary, weak fine, medium granular structure; friable; slightly sticky, non-plastic; 10% cobbles; common fine and medium roots; clear wavy boundary

BC1 3-11" loam; 10YR 4/3; weakly smeary, moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 10% cobbles and stones; few fine roots; gradual, wavy boundary, pH 7.4

BC2 11-18" loam; 10YR 4/3; moderate fine, coarse sub angular structure; firm; slightly sticky, non-plastic; 5% cobbles and gravel; clear smooth boundary, pH 7.6

18"+ Paralithic contact, sedimentary origin

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49C#

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
 Stop # 23 Location North central extreme  
 GPS Coordinates see enclosed report  
 Slope < 4 Elevation:  Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots

## BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib-	Con-	Andic	Indur	Sat
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake
AB	0-5	10YR <sup>3/2</sup>	0	L	1f m	cm	L	yes	1" f	0	0	x= mod
BW	5-18	10YR <sup>2/4</sup>	0	L	1C	cm		yes	1 1/2" f	0	0	x= mod
BW	18-30	10YR <sup>5/6</sup>	0	L	1C, m	cm		yes	1" f	0	0	x= mod
B	30-35	10YR <sup>5/6</sup>	1E	L	1C	cm		yes	1" f	0	0	x= mod
CR	35	basalt - saprolite						Mott = 0 x= 3 or 2				

Estimated  
 Remarks: Transient water table  
not SBK

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification  Family Fi-Isamy  
 Soil Drainage Class WD Soil Erodibility Index 2.4 Series Wanik wet  
 Hydrologic Group A Depth to Mottles 0 Effective Rooting Depth   
 Depth Current Water Table A Est Depth Seasonal High Water Table 0  
 Runoff Potential mod due to basalt rock  
 Flooding Potential 0 Wetland Conditions 0

# Growing Soils Environmental Associates

49C\* = wet<sup>35</sup> phase

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. T. Brown  
 Stop # 22 Location North central extreme limits  
 GPS Coordinates see enclosed report  
 Slope < 2 Elevation    Landform upland / Low rolling hill / Basin  
 Geology/Genesis residuum  
 Vegetation monocots isolated Picea wet forbs

\* DTM = 35"

### BRIEF PROFILE DESCRIPTION

Lowest elevation  
in parcel +  
lowest landscape

Horiz	Depth	Moist	Mott	Text	Struct	Frag	Ball	Rib	Con-	Andic	Indur	Set
		Color		Clay%			Hold	bon	sist	Smear	Cem	Intake

A	0-7	10YR 2/2	+	L	1f m/c	cm	yes	1/4	f	+	+	mod
---	-----	----------	---	---	--------	----	-----	-----	---	---	---	-----

BW	7-14	10YR 3/3	+	L	1m c	cm	yes	2/4	f	+	+	mod
----	------	----------	---	---	------	----	-----	-----	---	---	---	-----

BW <sub>2</sub>	14-30	10YR 5/4	+	HL	1c	cm	yes	2/4	f	+	+	mod slow
-----------------	-------	----------	---	----	----	----	-----	-----	---	---	---	----------

BC	30-35	10YR 6/4	+	HL	??	cm	yes	2/4	f	+	+	mod slow
----	-------	----------	---	----	----	----	-----	-----	---	---	---	----------

CR	35"	basalt - fracture										X
----	-----	-------------------	--	--	--	--	--	--	--	--	--	---

Abt geo contact

1.6-2" / hr

Remarks Brownish than upslope Areas  
no rock

Capability Class 4 Suitability = Gen. suited Gen. unsuited WHC > 2" < 2"

Classification    Family Fi-loamy  
 Soil Drainage Class MWD Soil Erodibility Index 128+ Series Wanukwet  
 Hydrologic Group A/A Depth to Mottles 12" Effective Rooting Depth < 10"  
 Depth Current Water Table 54" Est Depth Seasonal High Water Table 40-50"  
 Runoff Potential mod due to basalt rock  
 Flooding Potential + Wetland Conditions +

# Growing Soils Environmental Associates

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hydrology alteration area  
20 to 7 mile Hill Rd

Border de pression  
Area

## SOIL PROFILE DOCUMENTATION SHEET

Job Name Wilson / Seven Mile Date 12/19/20 Preparer K. Tzou  
Stop # 21 Location North Central Extreme  
GPS Coordinates see enclosed report  
Slope 43 Elevation      Landform upland / Low rolling hill / Basin  
Geology/Genesis residuum + some colluvium  
Vegetation monocots, isolated Pac monocots

### BRIEF PROFILE DESCRIPTION

Horiz	Depth	Moist Color	Mott Clay%	Text	Struct	Frag	Ball Hold	Rib- bon	Con- sist	Andic Smear	Indur Cem	Sat Intake
A		10YR 3/2	L	1cm	9/15	yes	1"	f				mod
BW <sub>1</sub>		10YR 3/3	L	1cm	5BK 10	yes	2"	f				mod
BW <sub>2</sub>		10YR 4/3	L	"	10	yes	2"	f				mod
BC		2Y 10YR (10)	H	"	5	yes	1 3/4"	f				mod
R	55"	basalt weathered										

Remarks

25Y-  
inter pore  
locations

Highly erodible

Wet warm  
Hot fall

Capability Class 4/6 Suitability = Gen. suited Gen. unsuited WHC = >2" <2"

Classification

Family Fi-loamy

Soil Drainage Class WD Soil Erodibility Index 27-35 Series Warm

Hydrologic Group A Depth to Mottles 38" Effective Rooting Depth

Depth Current Water Table 54" Est Depth Seasonal High Water Table 50" or less

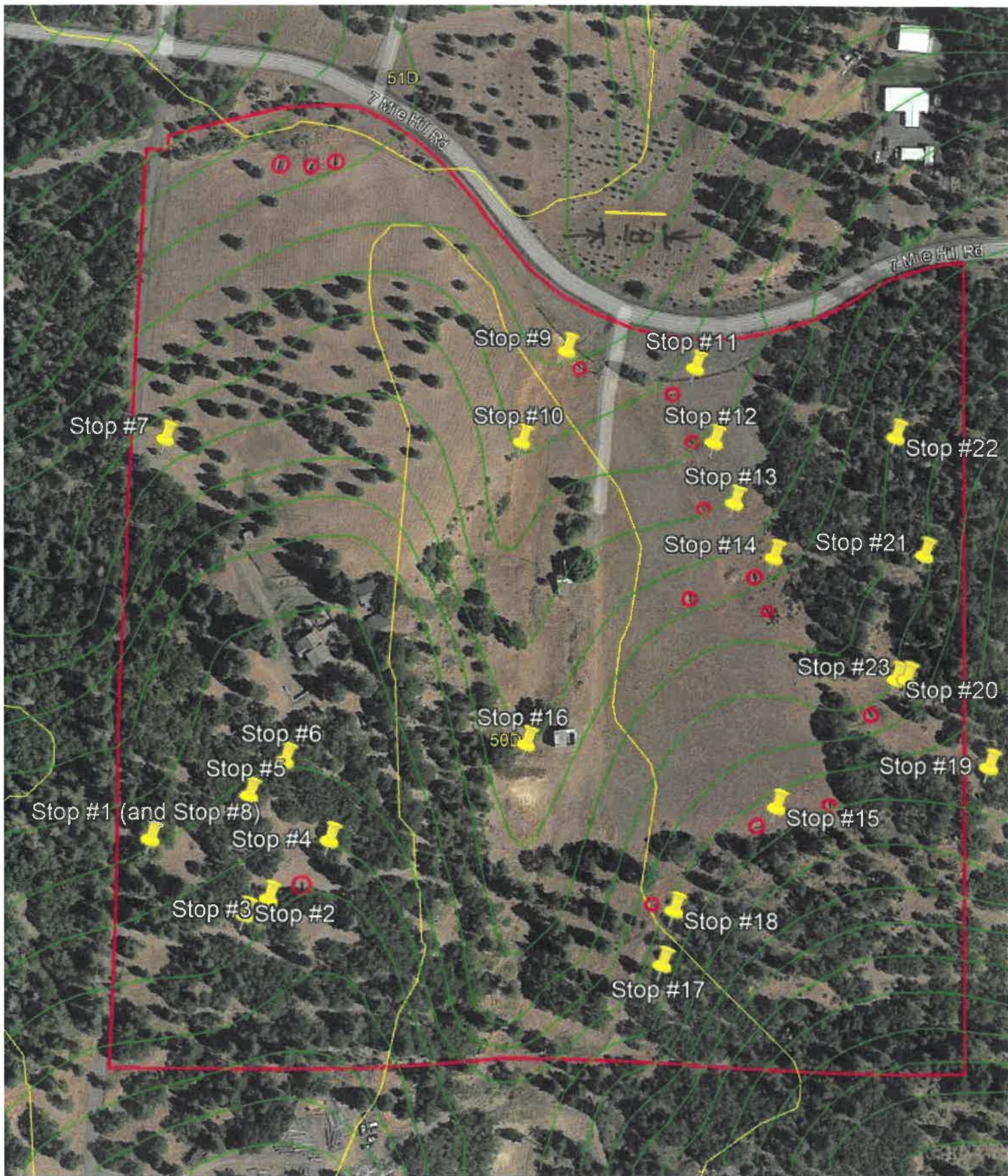
Runoff Potential mod due to basalt rock

Flooding Potential 0 Wetland Conditions 0 to 1



## **Appendix D.**

**Google Image of Site  
(July 24, 2021)**



1  
N

1" ~ 200'

○ - VISIBLE TEST PITS

## **Appendix E.**

### **Guide for Placing Soils in Capability Classes in Oregon**



## Guide for Placing Soils in Capability Classes in Oregon

Cap- abil- ity Class	Depth Inches		Surface Soil Texture		Permeability within Effective Depth in./hr. <sup>1</sup>	Max Slope % <sup>2</sup>		Erosion Hazard	Available Water Capacity <sup>4</sup> (in.) to 60 inches	Drainage Class	Overflow	Alkali & Salinity <sup>5</sup>	Frost Free Days 32° F <sup>6</sup>	E.L.P. Irr. <sup>7</sup>	E.L.A. Dry <sup>8,9</sup>
	W.C.	Dry	W.C.	Dry		W.C.	Dry								
I	≥40	≥40	SL to SCL	VFSL to SCL	0.2 - 6.0	≤3	≤3	None or Slight	≥7.5 ≥1.5 ft.	Well & Mod. Well	None to Rare	Free 0-4	≥140	32° 20	32° 20
II	≥40	≥40	SL to SCL Gravelly	SL to SCL Gravelly	0.06 - 20.0	≤5	≤12	Moderate	≥5.0 ≥1.0 ft.	Somewhat Excessive to Somewhat Poorly	Occasional (1 in 10 yrs)	Slight 4-8	≥100	32° 14	32° 14
III	≥20	≥40 <sup>3</sup>	LS to C & organic CB or GR	LS to C & organic CB or GR	<0.06 - 20.0	≤8	≤20	High	≥3.75 ≥0.75 ft.	Excessive to Poorly	Frequent (1 in 5 yrs)	Mod- erate 8-15	≥70	10	10
IV	≥10	≥20	S to C ST or GRV	S to C, GRV, CBV, or ST	<0.06 - >20.0	≤12	≤35	Any	≥2.5 ≥0.5 ft.	Excessive to Poorly	Frequent (1 in 5 yrs)	Strong >15	≥50	5	5
V	≥20	≥20	Any-GRV, CBV, or STV	Any-GRV, CBV, or STV	<0.06 - >20.0	≤3	≤3	None or Slight	≥3.0	Somewhat Excessive to Very Poorly	Very Frequent (each yr)	Slight <8	Any	4	10
VI	≥10	≥10	Any-GRV, CBV, or STV	Any-GRV, CBV, or STV	Any	-	≤60	Any	≥2.0	Any	Any	Any	Any	4	8
VII	Any	Any	Any-CBX or STX	Any-STX	Any	-	≤90	Any	Any	Any	Any	Any	Any	-	2
VIII	Any	Any	-	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	-	-

<sup>1</sup> Permeability of the least permeable subsurface horizon.

<sup>2</sup> The irrigated column refers to surface irrigation systems. The dryland column includes non-irrigated and sprinkler systems.

<sup>3</sup> Available water between field capacity and wilting point.

<sup>4</sup> Alkali soils have exchangeable sodium in excess of 15 percent.

<sup>5</sup> Temperature and Water Balance for Oregon Weather Stations. Special Report 150, May 1963. Oregon Agric. Exp. Sta. Column figures are minimums.

<sup>6</sup> Udic soils with excessive cloud cover (precipitation in excess of 60 or 70 inches) excluding coastal terraces and coastal bottom lands are Class VI up to 60 percent slopes and Class VII above 60 percent slopes.

<sup>7</sup> Depth to fragipan may be 30 or more.

<sup>8</sup> Poorly drained when protected by dikes and pumped.

<sup>9</sup> Depth to fragipan may be 20 or more.

<sup>10</sup> Very poorly drained when protected by dikes and pumped.

<sup>11</sup> All C<sub>2</sub> methods regardless of slope.

Subclass - use w, s, and only on 0 to 3% slopes; use e above 3% slopes.



**Appendix F.**

**Official Series Descriptions for  
Skyline, Wamic and Bodell**

Established Series  
Rev. DFA/GLG/AON  
12/1999

## SKYLINE SERIES

The Skyline series consists of shallow, well-drained soils that formed in loess, ash and colluvium weathered from sedimentary bedrock. These soils are on uplands and have gently sloping to very steep slopes. The mean annual precipitation is about 17 inches and the mean annual air temperature is about 48 degrees F.

**TAXONOMIC CLASS:** Loamy, mixed, superactive, mesic, shallow Typic Haploxerolls

**TYPICAL PEDON:** Skyline very cobbly loam, rangeland. (Colors are for moist soil unless otherwise noted.)

**A1**--0 to 2 inches; very dark grayish brown (10YR 3/2) very cobbly loam, grayish brown (10YR 5/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 20 percent fine and medium pebbles; 25 percent cobbles and 10 percent stones; neutral (pH 6.8); abrupt smooth boundary. (1 to 6 inches thick)

**A3**--2 to 9 inches; very dark grayish brown (10YR 3/2) very cobbly loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots and many very fine tubular pores; 10 percent fine pebbles and 15 percent cobbles; neutral (pH 6.9); clear smooth boundary. (4 to 9 inches thick)

**B2**--9 to 14 inches; dark brown (10YR 3/3) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots and many very fine tubular pores; 15 percent pebbles and 10 percent cobbles; neutral (pH 6.9); abrupt wavy boundary. (5 to 7 inches thick)

**ICr**--14 to 16 inches; dark brown (10YR 4/3) semiconsolidated sandstone bedrock and very hard.

**TYPE LOCATION:** Wasco County, Oregon; about 1,000 feet north of country road in the NE1/4 NE1/4 NW1/4 section 26, T. 1 S., R. 12 E.

**RANGE IN CHARACTERISTICS:** In most years the soils are usually moist but are dry in the moisture control section for more than 90 consecutive days during the 4 months following the summer solstice. They are moist throughout the moisture control section for 90 days or more following the winter solstice. The mean annual soil temperature ranges from 47 to about 54 degrees F. Thickness of solum and depth to the paralithic contact range from 12 to 20 inches. Rock fragments (2 mm. to 10 inches in diameter) range from 20 to 55 percent in the A horizons and 10 to 30 percent in the B horizons and average 20 to 35 percent in the control section. Amount of surface stones ranges from 5 to 20 percent. The control section is loam and has 12 to 18 percent clay.

The A horizon has value of 4 or 5.5 dry, 2 or 3 moist, and chroma of 2 or 3 moist dry. It has weak or moderate structure.

