

## APPENDIX A

### SUMMARY OF RESEARCH

#### 1. Components of a Stewardship Plan

One of the unstated goals of this plan is to use it as a template in the development of future stewardship plans for City of Nashua conservation land. Hence, an appropriate model was needed to begin writing this plan. Stewardship plans from the state and nationwide were researched to use as models for this plan. These plans all shared some common goals: managing land for conservation, watershed and water supply protection and passive recreation. Some of the components of these plans were used, but not all of them were appropriate for this particular plan. However, it is worthwhile to mention the common themes in these plans for possible use in future management plans in Nashua. The following is a compilation of these common themes from the referenced stewardship plans:

1. Introduction to the Plan – this includes the purpose, goals and objectives of the plan, a history of the development of the plan, how the plan was developed (methodology), and acknowledgements to the contributors to the plan
2. Existing Conditions – this includes a history of what leads up to these existing conditions (i.e., acquisition of the land and ownership history, forestry practices, development on the parcel, etc.), an inventory of the natural resources (including topography, soils, wildlife, and community types), and cultural resources.
3. The Visitor Experience – this is an inventory of the various types of facilities and amenities (trails, restrooms, access points, shelters, etc.) that are available on the property and how they contribute to the visitors' experience while on the property.
4. Overview of Stewardship – this includes all aspects of how the property is managed from personnel, to maintaining garbage, trail construction and maintenance, and how to address violations.
5. Stewardship Plan – In lieu of, or in addition to, the "Overview of Stewardship" section, this section outlines the specific measures that should be taken to manage the property including who is responsible for monitoring and maintaining the property, constructing trails and bridges and enforcing regulations.
6. Recommendations and Conclusion – this ties up all of the recommendations related to maintenance, stewardship, natural resource protection, and overall management of the property.

#### 2. Relevant Components for the Northwest Sanctuary Stewardship Plan

Many of the components from similar stewardship plans were used in this plan, but there are two main differences in the final organization and content. First, the chapter entitled "The Visitor Experience" is eliminated. While there is some content in this plan that would be in a typical Visitor Experience chapter (i.e., types of trails) this property was not purchased to create a facility for active recreation. Passive recreation is only one of the goals of this property.

Another difference in the organization of this plan is Chapter 5, Stewardship Options. At the time of the writing of this plan, it was undetermined who **specifically** would be the stewardship organization. As such, Chapter 4 covers the process of management for passive recreation and watershed protection and Chapter 5 **recommends** options for how the property can be monitored and maintained, and provides examples of stewardship in other communities. It is important, however, to designate a particular party as the stewardship organization to ensure the long-term protection of conservation land. It is strongly recommended that future stewardship plans follow the outline provided above.

## **APPENDIX B**

### **METHODOLOGY**

#### Step 1 – Setting Goals

The first step in developing a plan is to determine what you would like to accomplish by producing it. A plan needs to have straightforward, accomplishable goals that will lend itself to clear objectives and a successful end product. The goals can be found in the following section.

#### Step 2 – Background Research on Similar Plans

The initial stages of writing any plan, be it land management, a equipment maintenance, or a comprehensive plan, is conducting background research on plans that have been written to accomplish the same goals set forth in the plan to be written. Some of the resources used to write this plan were found: at the Nashua Public Library and online research; through phone interviews and email messages to organizations working to develop similar plans; and through interviews with co-workers or former co-workers who have experience writing various types of plans. The research uncovered a sound list of typical components of a Land Management Plan which can be found in the “Summary of Research” section that follows. The Management Plans and other material found while conducting this research can be found in Appendix A.

#### Step 3 – Meetings, Phone Conversations and Field Trips

In order to clarify many of the issues that existed regarding this property (i.e., logging procedures, wetland buffer, road access, existing natural resources on the property, etc.), phone calls were made and meetings were held with key people involved with the former management of the Northwest Sanctuary and current research on the property.

#### Step 4 – Development of the Plan

The actual document was developed in this process. All of the information that has been collected to this point is integrated into this step. The development of the plan consisted of site visits to determine feasibility of access points, field checking current trails, use of GIS to develop maps of the site, documenting the Steps 1-3, and composing the written portion of the document itself.

#### Step 5 – Review of the Draft Stewardship Plan

The plan was reviewed by the Nashua Community Development Division and the Nashua Conservation Commission.

#### Step 6 – Adoption of the Final Plan

The final product was developed integrating all of the changes made and was adopted by the City of Nashua in January 2003.

## APPENDIX C

### ACKNOWLEDGEMENTS

Special thanks are extended to the numerous individuals and communities who provided information, support and direction in the development of this Plan:

Paul Barten, Forester and Associate Professor at University of Massachusetts, Amherst  
Karen Berchtold, AICP, Planner II, City of Nashua, Community Development Division  
David Connell, Corporation Counsel, City of Nashua Legal Department  
Rebecca Crowther, Administrative Assistant, Town of Hollis Department of Public Works  
Dan Cyr, Forester, Bay State Forestry Services  
Tom Gumbart, Conservation Officer, Town of Lincoln, Massachusetts  
Hanover Conservation Commission  
Katherine Hersh, Director, City of Nashua Community Development Division  
Art Kidd, Assistant City Engineer, City of Nashua Engineering Department  
Joanna Magoun, Audubon Society of New Hampshire  
Mike Milligan, Sanctuaries Manager, Audubon Society of New Hampshire  
Kathryn Nelson, Chair, City of Nashua Conservation Commission  
E. Ann Poole, Ecologist and Environmental Planner  
Marcia Poulin, Landowner  
Angela Rapp, Environmental Planner, Nashua Regional Planning Commission  
Andrew Singelakis, Executive Director, Nashua Regional Planning Commission  
Margery Swope, Executive Director, New Hampshire Association of Conservation Commissions  
Eric Teitelman, City Engineer, City of Nashua Engineering Department  
John Vogl, GIS Manager, Nashua Regional Planning Commission  
Donald Ware, Vice President, Engineering, Pennichuck Corporation

## APPENDIX D

### LCHIP STEWARDSHIP PLAN GUIDELINES: LAND PROJECTS

A stewardship plan is important to insure consistent and effective monitoring and stewardship of protected properties over time. The plan itself can vary depending upon many factors, such as the type of property (land or structure), how it is protected (fee owned or easement) and the grantee itself (town or not-for-profit organization). Due to these variables, there is no standard stewardship plan required through LCHIP. Instead, these guidelines have been established to help applicants write an individualized stewardship plan.