**COMPETING SERIES:** These are the Balder, Kuhl, Stukel and Tollhouse series. Balder soils are fine-loamy, have 18 to 27 percent clay and overlie volcanic tuff. Kuhl and Stukel soils have lithic contacts. Tollhouse soils are coarse sandy loam or sandy loam and have 20 to 50 percent coarse sand or very coarse sand.

**GEOGRAPHIC SETTING:** The Skyline soils are on gently sloping to very steep uplands at elevations of 500 to 3,500 feet. The soils formed in mixed loess and volcanic ash and colluvium over partially weathered sedimentary bedrock. The climate is semiarid with moist winters and dry summers. The mean annual temperature is about 45 to 52 degrees F., the mean January temperature is about 32 degrees F., and the mean July temperature is about 62 degrees F. The mean annual precipitation is 14 to 20 inches. The frost-free (32 degrees F.) season is 110 to 140 days and for (28 degrees F.) is 140 to 160 days.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the Duart, Frailey, Hesslan and Wamic soils. Duart and Hesslan soils are 20 to 40 inches deep to a paralithic contact. Frailey and Wamic soils are more than 40 inches deep to bedrock.

**DRAINAGE AND PERMEABILITY:** Well-drained; rapid to very rapid runoff; moderate permeability.

**USE AND VEGETATION:** Range. Present vegetation is mainly bunchgrass, forbs, shrubs, oak and pine trees.

**DISTRIBUTION AND EXTENT:** Uplands of north-central Oregon. The series is moderately extensive.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Portland, Oregon

**SERIES ESTABLISHED:** Wasco County, Oregon, 1975.

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NATIONAL COOPERATIVE SOIL SURVEY  
U.S.A.

Established Series  
Rev. GLG/AON/RWL  
12/1999

## WAMIC SERIES

The Wamic series consists of deep, well-drained soils that formed in mixed loess and ash over alluvium and colluvium weathered from basalt or andesite. These soils are on uplands. Slopes are to 70 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 48 degrees F.

**TAXONOMIC CLASS:** Fine-loamy, mixed, superactive, mesic Vitrandic Haploxerepts

**TYPICAL PEDON:** Wamic loam, cultivated. (Colors are for moist soil unless otherwise noted.)

**Ap**--0 to 7 inches; very dark grayish brown (10YR 3/2) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; neutral (pH 6.6); abrupt smooth boundary. (6 to 10 inches thick)

**Bw1**--7 to 18 inches; dark brown (10YR 3/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; neutral (pH 6.7); clear wavy boundary. (0 to 13 inches thick)

**Bw2**--18 to 28 inches; brown (10YR 4/3) loam, light brownish gray (10YR 6/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine and common fine tubular pores; about 2 percent very fine gravel; light gray (10YR 7/2) with dry coatings of very fine sand on faces of peds; neutral (pH 6.8); abrupt wavy boundary. (8 to 15 inches thick)

**2C**--28 to 44 inches; brown (10YR 4/3) heavy loam, pale brown (10YR 6/3) dry; massive; very hard, very firm, sticky and plastic; few fine roots; many very fine and common fine tubular pores; about 2 percent very fine gravel; brown (7.5YR 4/4) when dry thick clay films in nearly all pores and on faces of fractures; neutral (pH 6.8).

**2R**--44 inches; bedrock

**TYPE LOCATION:** Wasco County, Oregon; 100 feet south of road in the northeast 1/4 northwest 1/4 northwest 1/4, sec. 26, T. 2 S., R. 12 E.

**RANGE IN CHARACTERISTICS:** The soils are usually moist but are dry for 60 to 80 consecutive days in more than 7 out of 10 years throughout the moisture control section. The mean annual soil temperature ranges from 47 to 52 degrees F. The thickness of the solum and depth to the 2C horizon ranges from 24 to 36 inches and depth to bedrock is 40 to 60 inches. The control section has 18 to 27 percent clay and more than 18 percent coarser than very fine sand. The solum has hue of 10YR or 7.5YR. The solum is estimated to have a volcanic glass content of 5 to 20 percent and acid oxalate extractable aluminum plus one-half iron of 0.4 to 1.0 percent.

The A horizon has value of 5 or 6 dry, 3 or 4 moist and chroma of 2 or 3 moist and dry. It is very fine sandy loam, loam, or silt loam. This horizon has weak granular or subangular blocky structure.

The Bw horizon has value of 5 or 6 dry and chroma of 2 to 4 moist and dry. It is loam or silt loam.

The C1 horizon, where present, is massive and has few to common very firm noncalcareous nodules 1/2 to 3/4 inch in diameter and is similar to the B horizon in texture. The 2C horizon is heavy loam, clay loam, or sandy



clay loam with 20 to 30 percent clay. It is very hard or extremely hard and firm or very firm. This horizon has brown or reddish brown, moderately thick or thick clay films mostly in pores and fractures but distributed throughout the mass in some pedons.

**COMPETING SERIES:** There are no competing series.

**GEOGRAPHIC SETTING:** The Wamic soils are on uplands and have nearly level to very steep slopes with gradients generally ranging from 0 to 20 percent but ranging to 70 percent in some areas and are at elevations of 1,000 to 3,600 feet. The soils formed in mixed volcanic ash and loess over medium or moderately fine textured alluvium or colluvium weathered from basalt or andesite. The climate is characterized by cool wet winters and hot dry summers. The mean July temperature is 63 degrees F.; the mean January temperature is 37 degrees F. The mean annual temperature is 45 to 50 degrees F. The mean annual precipitation is 14 to 25 inches.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the Bald, Bodell, Frailey, Hesslan, and Skyline soils. These soils are dominantly on steeper slopes with south aspects. Bald soils are loamy-skeletal and are 20 to 40 inches deep to a lithic contact. Bodell soils are grassland soils, have mollic epipedons and are less than 20 inches deep to a lithic contact. Frailey soils are coarse-loamy, have more than 15 percent rock fragments in the control section and lack firm or very hard 2C horizons above depth of 40 inches. Hesslan soils have mollic epipedons, are commonly stony, and are 20 to 40 inches deep to a paralithic contact. Skyline soils have mollic epipedons and are less than 20 inches to a paralithic contact.

**DRAINAGE AND PERMEABILITY:** Well-drained; moderately slow permeability.

**USE AND VEGETATION:** Principal use is for grain production. Other uses are hay and pasture, livestock grazing, woodland and recreation. Vegetation is mainly an overstory of white oak and ponderosa pine. Shrubs are bitterbrush, deerbrush, and snowberry. Idaho fescue is the predominant grass with bluebunch wheatgrass, prairie junegrass and Sandberg bluegrass.

**DISTRIBUTION AND EXTENT:** North-central Oregon; MLRA 6. The series is moderately extensive.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Portland, Oregon

**SERIES ESTABLISHED:** Wasco County, Oregon, 1975.

**REMARKS:** This draft reflects a change in classification from fine-loamy, mixed, mesic Typic Xerochrepts based on the Andisol Order.

Diagnostic horizons and features recognized in this pedon:

Ochric epipedon - from 0 to 7 inches (Ap horizon)

Cambic horizon - from 7 to 28 inches (Bw1 and Bw2 horizons)

Particle-size control section - from 10 to 40 inches.

**ADDITIONAL DATA:** Characterization data on 2 profiles (S57-Oreg-33-8 and 33-9) reported in Riverside Soil Survey Laboratory Report for soils in Wasco, Sherman and Gilliam Counties, Oregon, May, 1959.

Established Series  
Rev. DFA/GLG/RWL  
03/98

## BODELL SERIES

The Bodell series consists of shallow, well drained soils that formed in mixed loess, ash and colluvium weathered from basalt. These soils are on mountains. Slopes are 0 to 75 percent. The mean annual precipitation is about 28 inches and mean annual temperature is about 49 degrees F.

**TAXONOMIC CLASS:** Loamy-skeletal, mixed, superactive, mesic Lithic Haploxerolls

**TYPICAL PEDON:** Bodell cobbly loam, rangeland. (Colors are for moist soil unless otherwise noted.)

**A**--0 to 5 inches; dark brown (7.5YR 3/2) cobbly loam, brown (7.5YR 4/3) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 10 percent gravel and 20 percent cobbles; neutral (pH 6.6); abrupt smooth boundary. (4 to 6 inches thick)

**Bw1**--5 to 13 inches, dark brown (7.5YR 3/3) extremely cobbly loam, brown (7.5YR 4/3) dry; weak medium and fine subangular blocky structure; slightly hard, friable, slightly sticky and plastic; many very fine roots; many very fine tubular and irregular pores; 20 percent gravel and 40 percent cobbles; neutral (pH 6.6); clear smooth boundary.

**Bw2**--13 to 18 inches; dark brown (7.5YR 3/3) extremely cobbly clay loam, brown (7.5YR 4/4) dry; weak fine subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; many very fine irregular and tubular pores; 60 percent cobbles and 10 percent stones; neutral (pH 6.6); abrupt smooth boundary. (combined thickness of the Bw horizon is 8 to 20 inches)

**2R**--18 inches; basalt bedrock.

**TYPE LOCATION:** Wasco County, Oregon; 100 feet north of road in the NW1/4 SW1/4 SW1/4 section 33, T.2N., R.12E.

**RANGE IN CHARACTERISTICS:** The soils are moist in some part of the soil above depth of 12 inches for at least half the time (cumulative) during the period the soil temperature is above 41 degrees F. but are dry between depths of 4 and 20 inches for 60 to 90 consecutive days during the solstice. The mean annual soil temperature ranges from 47 to 55 degrees F. Depth to basalt bedrock is 12 to 20 inches. The solum has hue of 7.5YR or 10YR. The particle-size control section has 18 to 30 percent clay and 40 to 70 percent rock fragments. The upper 4 to 6 inches is estimated to have 10 to 30 percent volcanic glass and 0.4 to 1.0 percent acid oxalate extractable aluminum plus one-half iron. The mollic epipedon is 10 to 20 inches thick. The soil is slightly acid or neutral.

The A horizon has value of 2 or 3 moist, 4 or 5 dry and chroma of 2 or 3 moist and dry. It is cobbly loam, very cobbly loam, or very stony loam. It has 10 to 30 percent gravel, 10 to 30 percent cobbles, and 0 to 35 percent stones.

The Bw horizon has value of 3 or 4 moist, 4 or 5 dry and chroma of 3 or 4 moist dry. It is loam or clay loam and has 18 to 30 percent clay. It has 10 to 60 percent gravel, 10 to 55 percent cobbles, and 0 to 15 percent stones.

**COMPETING SERIES:** These are the Aldax, Bakeoven, Couleedam, Johntom, Lickskillet, Limekiln, Plaskett, Rockly, and Venator series. Aldax soils average less than 18 percent clay and are usually dry. Bakeoven soils are 4 to 10 inches deep to bedrock and are usually dry. Couleedam soils average less than 18 percent clay and are

usually dry (aridic). Johnthom soils are 5 to 15 percent clay in the particle-size control section. Licksillet soils are dry for more than 90 consecutive days. Limekiln soils have a calcic horizon at a depth of 7 to 12 inches. Plaskett soils have a mean annual soil temperature of 55 to 58 degrees F. and average less than 18 percent clay in the particle-size control section. Rockly soils are 4 to 12 inches deep to bedrock. Venator soils are dominated by channery rock fragments throughout the solum.

**GEOGRAPHIC SETTING:** Bodell soils are on moderately steep to very steep generally south-facing side slopes of mountains. Elevations are 200 to 3600 feet. These soils formed in mixed loess, volcanic ash, and colluvium weathered from basalt over basalt bedrock. The mean annual precipitation is 14 to 40 inches. The mean annual temperature is 45 degrees to 51 degrees F., the mean winter temperature is about 31 degrees F. and the mean summer temperature is about 69 degrees F. The frost-free season is 90 to 140 days.

**ASSOCIATED SOILS:** These are the Bald, Ketchly and Wamic soils. Bald soils are on forested side slopes of mountains and are more than 20 inches deep to bedrock. Ketchly and Wamic soils are on forested side slopes of mountains and more than 40 inches deep to bedrock. Also, Ketchly soils have frigid soil temperatures.

**DRAINAGE AND PERMEABILITY:** Well drained; moderate permeability.

**USE AND VEGETATION:** These soils are used for livestock grazing and wildlife habitat. The native vegetation is mainly Idaho fescue, bluebunch wheatgrass, sandberg bluegrass, arrowleaf balsamroot and onspike oatgrass.

**DISTRIBUTION AND EXTENT:** Uplands of north-central Oregon; MLRA 6. The series is inextensive.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Portland, Oregon

**SERIES ESTABLISHED:** Wasco County, Oregon, 1975.

**REMARKS:** Diagnostic horizons and features recognized in this pedon include:

Mollic epipedon - the zone from the surface to 18 inches (A, Bw1, and Bw2 horizons)

Vitrandic feature - the zone from the surface to 5 inches (A horizon)

Particle-size control section - the zone from 10 to 18 inches (lower 3 inches of Bw1 horizon and Bw2 horizon)

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National Cooperative Soil Survey  
U.S.A.

**Appendix G1-G2.**

**Data Tables for available  
water capacity calculation**



## Appendix G1. Adapted from the NRCS Web Soil Survey for Wasco County

Depth Range	Thickness (inches)	Texture	AWHC (in/in)	Coarse Fragments (%)	AWC (inches)
<b>Typical Skyline</b>					
0-2	2	Very cobbly loam	0.18	55	0.16
2-9	7	Cobbly loam	0.18	25	0.95
9-14	5	Gravelly loam	0.18	25	0.68
				<b>Total</b>	<b>1.78</b>
					<b>Web Soil Survey (about 1.8)</b>
<b>Average in/in from web soil survey and as calculated based on coarse fragments adjustments from base</b>					<b>0.13</b>
<b>Typical Wamic</b>					
0-7	7	Loam	0.18		1.26
7-18	11	Loam	0.18		1.98
18-28	10	Loam	0.18	2	1.76
28-44	16	Heavy loam	0.21	2	3.29
				<b>Total</b>	<b>7.04</b>
					<b>Web Soil Survey (about 7.1)</b>
<b>Average in/in from web soil survey and as calculated based on coarse fragments adjustments from base</b>					<b>0.16</b>
<b>Typical Bodell</b>					
0-5	5	Cobbly loam	0.21	30	0.74
5-13	8	Ex. cobbly loam	0.21	60	0.67
13-18	5	Ex. cobbly loam	0.21	70	0.32
				<b>Total</b>	<b>1.72</b>
					<b>Web Soil Survey (about 1.7)</b>
<b>Average in/in from web soil survey and as calculated based on coarse fragments adjustments from base</b>					<b>0.09</b>

### NOTES:

This table contains data from Soil Survey Staff, Natural Resources Conservation Service, retrieved from the web soil survey and official series descriptions (OSD).  
Abbreviations: AWC = available water capacity, in/in = inches per inch, NRCS = Natural Resources Conservation Service.