In addition to Section X and XI of the Criteria, Guidelines, and Procedures, there are two sets of guiding information below to help you consider stewardship issues. First is LCHIP's definition of stewardship:

*Stewardship means planning for and taking the necessary actions over the long term to successfully preserve and protect the natural cultural, or historical value of a resource asset. Such actions included, as applicable, managing the resource asset in accordance with all legal obligations entered into under this chapter, performing regular maintenance and upkeep, providing for necessary monitoring, educating or informing those that might negatively impact upon the resource asset about the need for and/or legal obligation to protect and preserve it, paying taxes or in-lieu-of tax obligations, obtaining liability insurance, and securing sufficient levels of financial resources to carry out all such necessary actions.*

The second is the Land Trust Alliance's Land Trust Standards & Practices (S&P's) outlined below. The S&P's have been developed for land trust organizations, but the concepts identified are directly comparable to the concepts that historical preservation groups and communities need to think about when considering long term stewardship. Simply substitute "buildings" for land when appropriate, and "community" or "preservation organization" for land trust.

**Instructions.** Below you will find the S&P's in outline form followed by questions under each practice. As you consider answers to the questions, think both about the specific practice and the LCHIP's definition of stewardship. Answers to the questions listed under each practice should form the basis of your stewardship plan.

For conservation or preservation easements, utilize questions posed under **S&P Standard 14**.

For fee-owned property, utilize questions posed under **S&P Standard 15**. If you have any questions please contact the LCHIP Authority at (603) 224-4113.

#### **LTA Standard 14: Conservation Easement Stewardship**

*A land trust must carry out a program of responsible stewardship for its easements.*

A land trust that holds conservation easements commits itself to their perpetual stewardship. A trust must regularly monitor its easements, maintain contact with easement property owners, and enforce easement terms when they are violated. A trust that fails to do so will eventually lose its credibility, could cause its easement program to be invalidated, and may erode public confidence in easements as a protection tool. A trust should also try to make contingency provisions for its easements in the event it can no longer fulfill its stewardship obligations.

#### **Practices**

**A. Easement Stewardship Funding.** The land trust determines the financial and management implications of each transaction and establishes that it has or can raise the funds needed to monitor and enforce the easement.

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*[Comment: LCHIP will be providing a contribution to the LCHIP Stewardship Endowment for each easement. A portion of the interest earned on this endowment may be returned to your organization to help defray the costs incurred for annual monitoring.]*

- How has your organization determined the funds necessary for ongoing stewardship of this conservation easement?
- Does your organization have a separate stewardship fund available for monitoring and stewardship of this conservation easement? If not, how will your organization fund stewardship?
- Does your organization have a separate legal defense fund available for dealing with potential litigation in enforcing the terms of the easement? If not, how will your organization fund its legal obligations?

**B. Easement Monitoring.** The land trust monitors its conservation easement properties regularly, at least annually, in a manner appropriate to the size and restrictions of each property, and keeps documentation (reports, photographs, maps, etc.) of each monitoring visit.

- What policies are established for ongoing stewardship of this conservation easement? (For example, who is responsible, what are their tasks, how often will an easement be monitored, what documentation will be filed, where will this information be kept, what is the contingency plan should the responsible party be unable to monitor as required).

**C. Landowner Contact.** The land trust informs new owners of easement-restricted properties about the easement's existence and restrictions and makes grantors and new owners aware of its monitoring policies.

- What is the policy for regular landowner contact?
- How will the organization deal with changes in ownership and contacting and building relationships with new landowners?
- What is the policy for working with landowners to maintain property boundaries?

**D. Enforcement of Easements.** The land trust enforces the terms of its conservation easements and takes necessary steps to see that violations are remedied.

- What policies has your organization established to deal with enforcing the terms of conservation easement? What is the process for resolving potential violations?

**E. Contingency Plans/Back-ups.** The land trust makes contingency provisions for all of its easements in the event the trust ceases to exist or can no longer monitor them.

- If your organization can no longer maintain these LCHIP stewardship standards, what policies are in place to insure that another party can take over these responsibilities?
- What policies are in place to help prevent the possibility of your organization losing its capacity to monitor this easement?

## APPENDIX E

### SPECIES LIKELY / WITH POTENTIAL TO INHABIT THE SITE

#### Amphibians likely to inhabit the site

<u>Scientific Name</u>	<u>Common Name</u>
<i>Notophthalmus v. viridescens</i>	Red-spotted newt
<i>Desmognathus f. fuscus</i>	Northern dusky salamander
<i>Plethodon cinereus</i>	Redback salamander
<i>Bufo americanus</i>	American toad
<i>Hyla versicolor</i>	Common gray treefrog
<i>Pseudacris crucifer</i>	Spring peeper
<i>Rana catesbeiana</i>	Bull frog
<i>Rana clamitans melanota</i>	Green frog
<i>Rana palustris</i>	Pickerel frog
<i>Rana pipiens</i>	Northern leopard frog
<i>Rana sylvatica</i>	Wood frog

#### Reptiles likely to inhabit the site

<u>Scientific Name</u>	<u>Common Name</u>
<i>Chelydra serpentina</i>	Common snapping turtle
<i>Chrysemys p. picta</i>	Eastern painted turtle
<i>Clemmys guttata</i>	Spotted turtle
<i>Clemmys insculpta</i>	Wood turtle
<i>Coluber constrictor</i>	Northern black racer
<i>Diadophis punctatus edwardsii</i>	Northern ringneck snake
<i>Elaphe o. obsoleta</i>	Black rat snakes
<i>Lampropeltis t. triangulum</i>	Eastern milk snake
<i>Nerodia s. sipedon</i>	Northern water snake
<i>Opheodrys v. vernalis</i>	Smooth green snake
<i>Storeria dekayi</i>	Brown snake
<i>Storeria occipitomaculata</i>	Red-bellied snake
<i>Thamnophis s. sirtalis</i>	Common garter snake

#### Rare birds with potential to inhabit the site

<i>Botaurus lentiginosus</i>	American bittern
<i>Nycticorax nycticorax</i>	Black-crowned night-heron
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Ardea herodias</i>	Great blue heron (rookery)

#### Rare / sensitive mammals with potential to inhabit the site

<i>Sylvilagus transitionalis</i>	New England cottontail
<i>Lutra canadensis</i>	River otter

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### WILDLIFE OBSERVED AT THE SITE

The following animal species, or evidence thereof, were observed at the site:

#### **Amphibians & Reptiles**

Bullfrog  
Green frog  
Spring peeper  
*Storeria* spp. (Northern brown snake or northern red-bellied snake)\*

#### **Birds**

American kestrel  
Blue-headed vireo\*  
Blue jay  
Canada goose  
Catbird  
Chickadee  
Common loon  
Common yellow throat  
Ducks (species unknown)  
Eastern phoebe  
Great blue heron  
Hermit thrush\*  
House wren\*\*  
Osprey  
Owl (species unknown)  
Red-eyed vireo\*  
Red-tailed hawk  
Ruby-throated hummingbird  
Ruffed grouse  
Rufus-sided towhee\*  
Tree sparrow  
Turkey  
Veery\*  
Yellow warbler

#### **Mammals**

Beaver  
Chipmunk  
Fox (species unknown)  
Gray squirrel  
Moose  
Red squirrel  
Whitetail deer  
Woodchuck

\* Observed by Dave Anderson, SPNHF

\*\* Observed by Pam Hunt, NH Audubon

January 2003

APPENDIX G

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Nov 5 10 36 AM '07

EASEMENT DEED  
KNOW ALL MEN BY THESE PRESENTS

THAT I, Irene F. West, an unremarried widow, of Hollis,  
County of Hillsborough, State of New Hampshire,

for consideration paid, grant to

Pennichuck Corporation, a New Hampshire corporation, with a  
principal place of business at 4 Water Street, Nashua, County of  
Hillsborough, State of New Hampshire and its successors and  
assigns

A permanent easement for the purpose of passing and  
repassing on foot and in vehicles, including trucks, upon and  
across the following described premises between Farley Road and  
land of Pennichuck Corporation lying northerly of the premises  
herein made subject to this easement:

A certain tract of land situate in Nashua, County of  
Hillsborough, State of New Hampshire, as shown on a plan of land  
entitled "Subdivision Lots 1 & 2 For Audubon Society, Prepared  
for: Irene F. West, Farley Road, Nashua, New Hampshire," by  
Roland Girouard & Assoc., dated October 28, 1987, Scale 1" =  
200', to be recorded at Hillsborough County Registry of Deeds.

Beginning at a stone bound set in the northeasterly side of  
Farley Road at the southwesterly corner of land now or formerly  
of Church of Christ, thence

1. N 39° 50' 28" E a distance of 331.88 feet by said land  
of Church of Christ to a stone bound at land now or formerly of  
Irene F. West; thence
2. N 9° 44' 42" E by said land of West 897.00 feet to a  
stone bound; thence
3. N 9° 44' 42" E a distance of 258.31 feet by said land of  
West to a point; thence
4. N 5° 15' 49" W a distance of 497.47 feet to a point;  
thence running
5. N 2° 14' 45" E a distance of 459.35 feet by land of West  
to a point
6. N 18° 23' 11" W a distance of 374.10 feet by said land  
of West to a point; thence
7. Due North a distance of 220.00 feet by said land of West  
to a point; thence



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## APPENDIX H

### RESEARCH ON DEERWOOD DRIVE ACCESS

**Meeting with City Engineer Eric Teitelman and Assistant Engineer Art Kidd at Department of Public Works**  
**Friday, December 13, 2002**

*Main question: Can the City be assured of keeping public pedestrian access along Deerwood Drive and N. Fork of Blood's Crossing to the three proposed acquisition parcels: I-11, H-10, and H-11, and currently owned H-577(Northwest Sanctuary)? Will the City perform any maintenance on these trails? What is status of Deerwood Dr. to the north?*

Both N. Fork of Blood's Crossing and Deerwood Dr. south of that are "paper streets." That is, they were dedicated as public right-of-ways but roads were never built. Public easements apply to each of them. N. Fork was dedicated in 1807 (as access to Samuel Blood's land in Hollis), and Art provided a copy of that. According to Eric Teitelman, these public easements will remain on the books as such, and legal access to the parcels along them will continue. There has not been City maintenance of them for some time, nor will there be in the future. The section of N. Fork to Farley Rd. across the West/Poulin property was discontinued in 1974.

*Regarding Deerwood Drive from railroad tracks to intersection with N. Fork of Blood's Crossing*

This section of Deerwood was discontinued by a Petition to the Board of Alderman dated Nov. 7, 1985. The petitioner was Stephen Bolton, Corporation Counsel, for the City. However, neither Mr. Teitelman nor Mr. Kidd are sure who now owns this right-of-way, or who initiated the discontinuance. In addition, Mr. Teitelman believes it is possible that the discontinuance is not valid because the discontinuance was conditioned on:

"the dedication of a 50-foot right-of-way connecting the so-called North Fork of Deerwood Drive with an existing or future street crossing the Boston & Maine railroad right-of-way and providing access to Amherst Street, Route 101-A." (see document).

This apparently was never done. It is possible that Deerwood Drive is still a public easement that legally the public would still have the right to use. The legal department could provide an opinion on this.

DPW does not discontinue streets. The process begins with City Clerk, and then to Aldermen.

## APPENDIX I

### NASHUA WATER SUPPLY PROTECTION DISTRICT ORDINANCE

#### **Sec. 16-650. Purpose.**

It is the purpose and intent of this article to establish an overlay district to increase protection for the Pennichuck Brook Watershed above the supply pond dam, including Pennichuck Brook, its associated ponds, wetlands, and tributaries, said water being the primary source of the city's public drinking water supply. Regulations within the district are intended to preserve the purity of the drinking water supply; to maintain the ground water table; and to maintain the filtration and purification function of the land; thereby protecting the public health, safety and welfare.

#### **Sec. 16-651. Definitions.**

*Contaminated runoff* is stormwater that has come in contact with process waste, raw materials, toxic pollutants, hazardous substances, oil or grease.

*Impervious surface* is material or structure on, above, or below the ground that does not allow precipitation or surface water to penetrate directly into the soil.

*Infiltration*, is the entry of water from precipitation, irrigation, or runoff into the soil.