Appendix G2. Based on Site-Specific Information Presented in the Report

Soil Type	Noted Depth	Depth Range	Thickness (inches)	Texture	AWHC (in/in)	Coarse Fragments (%)	AWC (inches)
Stop #1							
Skyline	shallow	0-6	6	Loam	0.18	10	0.97
		6-12	6	Loam	0.18	1	1.07
		12-15	3	Loam	0.18	1	0.53
		Total					2.58
Stop #2							
Skyline	moderately deep	0-5	5	Loam	0.18	10	0.81
		5-6	1	Loam	0.18	10	0.16
		6-21	15	Loam	0.18	10	2.43
		Total					3.40
Stop #3							
Skyline	moderately deep	0-4	4	Loam	0.18	10	0.65
		4-8	4	Loam	0.18	12	0.63
		8-25	17	Loam	0.18	10	2.75
		Total					4.04
Stop #4							
Wamic		0-6	6	Loam	0.18	10	0.97
		6-18	12	Loam	0.18	10	1.94
		18-24	8	Loam	0.18	10	1.30
		Total					4.21
Stop #7							
Wamic		0-6	6	Loam	0.18	10	0.97
		6-9	3	Loam	0.18	10	0.49
		9-30	21	Loam	0.18	10	3.40
		Total					4.86
Stop #8							
Bodell	shallow	0-3	3	Cb Loam	0.21	25	0.47
		3-11	8	Cb Loam	0.21	30	1.18
		11-18	7	Cb Loam	0.21	35	0.96
		Total					2.60
Stop #9							
Bodell	shallow	0-6	6	Cb Loam	0.21	25	0.95
		6-12	6	Cb Loam	0.21	30	0.88
		12-18	6	Cb Loam	0.21	35	0.82
		Total					2.65
Stop #11							
Skyline	shallow	0-4	4	Loam	0.18	10	0.65
		4-6	4	Loam	0.18	10	0.65
		6-15	4	Loam	0.18	15	0.61
		Total					1.91
Stop #12							
Skyline		0-6	6	Loam	0.18	<15	0.97
		6-9	3	Loam	0.18	5	0.51
		9-15	6	Gr Loam	0.18	15	0.92
		15-20	5	Gr Loam	0.18	15	0.77
		Total					3.17

## Appendix G2. Based on Site-Specific Information Presented in the Report

Soil Type	Noted Depth	Depth Range	Thickness (inches)	Texture	AWHC (in/in)	Coarse Fragments (%)	AWC (inches)
Stop #14							
Bodell	moderately deep	0-4	4	St Loam	0.21	25	0.63
		4-14	10	Cb Loam	0.21	30	1.47
		14-21	7	Cb Loam	0.21	35	0.96
	Total						3.06
Stop #15							
Bodell	shallow	0-6	6	VCb Loam	0.21	35	0.82
		6-14	8	Cb Loam	0.21	30	1.18
		14-20	6	Cb Loam	0.21	35	0.82
	Total						2.81
Stop #16							
Bodell	moderately deep	0-7	7	VCb Loam	0.21	35	0.96
		7-20	13	VCb Loam	0.21	40	1.64
		20-25	5	VCb Loam	0.21	35	0.68
	Total						3.28
Stop #18							
Bodell	shallow	0-2	2	St Loam	0.21	25	0.32
		2-11	9	St Loam	0.21	30	1.32
		11-17	6	St Loam	0.21	35	0.82
	Total						2.46
Stop #20							
Bodell	shallow	0-7	7	St Loam	0.21	25	1.10
		7-11	4	Cb Loam	0.21	30	0.59
		11-20	9	Cb Loam	0.21	35	1.23
	Total						2.92

### NOTES:

Yellow shaded cells highlight areas that differ from conclusions in the report (AWC <2", or "shallow" which is defined as 10" to 20" in depth).

Abbreviations: AWC = available water capacity, in/in = inches per inch, Gr = gravelly, Cb = cobbly, St = stony, VCb = very cobbly.

OREGON TRIAL ATTORNEY  
STATE & FEDERAL COURT

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March 15, 2022

**VIA ELECTRONIC MAIL ONLY**

Wasco County Board of Commissioners  
Attn: Daniel Dougherty, Senior Planner  
2705 East Second Street  
The Dalles, OR 97058  
danield@co.wasco.or.us

RE: File No 921-18-000086-PLNG (Wilson Goal Exception Remand)

Dear Wasco County Board of Commissioners:

These comments are provided on behalf of Sheila Dooley and Jill Barker, petitioners before LUBA in this above-referenced matter when it was appealed from its prior approval. For the reasons set forth below, Wasco County cannot approve the Goal Exception/Zone Change requested by applicant David Wilson. This parcel neither qualifies for a developed exception (as recognized by Staff, as voted on by Planning Commission, and as LUBA held as a matter of law); nor does it qualify for an “irrevocable commitment” exception, as voted on (in a tie, which goes to denial) by Planning Commission.

**DEVELOPED EXCEPTION**

In the interest of keeping the comments on this portion of the application brief, I will point to LUBA’s opinion on this matter (*Dooley v. Wasco County*, LUBA No. 2019-065). LUBA was unequivocal when it held that this property does not qualify for a “developed” exception. Nothing has changed since that time, other than the applicant’s attempt to re-frame the numbers around the extent of development. The law is clear: structures allowed by Goal 4 cannot be counted toward a physically developed exception. *See* OAR 660-004-0025(2). The roads, the dwelling, and the barns are allowed under Goal 4 as incidental to farm uses. The applicant added some buffers to the existing structures on the property, in an apparent attempt to inflate the percent of the property which could be considered developed. The law does not support these buffers. Staff correctly noted these problems with the application, and the draft findings correctly lead to the conclusion that a Developed exception is inappropriate. The Planning Commission agreed, and recommended the developed exception be denied.

**IRREVOCABLY COMMITTED EXCEPTION**

Again here, LUBA’s opinion in *Dooley v. Wasco County* is instructive. The “focal criteria” when analyzing an irrevocably committed exception is the relationship between the subject property and adjacent uses. OAR 660-004-0028(2); *see also*, *DLCD v. Curry County (Pigeon Point)*, 151 Or App 7, 11, 947 P2d 1123 (1997) (holding that the “fundamental test” for



irrevocably committed exception is the relationship between the subject property and the surrounding area); *Converse*, 39 Or LUBA at 441.

OAR 660-004-0028(2) sets forth the relevant factors at play here, which are: the characteristics of the exception area; the characteristics of the adjacent lands; the relationship between the exception area and the adjacent lands; the OAR 660-004-0028(6) factors. Those OAR 660-004-0028(6) factors are more specific considerations of the parcel and its surroundings and how they interact. Since LUBA ruled on the prior application, Mr. Wilson has added very little to the Record here. The primary addition to the Record is a soil survey claiming remarkably (and, in the area, uniquely) low quality soils. This survey stands in contrast to the trees and plants which actually exist on the property.

In any case, as LUBA noted, tracts as small as just two acres qualify for deferral, and can be used for resource uses. There remains, even with this new soil survey, far more than two acres available for resource uses, along with acreage which could support resource uses on adjacent parcels. This additional information does not cure the defects which LUBA noted. I urge the Board to deny this application.

As noted above, the County must demonstrate *how* existing uses on adjacent lands render resource use on the subject property impracticable. *DLCD v. Wallowa County*, 37 Or LUBA 105, 111 (1999). Stated another way, a committed exception “must be based on facts illustrating how past development has cast a mold for future uses.” *1000 Friends of Oregon v. LCDL (Curry County)*, 301 Or 447, 501, 724 P2d 268 (1986). The mere presence of adjoining residential uses is not a sufficient basis for concluding that resource lands are irreversibly committed to non-resource uses. *Gordon v. Polk County*, 54 Or LUBA 351 (2007); *Waymire*, 39 Or LUBA at 452-53. Nor is the “occasional inconvenience” that a rural resident must be willing to accept sufficient to approve a Committed exception. *Friends of Linn County v. Linn County (Schwindt)*, 42 Or LUBA 235, 246 (2002).

While, as with the prior hearing on this matter, staff has once again chosen to rely on a dictionary definition for “impracticable,” there is no shortage of case law on which the County should rely instead for its determination. The standard for impracticability “is a demanding one.” *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508, 519 (1994). The test is **not** one of commercial viability. The question is whether the subject property is capable of generating a gross income. *See, 1000 Friends of Oregon v. Benton County*, 32 Or App 413, 426 (1978).

Reliance upon longstanding adjacent rural uses is insufficient to demonstrate that resource use of the proposed exception area has become impracticable in the absence of recent or imminent changes affecting the subject property. *Wodarczak v. Yamhill County*, 34 Or LUBA 453, 460-461 (1998) (citing *Jackson County Citizens League*, 38 Or LUBA at 365-366). Here, the applicant has provided no new information on this relationship between the subject parcel and the surrounding parcels, and LUBA has already held that on the information as contained in the Record, there is no irrevocable commitment of this property.

## **PLANNING COMMISSION HEARING**

Mr. Wilson provided some updated (if questionable) soil surveys to the Planning Commission, but these do not fundamentally alter the character of the property at issue, nor do these new soil surveys change the actual relationship with this property to the surrounding uses.

That is a question of history, and whether (or how) conflicts with surrounding uses preclude resource uses here. evidence of proximal rural development does not, without evidence of *actual* conflicts, lead to the conclusion that the subject property is irrevocably committed. *Prentice v. LCDC*, 71 Or App 394, 403-404, 692 P2d 642 (1984).

Additionally, at the hearing before the Planning Commission, there was some significant discussion about “profitability.” In Oregon, profitability is a term of art when applied to a Goal 4 exception analysis, and is not one of commercial viability, but instead a question of whether a *gross* income could be earned from the property. *1000 Friends of Oregon v. Yamhill County*, 27 Or LUBA 508, 517-518 (1994) (“[W]e reject the county’s suggestion that it may establish the level of profitability necessary to qualify as a ‘farm use,’ as that term is defined by ORS 215.203, may not be set at such level that would qualify a farm use as a commercial agricultural enterprise. The goals protect and allow farm and forest uses other than commercial agricultural enterprises”).

Ultimately, the Planning Commission recommended denial of the Developed exception, and via a tie vote, recommended a denial of the Irrevocable Commitment exception as well. I would urge you to follow this recommendation, and deny the same.

## SOILS

Staff’s finding here is confusing- it simultaneously describes the different (and if accurate, seemingly anomalous) soil types on this property that make it unsuitable for growing the very trees which satellite views show it growing, while recognizing the surrounding properties on three sides as “actively [in] forest use” but saying nothing of the satellite views showing ponderosa pine trees growing across all properties in the area. Staff Report at BOCC 1-83.

The question, pursuant to OAR 660-004-0028(3) is whether:

- 1) farm use as defined in ORS 215.203;
- 2) propagation or harvesting of a forest product as specified in OAR 660-033-0120; and,
- 3) forest operations or forest practices specified in OAR 660-006-0025(2)(a) are *impracticable* [as defined above].

The historic (and current) existence of ponderosa pine throughout this tract seem to foreclose the idea that propagation or harvesting of a forest product is impracticable here. One look at the “soil suitability map” provided by the applicant, and presented in the staff report at BOCC 1-94 shows that the areas designated “generally unsuitable” are overlayed over large swaths of mature ponderosa pine trees. Not only that, but the soils dubbed “suitable” are largely in mowed areas, or areas where there are sparse trees, contrary to staff’s assertion that those areas are dominated by development. This is flatly not borne out by the very image submitted by the applicant and placed before this body.

Additionally, as LUBA discussed in its opinion remanding this application, “the county’s finding that conflicts with residential uses resulting from spraying are not a basis to find that resource use of the subject property is impracticable.” LUBA No. 2019-065 at 14 (internal citation omitted).

## PROFITABILITY

The question of profitability is relevant to this exception, but only as defined in Oregon law. The County does not have the responsibility of analyzing business plans, or “profitability” in the traditional sense. The test is whether the subject property is “capable, now, or in the future, of being currently employed for agricultural production for the purpose of obtaining profit in money.” ORS 215.203; *Brown v. Jefferson County*, 33 Or LUBA 418, 433 (1996). In this context, the term “profit” “does not mean profit in the ordinary sense, but rather refers to **gross income**.” *Id* at 433-434 (emphasis added)(quoting *1000 Friends of Oregon v. Benton County*, 32 Or App 413, 426, 573 P.2d 651 (1978)). Therefore, if a *gross income* can be obtained from farm use on the subject property, then resource use is practicable, and an exception is unwarranted. *Lovinger v. Lane County*, 36 Or LUBA 1 at 17-18 (1999). The question of gross profit, coupled with the lack of conflicts with surrounding properties (discussed below), would appear to foreclose any question of this goal exception under this case law.

Farm uses can remain practicable on a property not capable of supporting a self-sufficient commercial agricultural operation, or a property where a “reasonable farmer could not make a living entirely from agricultural use of the land.” *Id* at 18-19. In the case at hand, Mr. Wilson’s property currently grows Ponderosa Pine trees, and Oregon White Oak where it is not actively mowed. The existence of trees at that density suggests not only that the soils are of a relatively high quality, as noted on the NRCS maps, but also that a gross income could be obtained from growing trees (or other crops, like feed) on this property. Likewise, the property is currently used for grass hay, which is baled on the property, according to the application. Otherwise, the draft Findings are silent regarding the potential for this property to support the adjacent resource properties currently in forestry use.

Like with farm uses, commercial viability is not the sole measure of practicability for forest uses. To justify an irrevocably committed exception on forest land, Respondent must explain in its findings why the facts upon which it relies lead to a conclusion that all uses allowed by Goal 4 are impracticable. *DLCD v. Klamath County*, 16 Or LUBA at 28. It is insufficient for respondent to address just the feasibility of a commercial forestry operation on the property, rather than potential for any forest use. *Id*. Nor is it enough to conclude that “it would take substantial effort to have a profitable forest operations,” or that resource use is “severely restricted.” *DLCD v. Josephine County*, 18 Or LUBA at 93.

The issue of the soil quality and whether it is sufficient for resource uses must be considered in conjunction with those surrounding tracts, and the portions of Mr. Wilson’s tract, which today do in fact grow ponderosa pine and white oak. This seemingly includes all areas of this subject property which are not mowed or built upon. The balance of the property, as described by the applicant, is used for grass hay and pasture and is baled each year. *See* Staff Report at p. 50, citing 2018 application. Between the capability to grow hay and ponderosa pine trees, the issue of “profit” is completely foreclosed by the applicant’s stated current and past uses of the property.

## RELATIONSHIP TO ADJACENT PARCELS

Staff notes that “a majority of the north, northwest, and east adjacent parcels contain active registered addresses, and are generally smaller in size than those located to the south, southwest, and west.” BOCC 1-83. And further notes that “the size of the subject parcel, and its

historical and current use is more in line with those neighboring north, northwest, and east parcels.” *Id.* However, this isn’t quite true, if one looks at the map immediately preceding this finding. This subject parcel is 40 acres, while the neighboring parcels used to justify this finding are all less than 15 acres. While the applicant seeks to rezone this parcel so that it may in the future be subdivided to smaller parcels more like this, the subject parcel is actually more like the larger parcels to its south and west, which are, as staff describes “in active forestry use” Staff Report at 67.

On page BOCC 1-84 of the Staff Report, a 2013 settlement agreement is cited, noting that “the BPA line has a history of being considered a logical man-made boundary for separating forestry uses from built and residential areas.” The County should proceed with caution here. When approving a committed exception, a County cannot irrevocably commit *other* resource lands to non-resource uses. *Gordon v. Polk County*, 55 Or LUBA 57 (2007). The parcel at issue here does not abut the BPA line (*See* Staff Report at 80), and as such, if the Board uses this as a justification, it would appear to be committing these other adjacent resource lands.

Further, this BPA line is little more than an optical boundary- it provides no meaningful fire break, as seen during the 2020 Mosier Creek fire. *See also*, 2014 Letter from DLCD and ODF at p. 3 (BOCC 1-647). The power line is allowed in the resource zone, so it cannot commit land itself either, because its consideration is limited under OAR 660-004-0028(6) to “utilities lines . . . that effectively impede practicable resource use of all or part of the exception area.” Mr. Wilson has not demonstrated how a power line which bisects existing forestry operations impedes use of his property, which is not bisected by this utility line.

LUBA already held in its Opinion on the first appeal of this application, that the prior findings did not “address the relationship of the subject property to the adjacent approximately 450 acres of F-2 zoned lands located to the west of the property that are in timber production and/or that possess soils suitable for forestry production, or the approximately 2,000 acres of resource land that are in forest use located immediately south of Mr. Wilson’s tract, or the potential for resources use of the property in conjunction with the adjacent F-2 zoned properties.” LUBA No. 2019-065 at \*11-12. Since LUBA made that holding, Mr. Wilson has provided no new information to address these deficiencies, and the explanation in the Staff Report does not materially differ from that in the prior Decision. With no new information in the Record on those points, the County cannot now make a finding sufficient to meet the requirements of a goal exception.