*Mean annual high water mark* is the line from visible markings and changes in soils and vegetation from the prolonged presence of water which distinguishes between predominantly aquatic and terrestrial land.

*Peak discharge* is the maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event.

*Pretreatment* is limited treatment of stormwater runoff provided prior to discharge of such runoff to the stormwater management system, and is intended to remove coarse solids, thereby facilitating maintenance and enhancing the longevity of the stormwater management system.

*Recharge* is water that infiltrates into an aquifer, usually from overlying soils.

*Redevelopment* is the development, rehabilitation, expansion, and completion of phased projects on previously developed sites.

*Runoff*, is precipitation, snow melt, or irrigation that flows over the land, eventually making its way to a surface water such as a stream, river, or pond.

*Stormwater management system* is a conveyance system for the capture, treatment, and discharge of stormwater runoff.

*Toxic or hazardous material* is any substance or mixture with physical, chemical, or infectious characteristics posing a significant, actual, or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharged to land or water. Toxic or hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes acids and alkalis, and all substances defined as toxic or hazardous under applicable state or federal statutes, and also include such products as solvents and thinners in quantities greater as solvents and thinners in quantities greater than normal household use.

*Treated stormwater* is stormwater runoff that meets the requirements set forth in Section 16-145.

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*Wetlands* are, for the purposes of this article, are those wetlands defined and delineated in accordance with the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands," dated 1989.

### **Sec. 16-652. Water supply protection district established.**

The water supply protection district is herein established as an overlay district and shall be superimposed on the other districts established by the zoning ordinances. The requirements enumerated hereafter for this water supply district shall be in addition to, rather than in place of, the requirements of such other districts.

### **Sec. 16-653. Boundaries and zones.**

The water supply protection district is herein established to include all lands within the City of Nashua lying within the watershed of the Pennichuck Brook upgradient of the supply pond dam. The map entitled "Water Supply Protection District Map, City of Nashua, New Hampshire," dated October 28, 1998, and prepared by the City of Nashua Community Development Division shall delineate the boundaries of the district. This map as may be amended is hereby declared to be a part of this article.

There shall exist a conservation zone within the water supply protection district which shall consist of all land areas located within three hundred (300) feet of the annual high water mark of Supply Pond, Bowers Pond, Holt Pond, Harris Pond, and Pennichuck Pond, and all land areas located within one hundred fifty (150) feet horizontally from all water bodies that are connected via surface water to the aforementioned ponds and the wetlands associated with those water bodies. The conservation zone shall be delineated on the map.

To fulfill its function as a prime aquifer recharge zone, the conservation zone is intended to be maintained as an undisturbed natural buffer for the purpose of protecting the drinking water supply. In case where a lot is not located entirely within the water supply protection district, the requirements of the water supply protection district shall apply to that portion of the lot located within the water supply protection district.

### **Sec. 16-654. Application for uses in the water supply protection district.**

Notwithstanding the requirements of other provisions of this article, applications submitted for uses proposed within the water supply protection district shall be accompanied by sufficiently detailed information and plans to clearly show the extent of the conservation zone and the use proposed to be located on the subject property. The zoning administrator shall review the information provided to determine its sufficiency.

### **Sec. 16-655. Uses in the conservation zone.**

Unless permitted by the article, all uses are prohibited in the conservation zone. Activities that maintain existing uses associated with municipal water supply and treatment are allowed in the conservation zone.

To reduce potential damage to the conservation zone from significant storm events, overflow capacity may be provided within the conservation zone only by vegetated swales. Piping, headwalls, rip rap and all other techniques other than vegetated swales are prohibited. Tree cutting is strictly limited to what is absolutely necessary to construct and maintain the vegetated swale. All other tree cutting in the conservation zone is prohibited.

Land contained in the conservation zone may satisfy the open space requirements of any lot including those lands.

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Parking lots and sidewalks may encroach up to seventy-five (75) feet into the conservation zone, provided that the following criteria are met:

- (1) The proposed structure does not impede the flow of ground water below it;
- (2) The stormwater management practices used on the site provide for capture and treatment of all stormwater created by the ten (10) year, twenty-four (24) hour storm event on the impervious surfaces within the disturbed area of the conservation zone, and that adequate storage capacity is provided for such stormwater;
- (3) The stormwater management system on the site provides for the disposal of stored stormwater by infiltration, with all infiltration taking place outside of the conservation zone;
- (4) The stormwater management system on the site for the detention of any stormwater provide adequate safeguard for arresting the flow of any contaminated stormwater;
- (5) In cases where parking lots or other structures are placed in the conservation zone under this provision, procedures shall be submitted with the maintenance plan for the stormwater management system which provide for the removal of snow to an area outside of the conservation zone.

### **Sec. 16-656. Restriction on fertilizer and pesticide use.**

The use of fertilizers or pesticides is prohibited on any lands within the conservation zone or within two-hundred fifty (250) feet horizontally from the annual high water mark of all waterbodies and all associated wetlands, whichever is greater.

### **Sec. 16-657. Lots of record and nonconforming uses.**

- (a) The lawful use of any building or land existing at the time of the enactment of this article may be continued.
- (b) For lots of record as of the date of adoption of this article which have distances from the front lot line to the edge of a water body and associated wetlands in the conservation zone of less than one hundred fifty (150) feet, the restrictions of the conservation zone in that location shall be considered waived up to a distance of seventy-five (75) [will never be greater than 75 feet. This paragraph shall not apply to the three hundred (300) foot conservation area around the ponds.
- (c) In cases where legal loss of record, as of December 16, 1998 cannot reasonably be used for a permitted use due solely to the provisions of this article, a special exception may be granted allowing the use provided that there shall be no resulting significant adverse impact to the water supply.
- (d) Any use made nonconforming by the provisions of this article may be expanded provided such expansion would otherwise be permitted in the underlying zoning district and a minimum of fifty (50) percent open space is maintained.
- (e) In other cases where currently developed sites are proposed for expansion or redevelopment, a special exception may be granted, if the following conditions are met:
  - (1) The proposed expansion or redevelopment would be allowed under current zoning ordinances and meets all other requirements for a special exception as set forth in section 16-208 of this chapter.

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(2) The proposed expansion cannot be reasonably accomplished within the constraints of this article.

(3) Determination by the conservation commission within thirty (30) days from formal submission of the proposal declaring that the proposed use will not create a danger of prohibited acts under section 15-33 of the NROs.

(4) No increase of impervious surface in the conservation zone is proposed, except as designated in section 16-654.

(5) All stormwater management systems must be compliant with the requirements set forth in section 16-145, "Stormwater Management Standards," and must be sufficient to infiltrate all stormwater from the ten (10) year twenty-four (24) hour storm event."

## APPENDIX J

# Sanctuary Rules and Regulations

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Below is an excerpt from the Sanctuaries Dept. Stewardship Manual that highlights ASNH regulations, policies, and standards. As Sanctuary Stewards we would like you to be familiar with these regulations and the rationale behind them. At this time, **we are not asking you to enforce these regulations, nor do we want you to enforce regulations.** If you see a visitor not complying with a regulation, just jot down their license plate number and the offense and send it to the Field Manager.

The S&LMD develops policies in accordance with its goals of wildlife preservation; protection, safety and well being of visitors and ASNH staff; protection and security of ASNH property; ensuring that the terms of acceptance of the land are continued; and maintaining uniform policies on all S&LMD properties. ASNH reserves the right to limit or prohibit activities at any property for a period of time due to management projects. Note: All "allowed" activities are allowed only on wildlife sanctuaries and at program centers, not in Critical Habitat Areas, and rarely in easements.

**Camping.** The S&LMD does not allow overnight public camping. For purposes of management, education or research, camping may be allowed on an individual basis by the Field Manager or Director.

*Rationale:* Camping causes impact by going off trails and by flattening out vegetation. The S&LMD does not maintain outhouses or trash barrels. Allowing camping would also require ASNH to follow additional state regulations.

**Canoeing, kyaking, or other non-powered boats.** Non-powered boating, including electric trolling motors, is allowed at reasonable access points that do not disturb vegetation and wildlife and is not detrimental to the purposes of the sanctuary.

**Cross country skiing.** Cross country skiing is allowed on trails, open areas or fields. However, cross county skiing is not specifically encouraged as trails are not designed or maintained for the purpose of skiing.

**Fires.** The S&LMD does not allow fires on its properties, or on ice.

*Rationale:* Fires pose a great safety risk for visitors, wildlife and wildlife habitat. Fires also cause scars on the ground that take a considerable time to fill in. Collecting fire wood depletes nesting and shelter material and perch sites. Fires on ice often are lit with chemicals which pollute the water. Many towns require fire permits for any type of fire.

**Fishing.** The S&LMD currently does not have a policy for fishing. Therefore, it is allowed under state regulations and with a valid state fishing license.

**Horseback riding.** Horseback riding is not allowed on ASNH trails.

*Rationale:* Horseback riding is not compatible with our recreational uses and educational activities and poses a greater risk for injury on ASNH property. It impacts trails, creates waste, and would

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require additional signage for visitors. ASNH trails are not wide enough nor high enough to accommodate riding.

*Exceptions:* On properties where horseback riding has been a traditional use, exceptions may be made. A contract may be signed by both the Field Manager and the rider. See exceptions.

**Hunting.** ASNH has erected signs that state "No Hunting", but they are not considered legal posting. Therefore, hunters should be discouraged, but hunting may occur.

*Rationale:* In general, hunting is not a management objective that ASNH generally pursues. To this end, ASNH does not encourage hunting on its properties. It is not compatible with educational opportunities and management objectives of most properties. It was felt that traditional "POSTED" signs were negative and confrontational. ASNH choose to use a less harsh sign to be informative.

**ASNH policies are not applicable on state land. Below are a few scenarios where ASNH land includes or abuts state governed land.**

*Ponds greater than 10 acres.* If a body of water is over 10 acres without artificial or beaver dams, it is considered a "Great Pond" which is state property. On a pond 10 acres or greater, people can hunt from the water in a boat which is solely supported by the water as long as they have access to the water. Therefore, a hunter can carry their canoe and firearm across our land and hunt from a great pond.

*Ponds under 10 acres.* Ponds under ten acres are the property of the shoreline owner. If the land is posted for hunting, it also applies to the pond. However, if only a portion of the shoreline is posted, hunters may be able to access the pond from other property to hunt. Know where the ASNH property line extends across the water.

*Rivers or tidal flats.* As above, rivers that are determined "navigable waters" are state property and land below the "mean high water mark" is state property, both of which may be hunted on or from.

*Discharging firearms.* A person may not discharge a firearm within 300 feet of an occupied building unless the person is on property other than that of the building owner. In other words, a person owns a home on a 1/2 acre of land in a wooded area. A person may discharge a firearm within 300 feet of the home if they are on another persons property. Firearms cannot be discharged from roadways or vehicles.

Visitors to ASNH sanctuaries during hunting season are strongly encouraged to wear blaze orange.

**Motorized vehicles.** No motorized vehicles of any sort are allowed on sanctuaries except for maintenance purposes conducted by ASNH staff, or with explicit written authorization of the S&LMD.

*Rationale:* Motorized vehicles, such as dirt bikes or off-road vehicles, conflict with management goals and other recreational uses and educational activities, and they severely detract from a visitors enjoyment. Trails are not wide enough to accommodate vehicles and vehicles must veer off the trail to avoid walkers. Motorized vehicles would create a greater safety and liability risk and would require additional signage.

## APPENDIX J

**Mountain bikes or other bikes.** Bikes are not allowed on single track paths.

*Rationale:* Mountain bikes cause damage to trails, and disrupt walkers. Mountain bikes put more pounds per square inch on an area of land than do walking, jogging or other passive activities. This causes greater wear and tear and potential for erosion on the trails. Also, bikes need to veer off the trail to get around walkers. This causes more damage to ground immediately adjacent to trails than does a walker stepping aside for another walker.

*Exception.* Mountain bikes are allowed on trails with a public right-of-way such as class VI roads and railroad beds.

**Off Road Vehicles (ORV).** See "motorized vehicles".

**Overnight parking.** Overnight parking on any ASNH sanctuary is prohibited for safety reasons.

**Pets with or without a leash.** Pets are allowed on many ASNH properties on a short leash. Pets are not allowed on some properties due to management objectives.

*Rationale:* The introduction of any non-native or domestic species can often upset the balance of wildlife. Pets chase wildlife and can often overcome young animals. A well trained house pet can be very attentive, but will instinctively chase a moving animal. Roaming dogs also damage shrubs and landscaping. It is hoped that owners with a dog on a leash will be sensitive to this. Pets may be restricted on heavily visited sanctuaries for safety reasons and for noise.