## CONCLUSION

For each of the reasons set forth in this comment, as well as all of the comments provided to Planning Commission, and those provided by my clients directly, and the facts in the whole Record, the applicant has failed to meet the requirements for either a developed, or a committed exception, and the draft findings as presented are insufficient to support a Decision granting this application. This application must be denied.



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Mike Sargetakis  
*Attorney for Sheila Dooley and Jill Barker*



March 15, 2022

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

Phil Swaim  
3300 Vensel Rd.  
Mosier, Oregon

In 2014 DLCD and ODF did not believe the subject property was either Physically Developed or Irrevocably Committed and recommended that the existing zone and plan designations be retained. Their letter in opposition to an earlier rezone application that included this property is on page BC 1-647).

They also had concerns with the idea that the BPA powerline would serve as a fire break in the event of a fire. The Mosier Creek Fire of 2020 proved this as the fire raced across the powerline easement and onto adjoining forestland to the south.

Additional development would push the wildland-urban interface more deeply into forest zone to the detriment of forest management and increase cost and risk of fire, endangering the larger community.

All forest land is bordered by something which makes the argument that there is already development moot. If you are allowing development because it is next to development where does that end?

The original staff report was based on an on-site visit.

The applicant has put forth a new site plan that is drastically different from that in the LUBA Record. Commenting on this application is made difficult as the facts and numbers keep changing. There are non-existent buffer requirements including a 50-foot road setback along Seven Mile Hill Rd. although none is required as per Arthur Smith. This non-existent 50-foot buffer zone contains 60 plus pines of 2 to 40 feet in height.

In regards to the 30' wide easements for power lines, there is no such requirement for underground utilities. The only power lines of concern are those owned and maintained by Wasco Electric Coop. There are no required setbacks for buried lines but on page BOCC 1-49 there is a long list of buried lines with a 30' easement.

The applicant has claimed a total of 10,024 feet of power lines. In reality there appears to be only 450 linear feet of overhead power lines shown on the new site plan.

The applicant has included a buffer of 50' each side from structures. **The Wasco County LUDO does not prohibit trees within 50 feet of a structure.** The 50-foot wide fire fuel break maintenance standards include having trees limbed up approximately 8 feet from the ground and removing underbrush but does not prohibit trees in the buffer zone. **The LUDO encourages trees in the buffer zone to provide shade and cooling. (BOCC 1-640). (LUDO 10.120).**

The original site plan was based on a staff site visit.

None of the square footage of the structures in the original site plan in the LUBA Record (page 9) (BOCC 1-639) match the square footage listed in the Remand Request Letter (PC 1-629).

The dimensions of the log house are shown as 80 x 100 or 8,000 square feet in his letter calculations (BOCC 1-1344) but only 2,660 on the site plan. At the December 7<sup>th</sup>, 2021 Planning Commission hearing the applicant stated that the difference was due to decks surrounding the house. According to the Complete LUBA Record (pg. 1382, PC 1-1383), the house with decks totals 2,680 square feet, not 8,000.

The original staff report that went to LUBA and the new staff report contain contradictory information. For example, the site plan that went to LUBA and the new site plan contain different development and none of the square footage of the buildings match the original square footage.

There are trailer sites on the new site plan but looking at the aerial photograph not such development is visible.

I've been driving past the property under discussion for over 50 years. I have never seen any of the trailer sites that are on the new site plan map.

In the 60's and 70's the Deckers cut and baled hay and grazed livestock. The applicant claims that the soil is no good for either ag use or growing trees. However 2/3 of the 40 acre parcel is tree covered, 90% of the alleged bad soils on the south and east are tree covered. There are over 500 pine trees growing on 28 acres, many that are merchantable. The balance of the acreage, the mowed hay field, is of prime soil type that could grow about anything. Trees would naturally reseed if it was left unmowed, even with Douglas fir, as evidenced by a water course down the center of the property as shown by a willow tree growing there.

Please reject the proposed zone change.

Sincerely,

Phil Swaim

March 15, 2022

RE: File #921-18-000086-PLNG. Land Use Board of Appeals Remand (LUBA No. 2019-065)  
Comprehensive Plan Amendment; Exception to Statewide Planning Goal 4; and Zone Change from  
Forest, F-2 (80) to Forest-Farm F-F (10) by David Wilson

Sheila Dooley  
3300 Vensel Rd.  
Mosier, Oregon

Dear Wasco County Commissioners,

These comments supplement my written testimony and photographs in the BOCC packet starting on  
page BOCC 1-592. The photographs illustrate the following points.

1. Soil survey

The USDA soil survey found the soils to be more productive than average (all class 4) and suited to  
growing Ponderosa Pine and Oregon white oak. These trees as well as fir trees are growing on the areas  
not mowed and are visible in the photographs. (BOCC 1-597-604) (Also Planner Will Smith's LUBA  
Record photographs on page BOCC 3172-3177, June 21, 2018 site visit).

The stated goal of the applicant's soil survey was to show a preponderance of unsuited soils.

They claim that a slight preponderance or 51.8% is made up of generally unsuited soils Class 7 and Class  
8 infrastructure: 20.79 acres generally unsuited and 19.34 acres generally suited, a difference of 1.45  
acres. (Moving just over half that amount ( $\frac{3}{4}$  acre) to the suited side would reverse the outcome.)

In reality this is not the case as there are no class 8 soils on this property. The class 8 infrastructure label  
is based not on the soil type, which is class 4 in these areas, but on structures.

a. Infrastructure

The difference of 1.45 acres can be more than accounted for by areas of class 4 soil misclassified as class  
8 infrastructure. Although there are less than 5,000 square feet of usable structures (.11 acres), there is  
a total of over an acre and a half (1.57 acres) classified as class 8 infrastructure. The area including the  
usable structures (log house and 2 hay barns) also includes large conifer trees, oaks and cleared land  
(photographs on BOCC 1-592-593.)

The Soil Survey aerial photo (BOCC 1-1364) also shows these treed and cleared areas, which include an  
area that appears to be in a corral (photograph on BOCC 1-598 and 1-1390).

If you adjust the totals to account for this, it reverses the percentages of suited and unsuited soils and  
results in:

51.8% suited and 48.2% unsuited. 20.80 acres suited and 19.33 acres unsuited

Including the two unusable structures on the property as infrastructure (.09 acres), results in .2 acres of total infrastructure and still results in a preponderance of suited soil. The metal barn is missing its roof and the decommissioned house is missing an exterior wall and windows. Both are in too poor of condition to be used.

This results in 51.6% suited and 48.4% unsuited acres. 20.71 acres suited and 19.42 acres unsuited

None of the square footage of the buildings in the site plan that went to LUBA match those in the site plan submitted with the remand request. The LUBA site plan square footage is being used here. On June 21, 2018 Planner Will Smith conducted a site visit to verify conditions on the ground.

As an example, the dimensions of the log house are shown as 80 x 100 or 8,000 square feet in the remand letter calculations but only 2,660 on the LUBA site plan. At the December 7<sup>th</sup>, 2021 Planning Commission hearing the applicant stated that the difference was due to decks surrounding the house.

According to the Complete LUBA Record (pg. 1382, PC 1-1383), the house with decks totals 2,680 square feet, not 8,000. The applicant's new site map on page BOCC 1-1390 clearly shows that the additional decks are nonexistent.

In regards to required buffers, the Wasco County LUDO does not prohibit trees within 50' of a structure. Although requires trees to be limbed up 8 feet, trees are encouraged in this area to provide shade and cooling. (BOCC 1-640). (LUDO 10.120).

#### b. Conditions on the ground

The percentage of suited soils is actually much higher based on conditions on the ground as evidenced by the photographs.

The applicant's soil survey classified some areas of the property as class 7 soils and unsuited for growing trees. Photographs of the subject parcel contradict this as numerous Ponderosa Pine, Oregon White Oak and fir trees are present on the property in most of the areas that haven't been mowed. (BOCC 1-597-604; also LUBA record photographs on BOCC 3172-3177).

The areas not used to grow hay on this property are similar in appearance to much of the other Mosier area forest zone properties. Oak, fir and pine trees are often seen growing together throughout the Mosier area. Oak and pine trees are similar in their soil requirements according to the Wasco County Soil and Water Conservation District staff. The oak and pine habitat is a unique habitat of high value to many animal, bird and insect species.

Ponderosa Pine is a suitable tree for reforestation and is a marketable species according to ODF. ODF stated that it is used quite a bit for reforestation in the Mosier area.

#### c. Soil Survey Goal

The soil scientist was hired by the applicant to find a preponderance of unsuited soil. This was not an unbiased survey. Any decisions or assumptions he had to make most likely favored the applicant. The county doesn't have the means to determine the accuracy of the soil survey.



Another consideration is that out of 40 acres, there were a total of 23 test holes dug with the results extrapolated to apply to the areas around them. This involves a margin of error.

There is an additional margin of error to consider when inclusion areas containing different soil types within a soil type are involved. There may be many of these areas present on the property according to Wasco County Soil and Water Conservation District staff.

The soil map dimensions that the soil surveyor submitted favor the supposedly unsuited soil areas as it does not contain 90-degree angles on the south side. The map should have had right angles had it followed the property lines. It is not a direct overhead view but one taken at an oblique angle.

On the soil sheets, several areas tested were borderline as to suitability.

As an example:

Page 20 of the Soil Profile sheets shows 50D (class 4) and Wamic as the soil type, then lists “borderline??” and capability class 7/6 (6 is suitable for forestland). For vegetation, he lists conifers and hardwood trees. For suitability, both “suited” and “unsuited” are circled. (BOCC 1-1371)

The soil map has no scale shown although it should have. The map is also difficult to decipher as many of the test hole site numbers are not visible due to the presence of so many trees. Most of these are in areas that the applicant claims can’t grow trees. (BOCC 1-1361).

#### d. Soil type discrepancies

There are also discrepancies with 2 of the soil types identified in the survey and classified as class 7. These were questioned by the Wasco County Soil and Water Conservation District staff

A. The soil survey of the applicant’s property includes a soil type 51C not found in Northern Wasco County according to *Soil Survey of Wasco County, Northern Part*. This document is included in the staff report to the Planning Commission with soil types listed on PC 1-425 (December 7, 2021 Planning Commission packet). (BOCC 1-430).

B. The soil type 10E Bodell was identified in areas containing Ponderosa Pine and Oregon White Oak, trees that should not be growing on this soil type according to the Wasco County Soil and Water Conservation District (December 7, 2021 Planning Commission Packet, PC -581-582). (BOCC 1-654-655)

e. The letter to Planner Daniel Dougherty from Gary Kitzrow (PC 1-353) states that Skyline is the predominant soil. If you add up the acres of soil types in the Soil Survey Legend, Wamic is the dominant soil type. (BOCC 1-1364).

Skyline 13.16

Wamic 19.34

Bodell 6.06

Also Infrastructure 1.57 on Wamic soil

He also states that there are no proper trees to measure- which is not accurate as there are numerous large conifers, including Ponderosa pine and Douglas fir trees on the property.

## 2. Aerial Photo of Subject Property and Adjoining Area

The applicant states that his aerial photo shows a “moonscape” south of the property. His photograph submitted in the Remand Request appears to have been deliberately overexposed. Areas to the south and east include productive forest, hay and grazing land including that formerly owned by Grant Robbins. The moonscape the applicant refers to is not evident on Google maps of the surrounding area (BOCC 1-604).

The subject property has historically been used for farming, starting from at least the ‘60s if not earlier. Sam Decker farmed property on both sides of the road and had 3 cuttings of alfalfa per year in the mid-70s according to the neighbors. When the property was sold to Larry Black in the late ‘70s he purchased Mr. Decker’s farm equipment (bill of sale attached as Exhibit 1 in my testimony to the Planning Commission) and continued farming the land and also had cattle grazing there in the late ‘70s.

According to his rezone application, David Wilson continued the farm use growing grass hay that is baled each year (December 7, 2021 Planning Commission, PC 1-45). The property also contains merchantable timber (Staff finding in Complete LUBA Record page 1128, BOCC 1-3323)

The staff report to the Planning Commission on December 7<sup>th</sup> stated that “The subject parcel has been removed from farm/forest tax deferral.” (Planning Commission Agenda Packet, December 7, 2021, PC 1-90).

The fact that the applicant has chosen to not farm this parcel beyond growing grass hay, plant trees or let them come back naturally, or reinstate the farm/ forest tax deferral, does not make it less valuable as farm or forest land. Choosing to do this was most likely done to support the claim that the property should be rezoned.

The subject property is part of a 109-acre tract owned by the applicant. Adjoining the 40- acre subject property to the south is a 69-acre parcel owned by the applicant that is in farm deferral. As stated in my written testimony, in 2018 the applicant stated that he needed a 7,000 square foot agricultural exempt building to support his agricultural/farm use. In January 2018 the Wasco County Planning Commission approved his request for retroactive approval of the illegally placed building on appeal (PLAAPL-17-10-001 Wilson Appeal).

At the January 2, 2018 hearing Mr. Sumerfield stated that “Applicant makes substantial income from farm production each year the property has been in deferral.” (Planning Commission meeting minutes of January 2, 2018, page 20). The applicant stated that he planned to farm an additional 20 acres (page 4) and was waiting to plant more alfalfa (page 5). He was plowing additional land adjacent to his 6 acres of barley/oats and planning to expand the farm use and increase the number of cattle grazed (page 16). (January 2<sup>nd</sup> Planning Commission meeting minutes on BOCC 1-616-637).

The Planning Commission found that “the applicant has met the need for the size of the building in conjunction with the existing and future farm use as described in the farm plan.” (January 23, 2018 meeting minutes, page 3). (January 23<sup>rd</sup> Planning Commission meeting minutes on BOCC 1-612-615).

Location & Zone Map on BOCC 1-33: There is no house to the west of the property and the applicant's house is on the adjoining parcel to the south. Both properties are zoned F-2. To the north across the road there is a tree farm. The house on the property to the east is on the other side of that property and located south of the subject property. There is no potential conflict with forestry use.

As the entire record, including the new evidence does not demonstrate that the property is either physically developed to such an extent that it is no longer available for resource use or irrevocably committed to non-resource uses, the rezone request should be denied.