**Picking vegetation.** Removal of any vegetation from a sanctuary is prohibited.

*Rationale:* The S&LMD seeks to maintain a diversity of wildlife and plant life. Picking vegetation not only damages the existing plant, but transporting plants can carry disease and pests to new areas. Some plants, such as purple loosestrife, will crowd out native plants which are more valuable for wildlife. Picking wild plants off private and public property for personal and commercial use is a problem in New Hampshire in general which ASNH does not want to encourage. State law also protects threatened and endangered plants.

**Picnicing.** Picnics are not encouraged.

*Rational:* The S&LMD does not provide trash barrels, tables or rest rooms. Left over food, such as chicken bones, can be thrown into the woods in a misguided effort to help feed wildlife.

**Powerized boats.** The S&LMD does not allow power boats on its private waterbodies.

*Rationale:* Similar to motor vehicles, power boats disturb wildlife, bird watching and educational activities. They produce pollution with oil and gas and the wakes can damage the shoreline. Electric trolling motors are allowed.

**School groups/large groups.** The S&LMD currently does not put limits on the amount of visitors at any sanctuary. School groups are encouraged to use our sanctuaries but must be reminded that there are no picnic facilities, trash barrels or rest rooms. Whenever possible, notification from the group is requested to avoid conflicting uses on a given day. Boardwalks are sometimes not suitable for large groups.



## APPENDIX J

**Skating.** Skating is allowed on all open water areas. Visitors are asked to be cautious of vegetation and to take out what they bring onto the ice. Fires are not allowed. ASNH does not provide assurances on ice conditions or safety.

**Snowmobiles.** Snowmobiling is not allowed.

*Rationale:* Sanctuary trails are not designed to accommodate snowmobiles, snowmobiles create a great deal of noise which is not compatible with educational opportunities, they compact the snow lessening the insulation value and compact the ground below.

*Exceptions:* On properties where snowmobiling has been a traditional use, exceptions may be made for individual clubs or riders. A contract will be drawn up and signed by both parties. See exceptions.

**Snowshoeing.** Snowshoeing is allowed on trails, open areas and fields.

**Swimming.** Swimming is not allowed.

*Rationale:* By granting permission to swim, ASNH is accepting liability, which ASNH is not prepared to do. Swimming is not considered a wildlife-related activity.

**Trapping.** Trapping is not allowed on ASNH properties. Also note that all trapping, unlike hunting, requires written landowner permission.

*Rationale:* Trapping is not a management objective that ASNH pursues.

*Exceptions:* If wildlife is causing safety problems, liability concerns, or economic hardships such as damage to roads, trails, culverts, bridges, homes, fields, or woodlots, ASNH reserves the right to remove the wildlife in the manner it deems appropriate.

**Trash.** The S&LMD does not maintain trash barrels at any of its sanctuaries. Visitors must take out what they bring in.

*Rationale:* The S&LMD does not have the personnel around the state to monitor trash barrels. With our varied assortment of wildlife, it would be difficult to secure barrels.

**Walking.** Walking on ASNH trails is encouraged.

*Exception:* Walking is not allowed in critical habitat areas and most easements.

## **APPENDIX K**

### **NEW HAMPSHIRE STATE STATUTE REGARDING CONSERVATION COMMISSIONS**

#### **RSA 36-A:4 Powers of a Conservation Commission**

Said commission may receive gifts of money and property, both real and personal, in the name of the city or town, subject to approval of the local governing body, such gifts to be managed and controlled by the commission for the purposes of this section. Said commission may acquire in the name of the town or city, subject to the approval of the local governing body, by gift, purchase, grant, bequest, devise, lease, or otherwise, the fee in such land or water rights, or any lesser interest, development right, easement, covenant, or other contractual right including conveyances with conditions, limitations or reversions, as may be necessary to acquire, maintain, improve, protect, or limit the future use of or otherwise conserve and properly utilize open spaces and other land and water areas within their city or town, and shall manage and control the same, but the city or town or commission shall not have the right to condemn property for these purposes.

#### **RSA 36-A:5 Appropriations Authorized.**

I. A town or city, having established a conservation commission as authorized by RSA 36-A:2, may appropriate money as deemed necessary for the purpose of this chapter. The whole or any part of money so appropriated in any year and any gifts of money received pursuant to RSA 36-A:4 may be placed in a conservation fund and allowed to accumulate from year to year. Money may be expended from said fund by the conservation commission for the purposes of this chapter without further approval of the town meeting.

January 2003

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**APPENDIX L**  
**CONSERVATION LAND**  
**SAMPLE MONITORING FORM**  
**(DATE)**

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1. Trail Segment Name:  
Location:
2. Description of the Segment:
3. List Man-Made Alterations (for example, construction, filling, trash, clearing) since the last time the trail segment was monitored. Please describe activity or alteration; note location, extent, purpose (if known), individual responsibility (if known). Attach maps, photos, illustrations. Please label your photos, including direction taken.
4. List Natural Alterations (for example, flooding, fire, blow-downs in the trails). Note location and nature of changes. Attach maps, photos, illustrations as necessary. Please label your photos, including direction taken.
5. To the best of your knowledge and observation, are the restrictions of the property being complied with (i.e, ATVs, larger vehicles, burning, etc.)
6. Other observations/comments.
7. Method of Inspection: Walking/biking (circle one)
8. Date of Inspection:
9. List All Persons Attending the Inspection:
10. Monitor's Name:
11. Signature:
12. Address and Phone Number:

Please indicate the number of the following attached to this report. Be sure to date and sign all materials and provide a description or map showing where on-site photos and illustrations were taken:

___ Aerial photos	___ Maps
___ Ground photos	___ Illustrations
___ Other: _____	

## APPENDIX M

### CITY OF CONCORD CONSERVATION OPEN SPACE ORDINANCE

#### 4-6-1 Definition.

*Conservation Open Space:* The term "conservation open space" shall be deemed to include land within and owned by the City and subject, under the provisions of Chapter 30-3-12, to management and control by the Conservation Commission.