Sincerely,

Sheila Dooley



Planning Department



Wasco County Board of Commissioners  
Public Remand Hearing  
March 16, 2022

Applicant/Owner: Dave Wilson  
(921-18-000086-PLNG)



# Agenda

- Overview of the Request and Area Involved
- History & Scope of Remand Hearing
- Applicable Rules
  - OAR 660-004-0025
  - OAR 660-004-0028
- Questions

# Overview of the Request & Area

## Request

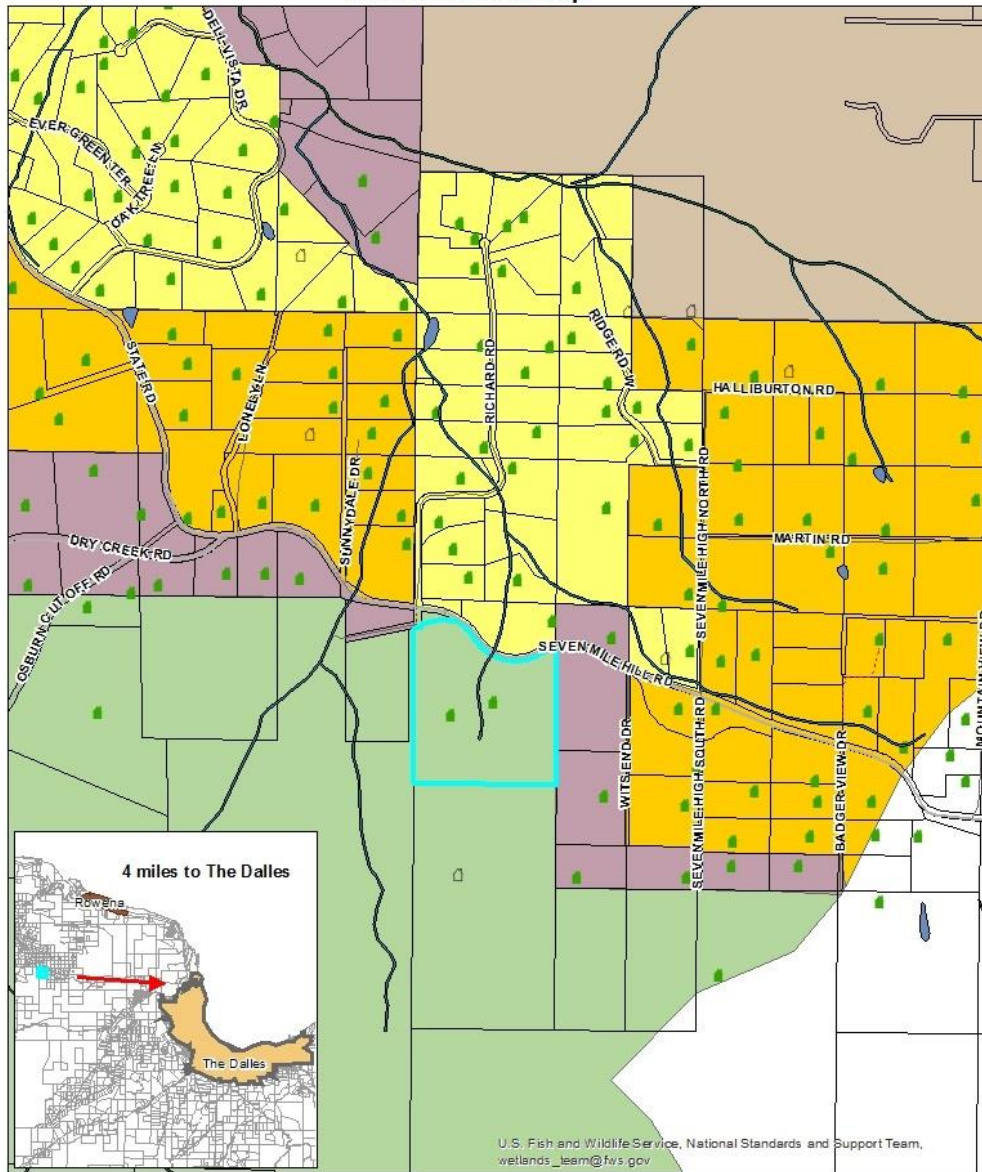
1. Comprehensive Plan Map Amendment: Change a legal parcel designated “Forestry” to “Forest Farm”;
2. Exception to Statewide Planning Goal 4 – Forest Lands; and
3. Zone Change: Change a legal parcel zoned Forest (F-2) Zone to Forest-Farm (F-F 10) Zone (Non-Resource) (remove from resource zone protections)

## Scope of Remand Hearing

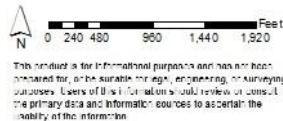
- Staff findings and the Planning Commission’s recommendations made were limited to OAR 660-004-0025 and OAR 660-004-0028.

# Vicinity Map & Surrounding Zones

Location & Zone Map



- |          |         |                   |
|----------|---------|-------------------|
| A-1(160) | R-R(10) | Riverine          |
| F-2(80)  | R-R(5)  | Freshwater Pond   |
| F-F(10)  |         | Wilson Property   |
|          |         | Taxlots           |
|          |         | Unknown Addresses |
|          |         | Addresses         |



## Subject Parcel

Map & Tax Lot: 2N 12E 22 4400

Tax Account No.: 884

GIS Acres: 40.16



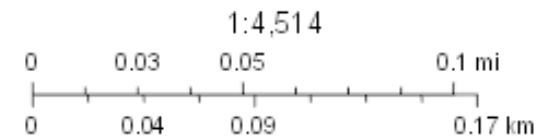
# Subject Parcel Vegetation



**Subject Parcel**

**Map & Tax Lot: 2N 12E 22 4400**

**Tax Account No.: 884**



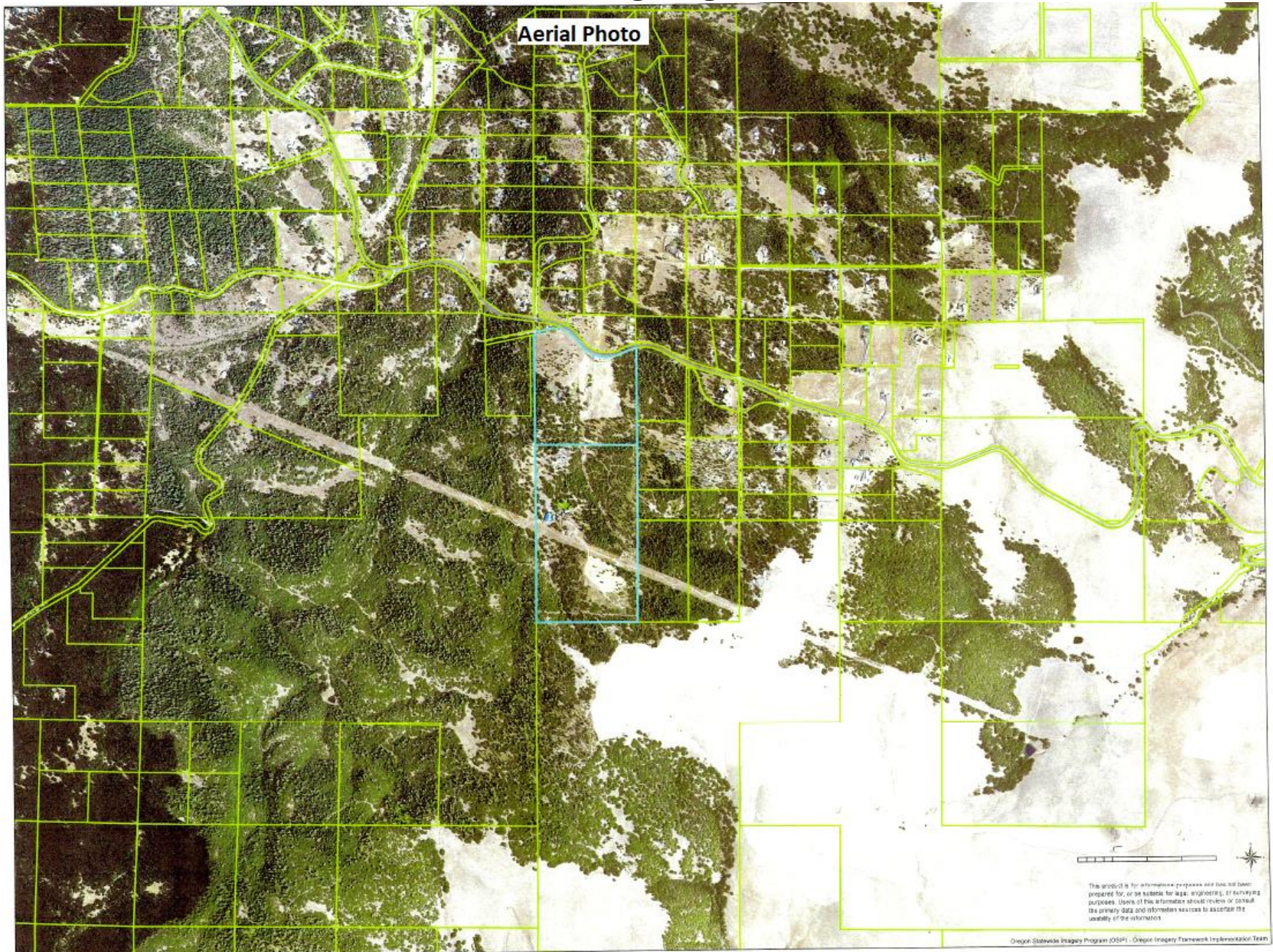
© OpenStreetMap (and) contributors, CC-BY-SA, Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team, Wasco County GIS, DOGAMI, State of Oregon, Wasco County GIS, Lane County, Assessor's, Wasco County GIS

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# Surrounding Vegetation





# History & Scope of Remand Hearing

## History of Request

- Initial application submitted on May 23, 2018
- WC-Planning Commission Hearing on April 2, 2019 (Recommended Approval)
- WC-Board of Commission Hearing on June 5, 2019 (Approved)
- Appealed to the Land Use Board of Appeals (LUBA)
  - Decision Remanded on January 14, 2020
- Request for Remand Hearing received on June 13, 2021
- Planning Commission Hearing on December 7, 2021
  - OAR 660-004-0025 (Recommend Denial)
  - OAR 660-004-0028 (tie (3-3) vote, Recommend Denial per WC-PC Bylaws)

# *OAR 660-004-0025*

## *OAR 660-004-0025*

### *Exception Requirements for Land Physically Developed to Other Uses*

- (1) A local government may adopt an exception to a goal when the land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal. Other rules may also apply, as described in OAR 660-004-0000(1)*
- (2) Whether land has been physically developed with uses not allowed by an applicable goal will depend on the situation at the site of the exception. The exact nature and extent of the areas found to be physically developed shall be clearly set forth in the justification for the exception.*

# *OAR 660-004-0025*

## *OAR 660-004-0025*

### *Exception Requirements for Land Physically Developed to Other Uses*

- (1) Applicant must demonstrate that because the parcel is so physically developed, resource use is precluded.
  
- (2) Situation at the Site of Exception
  - Specific area(s) must be shown on a map or described and keyed to findings;
  - Identify the extent and location of the existing physical development;
    - Structures, roads, sewer and water facilities, and utility facilities
  - Roads cannot be used to justify physically developed exception



# OAR 660-004-0025

## Applicant Site Map

### Applicant Estimates

- Power Lines / 15' from center line
- Structures / 50' (fire fuel break)
- Seven Mile Hill Road / 50' buffer
- Driveway Easement / 50' buffer

Total = 571,187 ft<sup>2</sup>

### Total

32.81% of total area

(See Attachment D Exhibit 4)



# OAR 660-004-0025

## Staff Information & Estimates

- *Chapter 10 Fire Safety Standards*
  - *Section 10.120 - Defensible Space – Clearing and Maintaining a Fire Fuel Break*
    - *50 foot fire fuel break around structures*
  - *Section 10.140 - Access Standards - Providing safe access to and escape from your home*
    - *A fire fuel break extending 10 feet either side of the center line of the driveway is required*
- Public Road Maintenance Area (4-6' on each side of county road)
- Power Line Maintenance Easement Area (15' from centerline)



## Staff Estimates

- Actual Development = 14,620 SF
  - Structural Fire Break = 113,500 SF
  - Access Drive Fire Break = 67,740 SF
  - Power Line Easement = 112,800 SF
  - Public Road Maintenance = 6,690 SF
- Total = 315,350 SF

## Total

18% Physically Developed



# OAR 660-004-0025

## Staff Findings & Planning Commission Recommendation

- *Sandgren v. Clackamas County*, facts must demonstrate the property is physically developed to such an extent that all resource uses are precluded.
- *Dooley et al v. Wasco County*, impracticability of Goal 4 uses caused by existing physical development is not the standard for a physically developed exception request.

**PLANNING COMMISSION RECOMMENDATION:** Pertaining to OAR 660-004-0025, the Planning Commission concluded that the parcel does not meet the required standards of OAR 660-004-0025, and recommended that the Wasco County Board of Commissioners deny the request based on the physically developed exception.



# OAR 660-004-0028

## OAR 660-004-0028

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

*(1) A local government may adopt an exception to a goal when the land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable:*

- Impracticable is the standard not Impossible
- 1000 Friends of Oregon v. Yamhill County, the impracticable standard is a demanding one.
- Impracticability is demonstrated through the relationship between the exception area (subject parcel) and the lands adjacent to it.

# OAR 660-004-0028

## OAR 660-004-0028(2)(a)-(c)

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2)(a): The characteristics of the exception area*

*(2)(b): The characteristics of the adjacent lands*

*(2)(c): The relationship between the exception area and the lands adjacent to it*

- The focal point of analysis is the relationship between the subject parcel and adjacent uses.

# OAR 660-004-0028(2)(a)

## OAR 660-004-0028

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2) Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

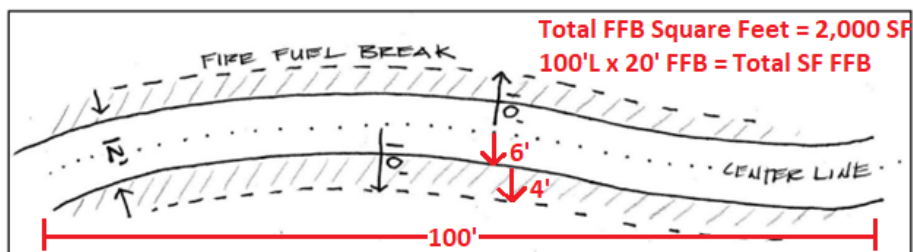
*(a) The characteristics of the exception area;*

#### Staff Analysis

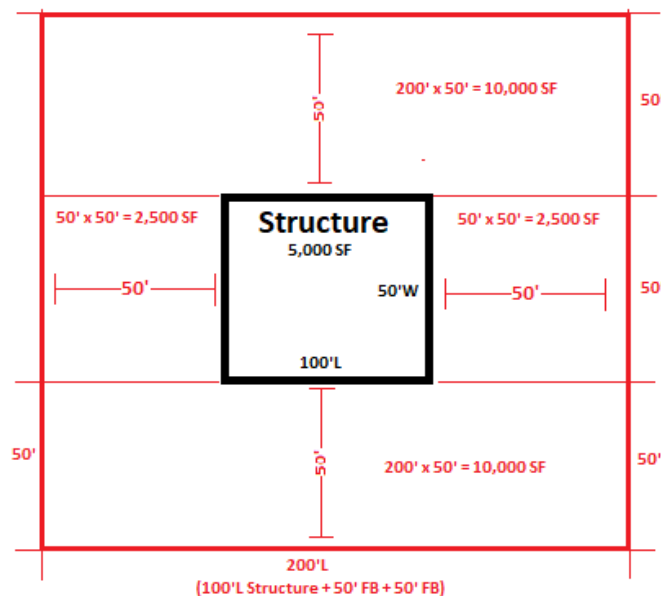
- **Physical Development & Fire Buffer & Maintenance Area Estimates**
- **Undeveloped Areas & Soils**

# OAR 660-004-0028(2)(a)

## Physical Development & Fire Buffer & Maintenance Area Estimates



### 25,000 Square Feet (Approximate Total Fire Fuel Break Buffer Area)



### Total

Staff Estimates: 18% Physically Developed

Applicant Estimates: 32% Physically Developed



## Wetland Map

# OAR 660-004-0028(2)(a)

## Undeveloped Areas & Soils

- North-South Wetland (non fish bearing)
- Grass hay farmed in pasture area
- Tree growth on east edge, south, and southwest areas



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Statewide Wetlands Inventory

Riverine

National Hydrography Dataset

Waterbody - Large Scale (Pond)

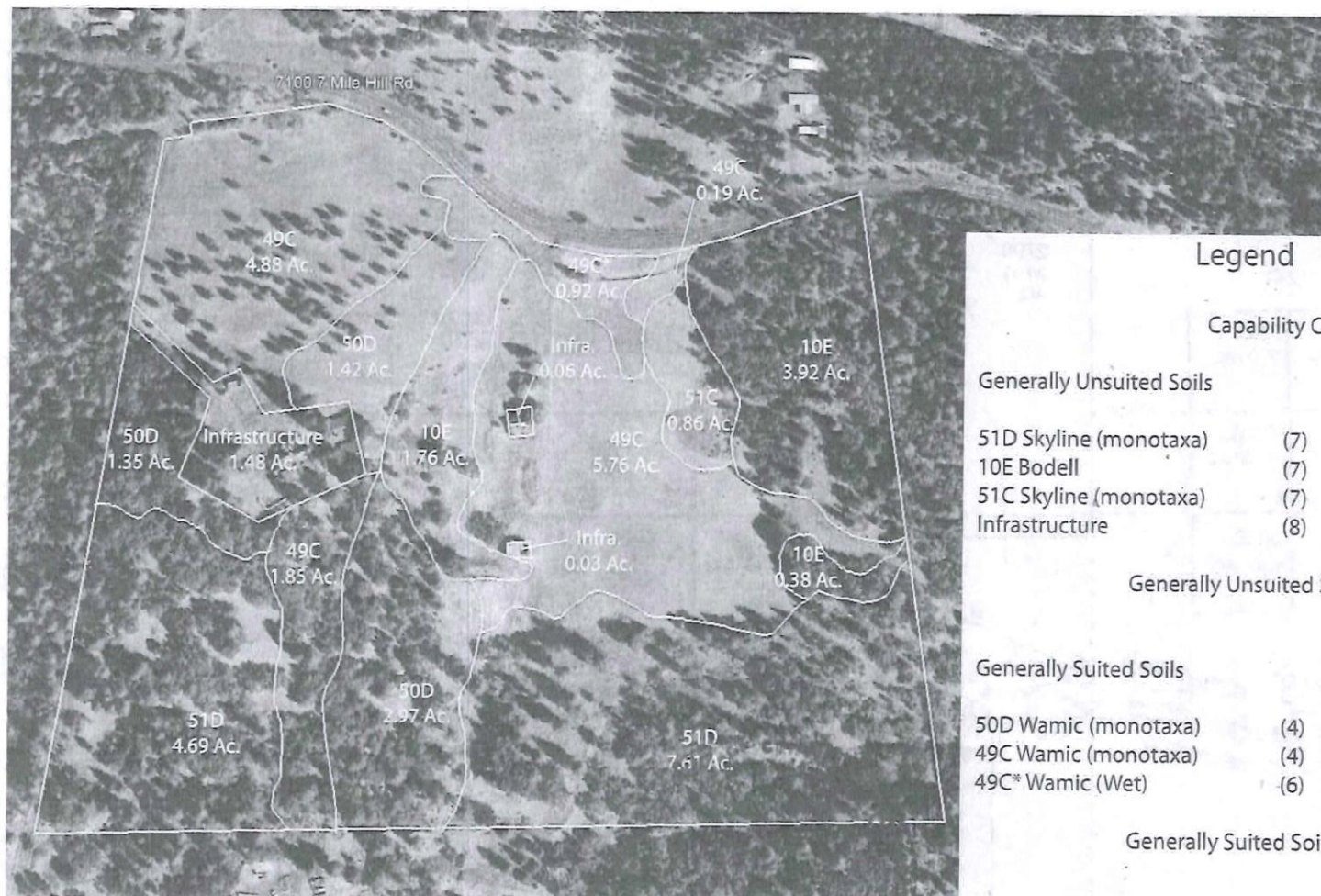
Flowline - Large Scale (Stream)



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**Wilson Property**  
 Seven Mile Hill Rd  
 The Dalles, Oregon  
 T2N R12E Sec. 22 TL#4400

**Order 1 Soil Survey**



**Legend**

Capability Class Acreage

**Generally Unsited Soils**

51D Skyline (monotaxa)	(7)	= 12.30 Acres
10E Bodell	(7)	= 6.06 Acres
51C Skyline (monotaxa)	(7)	= 0.86 Acres
Infrastructure	(8)	= 1.57 Acres

Generally Unsited Soils = 20.79 Acres

**Generally Sited Soils**

50D Wamic (monotaxa)	(4)	= 5.74 Acres
49C Wamic (monotaxa)	(4)	= 12.68 Acres
49C* Wamic (Wet)	(6)	= 0.92 Acres

Generally Sited Soils = 19.34 Acres

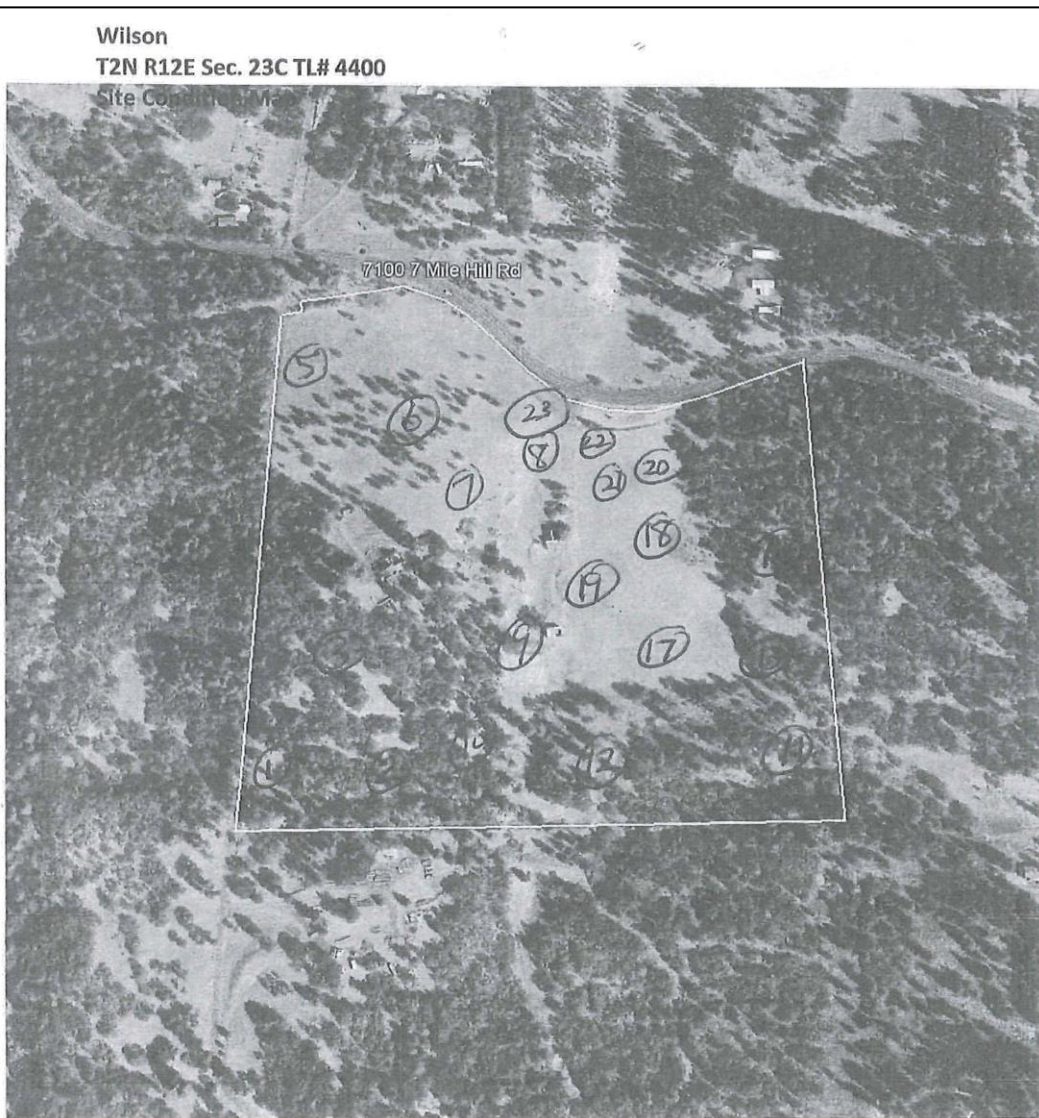
Total Acres: 40.13 Acres  
 Percentage of Generally Unsited Soils: 51.8%



# OAR 660-004-0028(2)(a)

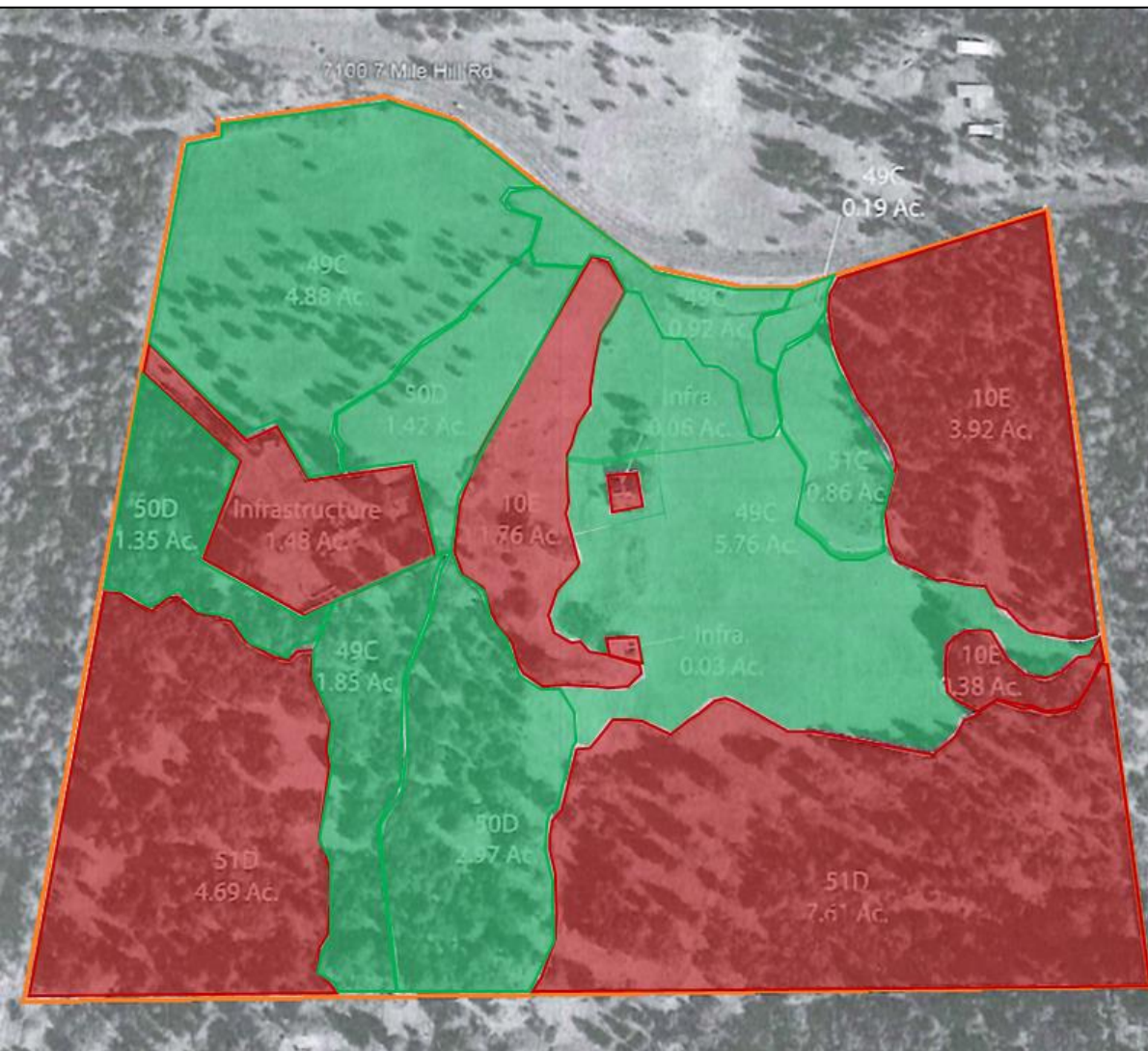
## Undeveloped Areas & Soils

### **“Wilson – Order 1 Soil Survey”**



- Found to be complete and consistent according to DLCD Farm Forest Specialist
- Conducted by Soils Scientist Gary Kitzrow, M.S., Certified Professional Soil Classifier (CPSC), Certified Professional Soil Scientist (CPSS) (License # 1741), Principal Soil Taxonomist.
- Survey contains detailed soil testing analysis for 23 study areas on subject parcel

# OAR 660-004-0028(2)(a)



Soil Suitability Map



Subject Parcel



Generally Unsuitable Soils (Class 7 & 8)

- 51D Skyline = 12.30 Acres
- 10E Bodell = 6.06 Acres
- 51C Skyline = 0.86 Acres
- Infrastructure = 1.57 Acres
- Total = 20.79 Acres (51.8% of parcel)



Generally Suitable Soils (Class 4 & 6)

- 50D Wamic = 15.74 Acres
- 49C Wamic = 12.68 Acres
- 49C Wamic (Wet) = 0.92 Acres
- Total = 19.34 Acres (48.2% of parcel)



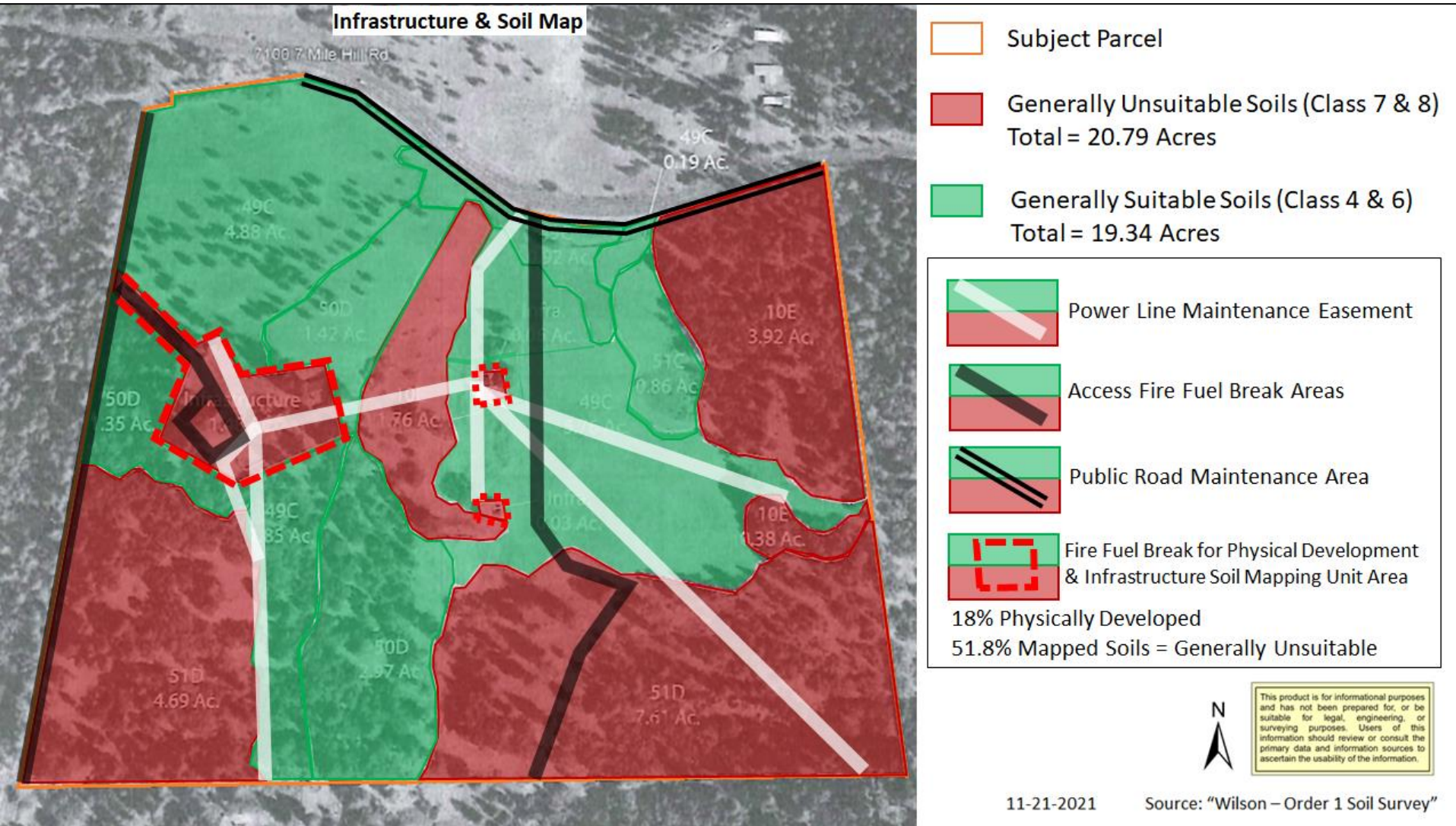
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11-21-2021

Source: "Wilson – Order 1 Soil Survey"



*OAR 660-004-0028(2)(a)*



# *OAR 660-004-0028(2)(b)*

## *OAR 660-004-0028*

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2) Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(b) The characteristics of the adjacent lands;*

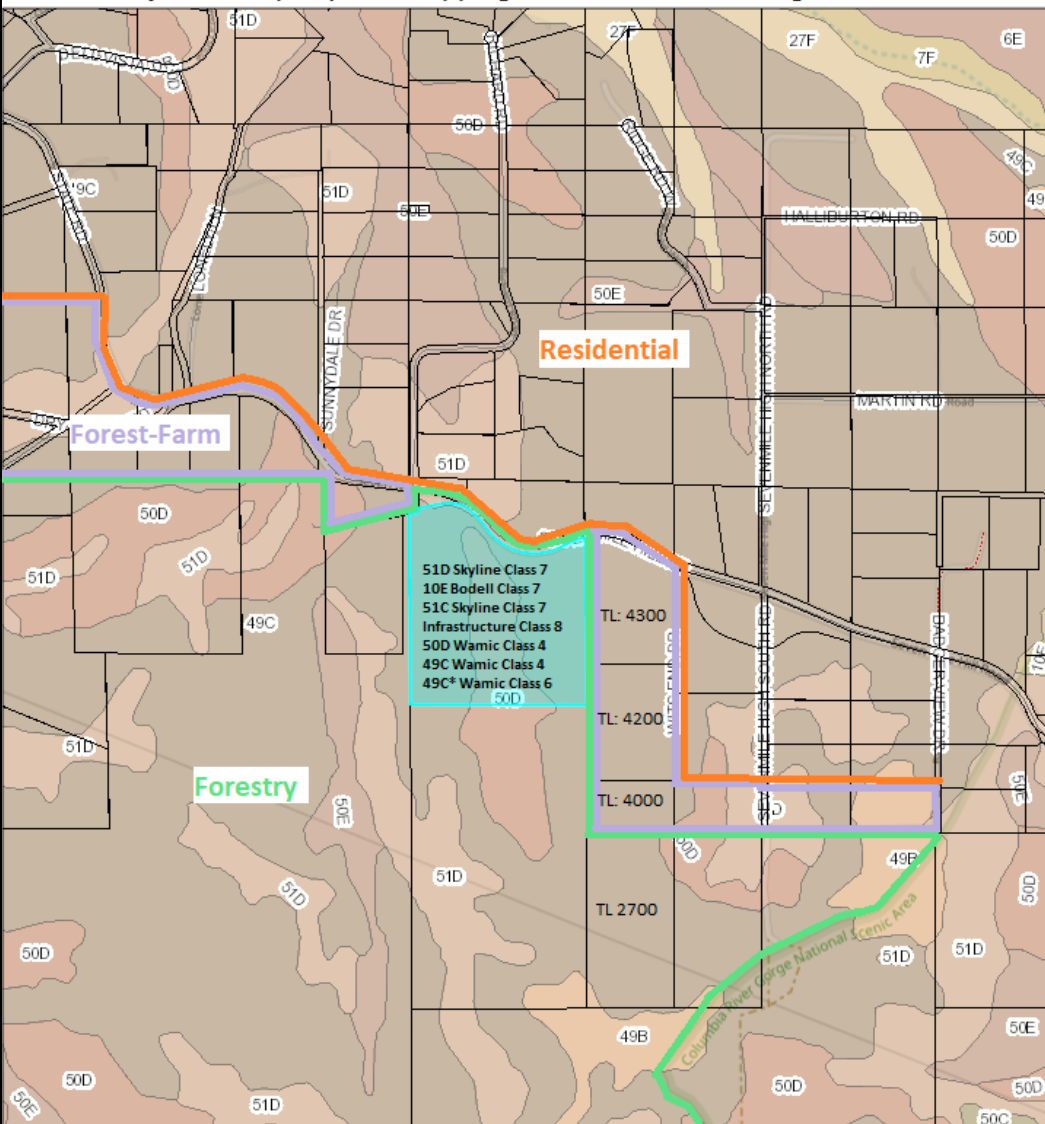
#### Staff Analysis

- **Soil Analysis**
- **General Land Use History, Zoning, and Use**

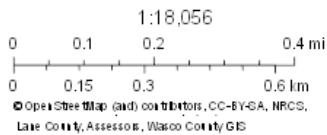
# OAR 660-004-0028(2)(b)

## Adjacent Property Soils

- 1982 USDA Order 3 Survey
- Primarily Wamic Mapping Units
  - 50D, 49C, 51D, 50E, 49B = Wamic
- Land Designation ≠ Drastic Difference in Soil Mapping Unit per the Order 3 Survey

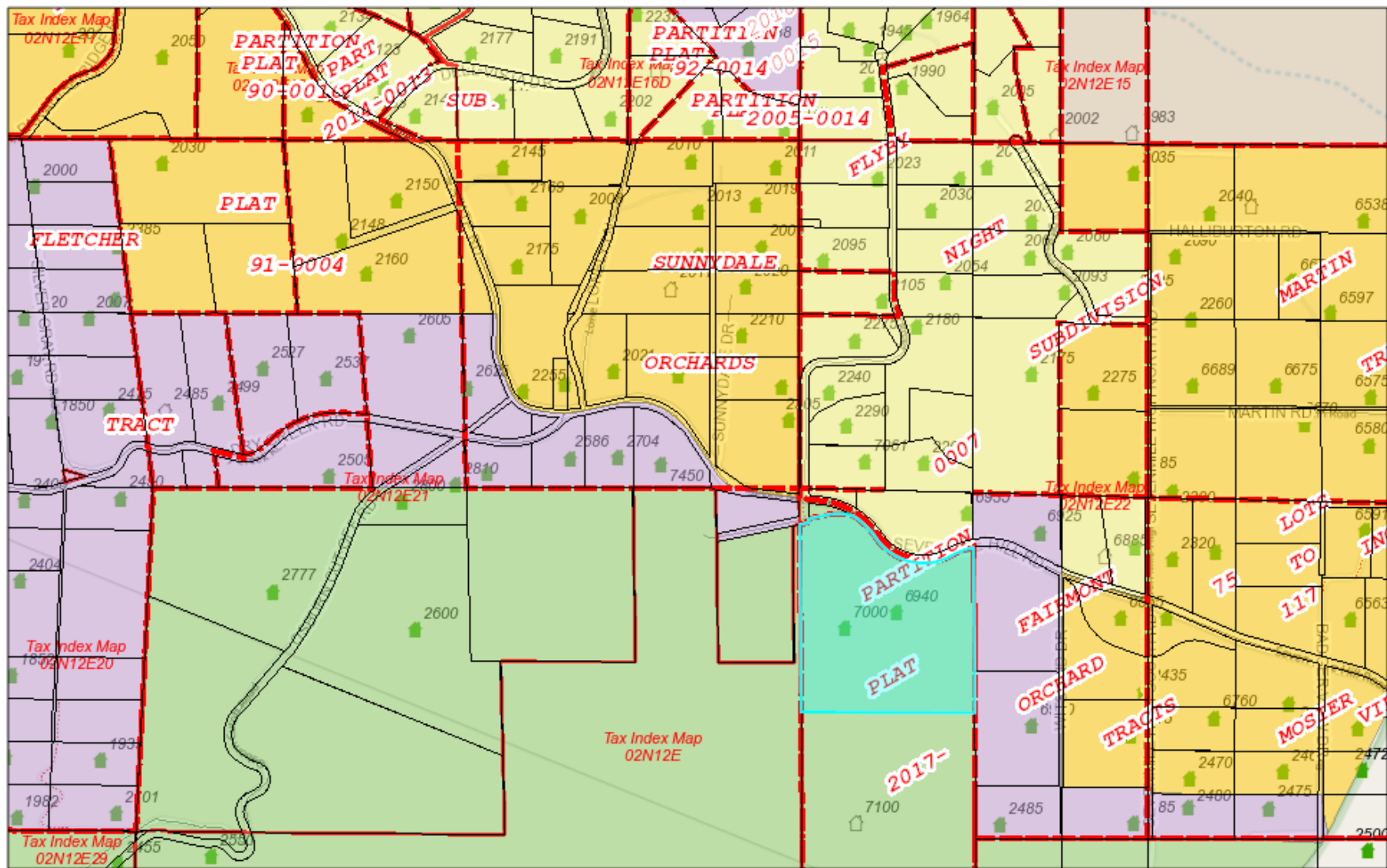


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# OAR 660-004-0028(2)(b)

## General Land Use History, Zoning, and Use

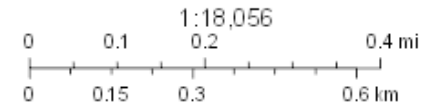


11/21/2021, 4:24:47 PM

- Taxlots
- Subdivision Line
- Tax Map Index
- Registered Dwellings



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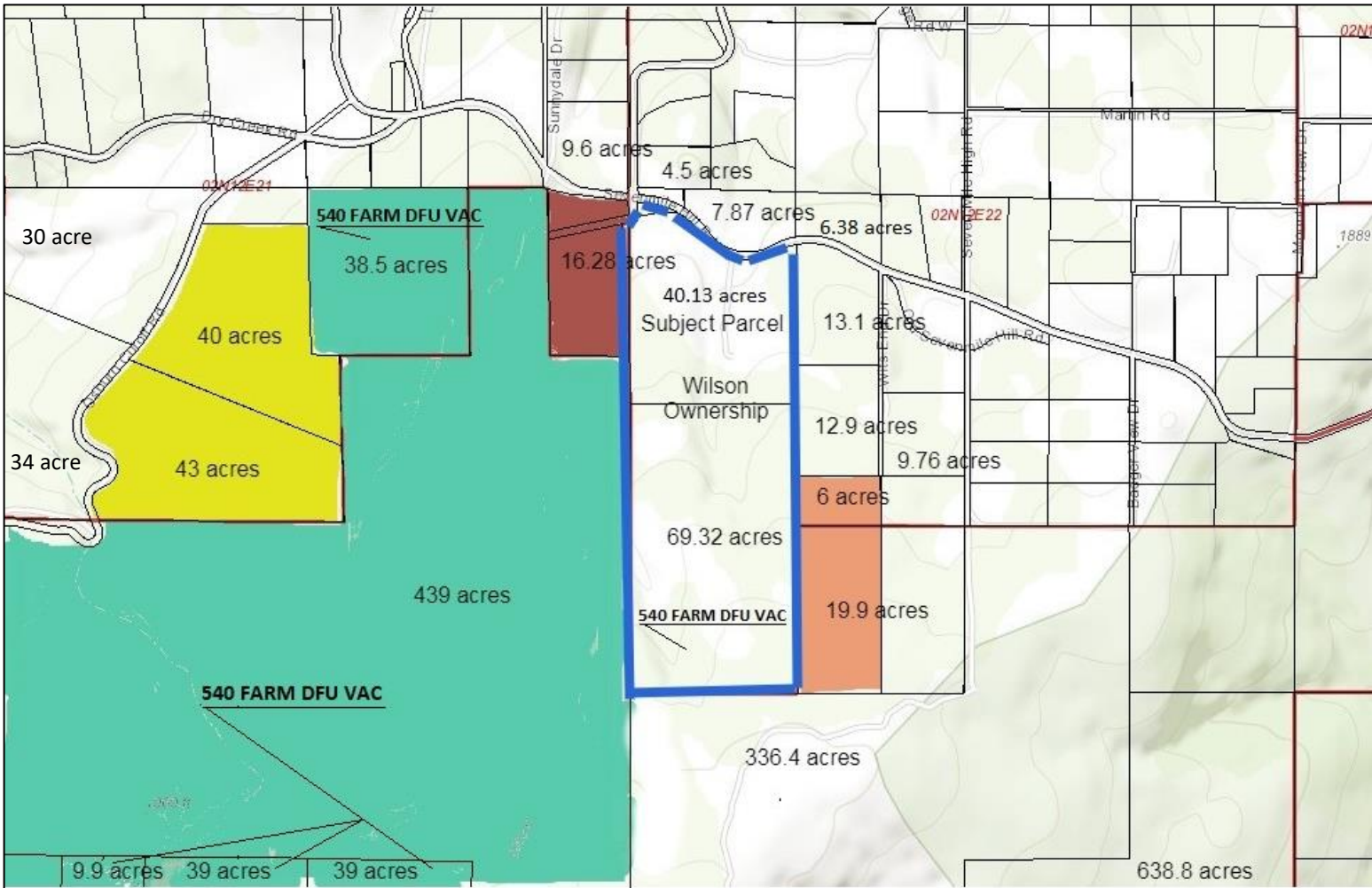


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# OAR 660-004-0028(2)(b)

## General Land Use History, Zoning, and Use



Contiguous Ownership

	KENNETH A THOMAS		DAVID & JOLENE WILSON
	RICHARD & HOPE VANCE		STEVEN A BLEILER
	DENNIS L & MARY R DAVIS		

Single Parcel (Split-Zone)  
F-F(10 & F-2(80)

Map Data  
WC-Assessor, WC-GIS

Not colored = No contiguous ownership

540 FARM DFU VAC = In tax deferral

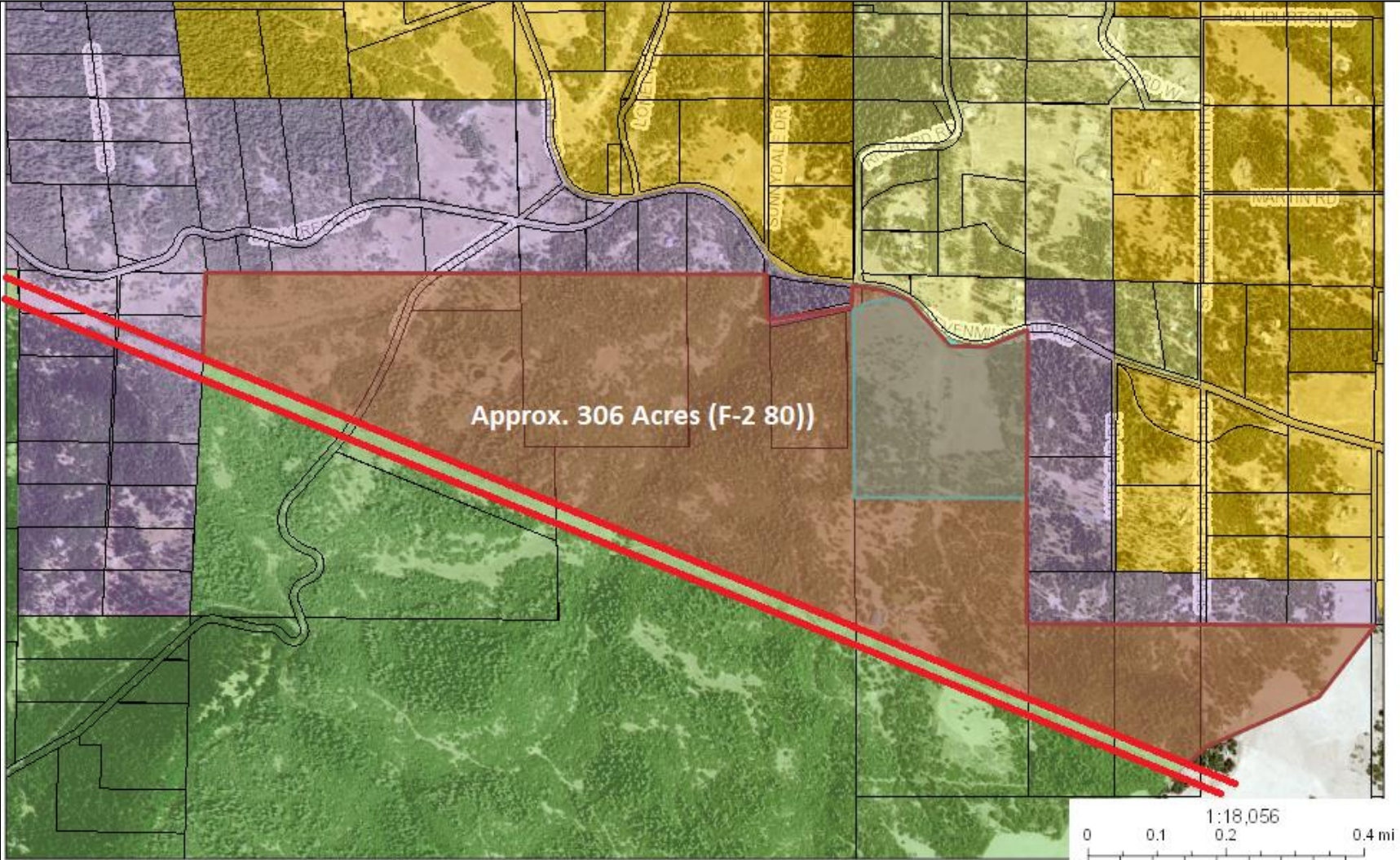


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11-24-2021

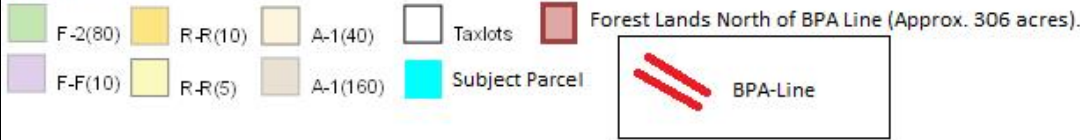


OAR 660-004-0028(2)(b)  
General Land Use History, Zoning, and Use



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WC-Zone

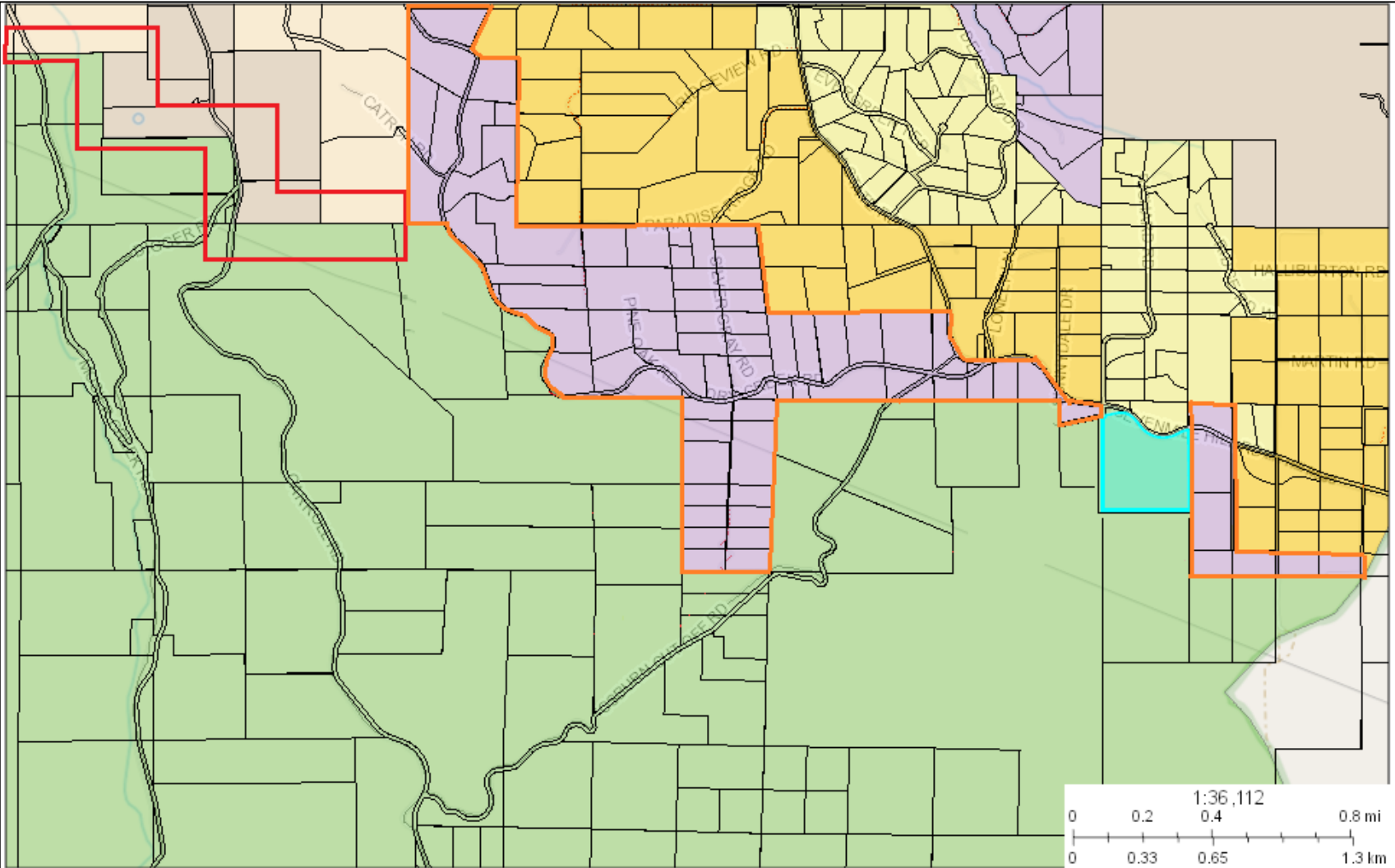


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OAR 660-004-0028(2)(b)  
General Land Use History, Zoning, and Use



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WC-Zone

- |         |         |          |                |
|---------|---------|----------|----------------|
| F-2(80) | R-R(10) | A-1(40)  | Taxlots        |
| F-F(10) | R-R(5)  | A-1(160) | Subject Parcel |

- |  |   |
|--|---|
|  | Border between lands zoned for resource use                     |
|  | Border between lands zoned for resource use and residential use |

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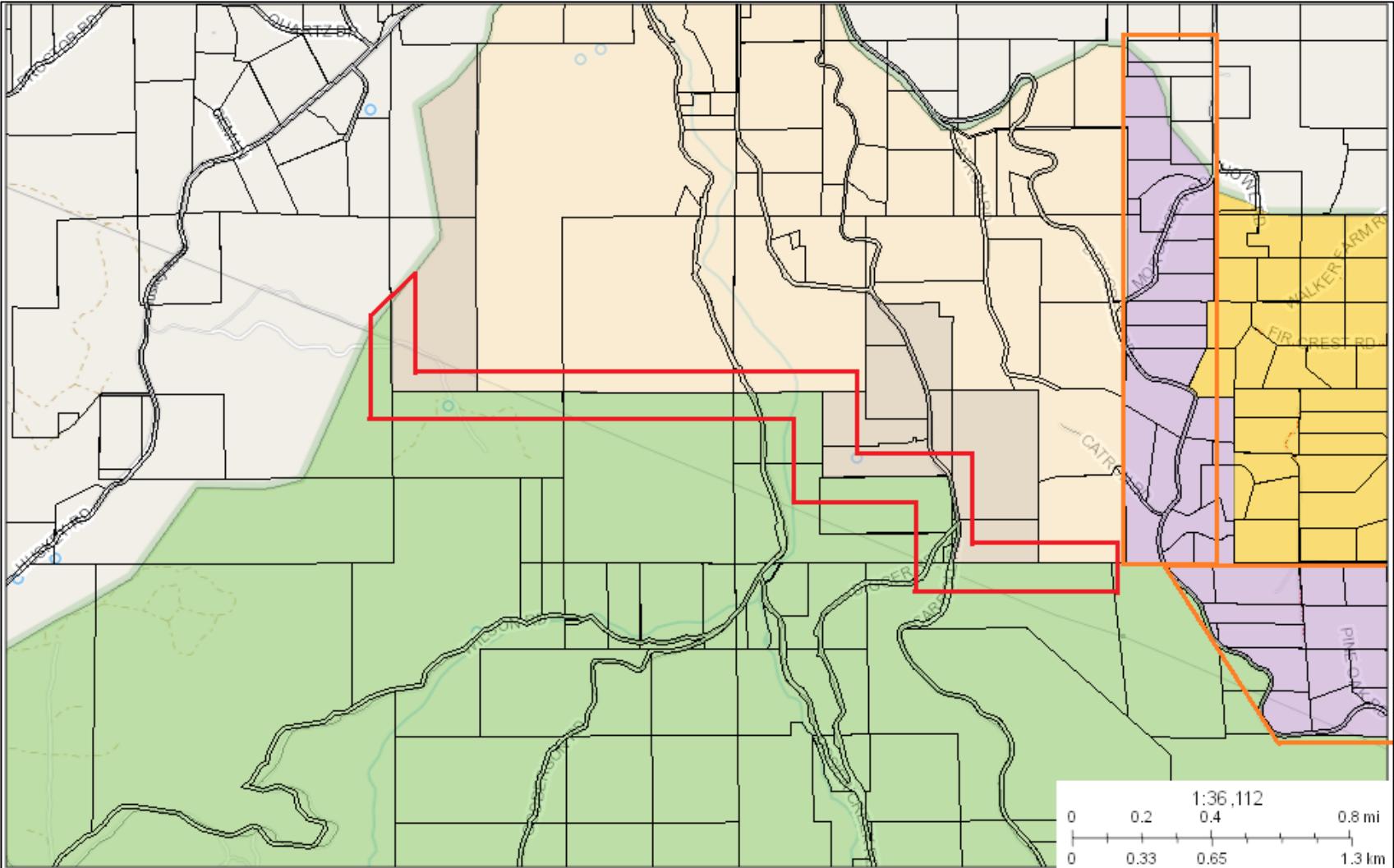


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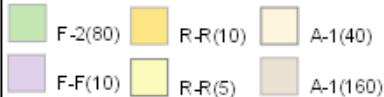
# OAR 660-004-0028(2)(b)

## General Land Use History, Zoning, and Use



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WC-Zone



Border between lands zoned for resource use



Border between lands zoned for resource use and residential use

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# *OAR 660-004-0028(2)(c)*

## *OAR 660-004-0028*

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

*(2) Whether land is irrevocably committed depends on the relationship between the exception area and the lands adjacent to it. The findings for a committed exception therefore must address the following:*

*(c) The relationship between the exception area and the lands adjacent to it;*

#### Relationship Analysis

- **Soils**
- **General Land Use History, Zoning, and Use**

# OAR 660-004-0028(2)(c)

## Relationship Analysis

- “Wilson – Order 1 Soil Survey” and 1982 USDA Order 3 Soil Survey differ
- The subject parcel’s existing “residential use” and development is more in line with residentially zoned properties to the north, northwest, and east
- The subject parcel’s resource designation & zoning does not fall in line with the land use designation and zoning pattern of the area
- The parcel’s development combined with generally unsuitable soils diminish relationship with active forest uses to the south, southwest, & west

# OAR 660-004-0028(3)

## OAR 660-004-0028(3)

### *Exception Requirements for Land Irrevocably Committed to Other Uses*

- (3) *“Whether uses or activities allowed by an applicable goal are impracticable as that term is used in ORS 197.732(2)(b), in goal 2, Part II(b), and in this rule shall be determined through consideration of factors set forth in this rule. Compliance with this rule shall constitute compliance with the requirements of Goal 2, Part II. It is the purpose of this rule to permit irrevocably committed exceptions where justified so as to provide flexibility in the application of broad resource protection goals. It shall not be required that local governments demonstrate that every use allowed by the applicable goal is ‘impossible.’ For exceptions to Goals 3 or 4, local governments are required to demonstrate that only the following uses or activities are impracticable;*
- (a) Farm use as defined in ORS 215.203;*
  - (b) Propagation or harvesting of a forest product as specified in OAR 660-033-0120;*
  - (c) Forest operations or forest practices as specified in OAR 660-006-0025(2)(a).”*

# *OAR 660-004-0028(3)*

Resource use is impracticable due to combined reasons:

- Diminished overall soil capacity
- Mapping of “generally unsuitable soils” as compared to adjacent lands
- Questions concerning soil mapping accuracy of adjacent lands
- Existing development and non-farm/forest residential use
- Surrounding residential uses (north, northwest, and east)
- Not in line with land designation & zoning map
- Risk of potential conflict of uses



# OAR 660-004-0028(6)

## OAR 660-004-0028(6)

*(6) Findings of fact for a committed exception shall address the following factors:*

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(A) Consideration of parcel size and ownership patterns under subsection (6)(c) of this rule shall include an analysis of how the existing development pattern came about and whether findings against the Goals were made at the time of partitioning or subdivision. Past land divisions made without application of the Goals do not in themselves demonstrate irrevocable commitment of the exception area. Only if development (e.g., physical improvements such as roads and underground facilities on the resulting parcels) or other factors make unsuitable their resource use or the resource use of nearby lands can the parcels be considered to be irrevocably committed. Resource and nonresource parcels created pursuant to the applicable goals shall not be used to justify a committed exception. For example, the presence of several parcels created for nonfarm dwellings or an intensive agricultural operation under the provisions of an exclusive farm use zone cannot be used to justify a committed exception for land adjoining those parcels.”*

# OAR 660-004-0028(6)

## OAR 660-004-0028(6)

*(6) Findings of fact for a committed exception shall address the following factors:*

*(c) Parcel size and ownership patterns of the exception area and adjacent lands:*

*(B) Existing parcel sizes and contiguous ownerships shall be considered together in relation to the land's actual use. For example, several contiguous undeveloped parcels (including parcels separated only by a road or highway) under one ownership shall be considered as one farm or forest operation. The mere fact that small parcels exist does not in itself constitute irrevocable commitment. Small parcels in separate ownerships are more likely to be irrevocably committed if the parcels are developed, clustered in a large group or clustered around a road designed to serve these parcels. Small parcels in separate ownership are not likely to be irrevocably committed if they stand alone amidst larger farm or forest operations, or are buffered from such operations.*

# OAR 660-004-0028

## Staff Findings & Planning Commission Recommendation

- 1000 Friends of Oregon v. Yamhill County, the impracticable standard is a demanding one.
- OAR 660-006-0028(1) and DLCD v. Curry County (Pigeon Point), The focal point of analysis of an “irrevocably committed” exception is the relationship between the “exception area” and adjacent lands.
- **PLANNING COMMISSION RECCOMENDATION:** Pertaining to OAR 660-004-0028, the Planning Commission voted a tie (3-3) vote. The Wasco County Planning Commission Bylaws Section I Subsection P, provides that “In cases of a tie vote, the decision shall be deemed a denial of the motion before the Commission.” Accordingly, the Planning Commission recommends that the Wasco County Board of Commissioners deny the request based on the irrevocably committed exception.

# Questions?