#### 4-6-2 Conduct Prohibited in Conservation Open Space.

It shall be unlawful for any person in any conservation open space to:

- (a) *Solicit Money.* Solicit money, subscription, alms, or contributions for any purpose.
- (b) *Advertising.* Advertise in any manner whatsoever for any reason whatsoever.
- (c) *Deface or Destroy Property.* Deface, destroy or remove any sign, bench, fence, or other structure, or any living plant material existing on conservation open space lands except for forest management practices specifically authorized by the Commission under Section 4-5-7.
- (d) *Setting of Fires.* Set a fire.
- (e) *Treatment of Animals.* Remove or have in his possession any animal's nest or remove the young or eggs of an animal or injure or kill any animal except during a hunting or trapping season and while legally hunting or trapping.
- (f) *Litter.* Deposit, drop or leave any debris, refuse or other litter of any kind except in such receptacles as may be provided for this purpose.
- (g) *Vehicles.* Operate on or bring onto any conservation open space, any motorized vehicle including but not limited to automobile, truck, motorized trail bike or other off-highway recreational vehicle.

#### 4-6-3 Regulated Uses.

The following uses are considered regulated uses and are prohibited, except as permitted under the conditions stated below:

- (a) *Firearms.* It shall be unlawful for any person in any conservation open space to bring into, possess or use any firearm except that hunting for wild game as otherwise may be permitted by state or local law during the designated seasons unless prohibited by the posting of signs.
- (b) *Horses.* It shall be unlawful for any person to ride a horse on, or bring into or possess a horse on any conservation land that is posted prohibiting such use.
- (c) *Snowmobiles.* It shall be unlawful for any person to operate on or bring onto any conservation open space a snowmobile except on trails authorized under the provisions of Section 4-5-4.
- (d) *Selling Concessions.* It shall be unlawful for any person in any conservation open space, except by permit, to exhibit, sell, or offer for sale, hire, lease, or rent any object, service or merchandise.
- (e) *Camping.* It shall be unlawful for any person, except by permit to remain upon any conservation open space lands for the purpose of overnight camping.

#### 4-6-4 Snowmobile Trails.

Snowmobiles shall be permitted only on designated trails that may cross open space lands. Request for such trail designation shall be made to the Conservation Commission through the Office of the City Manager. Approvals shall stipulate the authorized trails must not obliterate or otherwise interfere with cross-country skiing trails.

#### 4-6-5 Authority of Conservation Commission.

In order to provide for the controlled and equitable use of designated conservation open space lands and to protect the safety of users and to preserve the natural environment, the Conservation Commission may issue rules and regulations that:

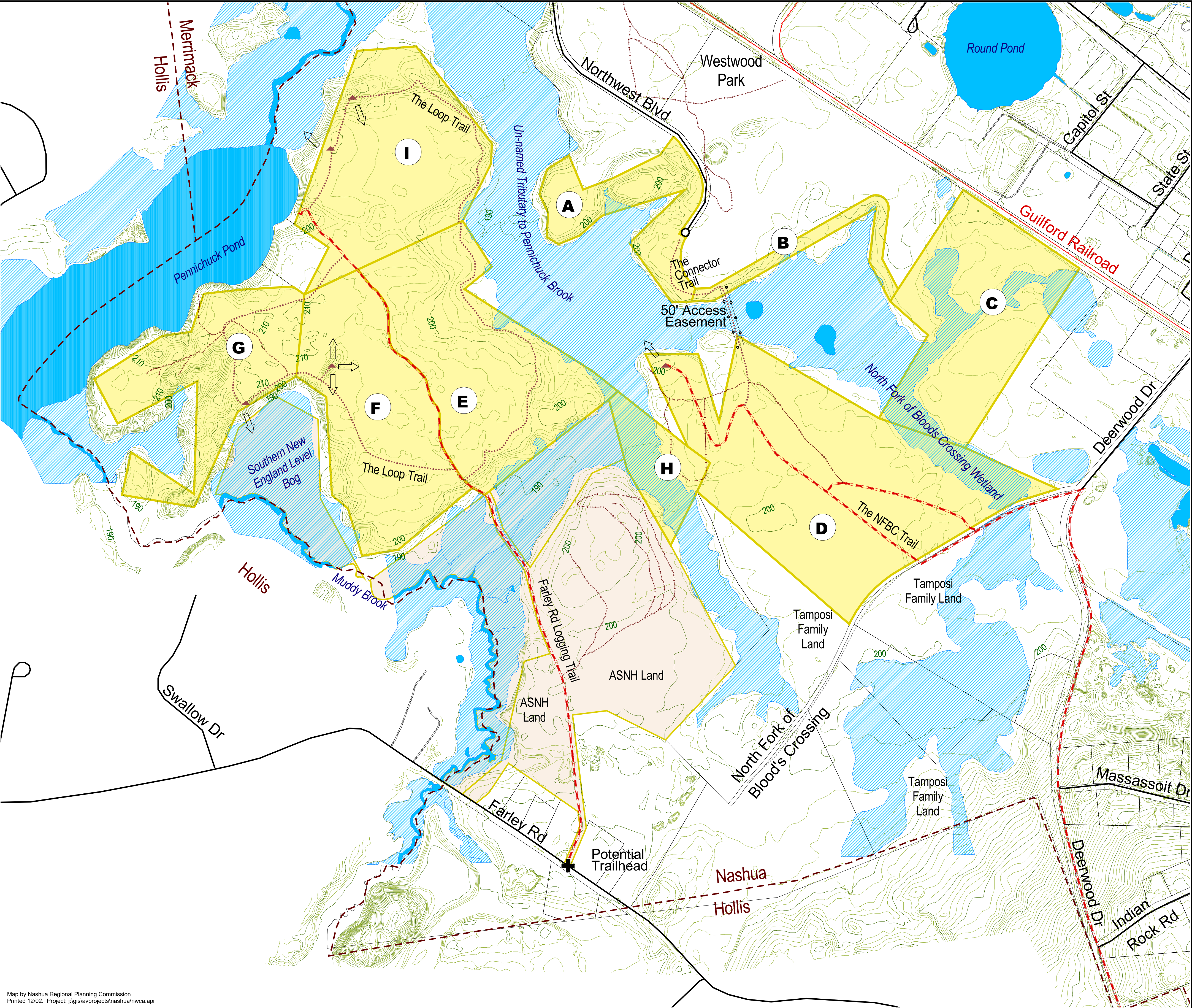
## APPENDIX M

- (a) *Fix Times*. Fix the times when the open space lands shall be open to public use, whenever such restrictions are necessary to protect the public or the lands.
- (b) *Restrict Use*. Restrict the use of open space lands, or parts thereof, for any use which may be determined by the Conservation Commission to be detrimental to forest or open space management.
- (c) *Layout of Uses*. Layout proper open space land uses in accordance with the open space plan and other management studies dealing with these designated City-owned properties.
- (d) *Permit*. The Conservation Commission shall establish guidelines for any necessary permits for uses allowed by this Article. Permits shall be issued through the Health Services Division of the Code Enforcement Department. Any permit issued shall be followed with strict accordance with the written terms and conditions thereon. Any violation of any law or ordinance, rule or regulation shall constitute grounds for revocation of the permit. In the case of revocation, monies paid shall be forfeited and the violator shall be liable for all damages including prosecution under the applicable legal jurisdiction.
- (e) *Appeal*. Any person aggrieved by a decision made by the Health Services Division of the Code Enforcement Department may, within five (5) working days of receipt of that decision, file a written appeal with the City Manager setting forth the reasons why the appellant is aggrieved. The decision of the City Manager shall be final.



# Northwest Sanctuary, Nashua, NH

## Map 1 of 5: Base Details



### Map Legend

- Existing or Potential Trails

  - Existing Trails
  - Existing, Indistinct Trails
  - Proposed Trails
  - Access Easement
  - Access Locations
- Topography

  - 10' (Index) Contours
  - 2' Contours
- Scenic Vista Sites and Direction of View

  - Scenic Vista Sites and Direction of View
- Northwest Conservation Land

  - Other Permanent Open Space
- Roads

  - State Roads
  - Local Roads
  - Class VI Roads
- Boundaries

  - Political Boundaries
  - Railroad Tracks
  - Rivers or Streams
  - Wetlands
  - Lakes or Ponds
  - Wetland

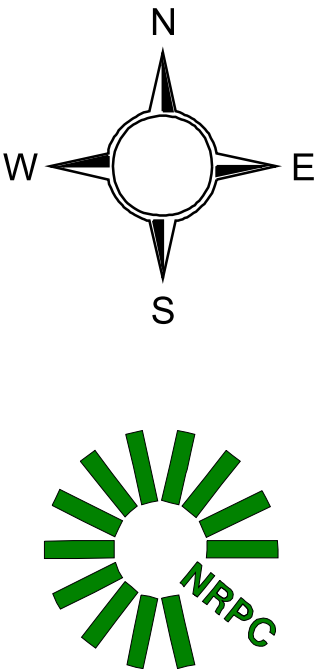
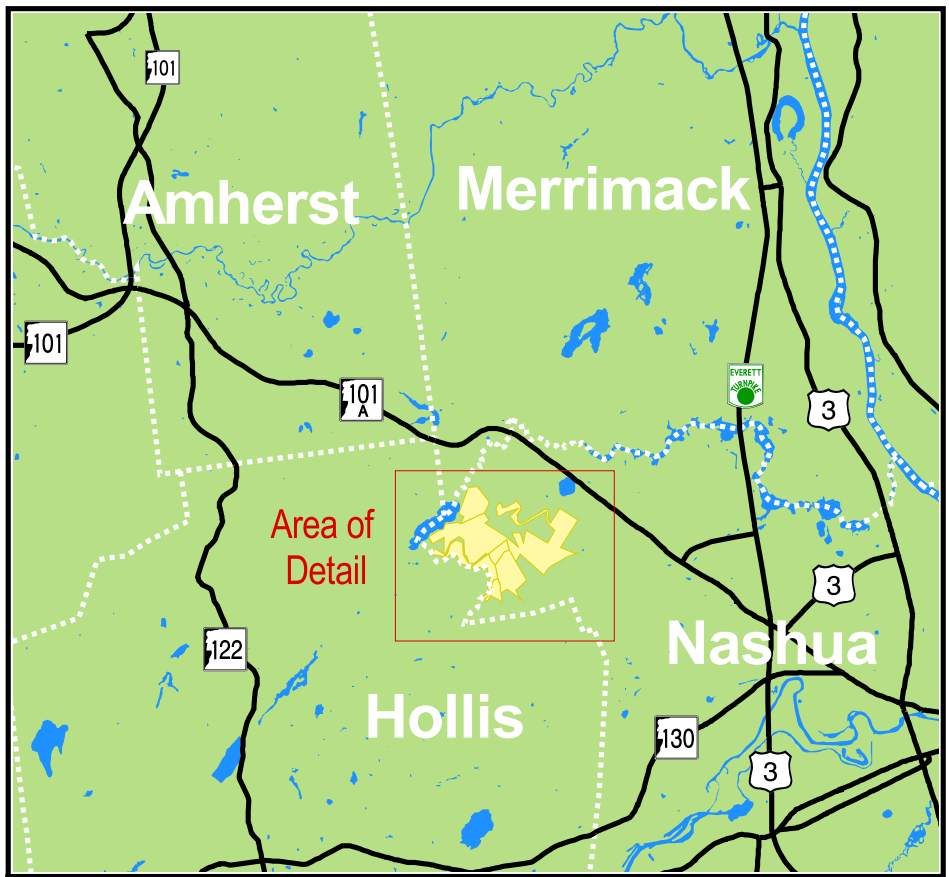
Area Locations and Descriptions in the Northwest Sanctuary

Area	Location	Acres (approx.)	Description
A	Southwest from terminus of Northwest Blvd.	17	Mature mixed forest transitioning into red maple/scrub-shrub swamp.
B	Wetland protection zone south and east of terminus of Northwest Blvd.	5	Mature mixed forest 100-200 foot wide bordering red maple/scrub-shrub swamp.
C	South of Guilford Industries (formerly B&M) Railroad ROW and west of Airport	40	Upland and wetland. Upland supports mature mixed forest; wetland supports mixed hardwoods/scrub-shrub swamp.
D	West of North Fork of Blood's Crossing	75	Level upland. Dominated by large stands of managed white pine; some mature red and white oak along wetland edges. Red maple/scrub-shrub swamp interspersed along property line and bisecting Area D and C.
E	Northeast of the Farley Logging Road	38	Level upland. Dominated by large stands of managed white pine; some mature red and white oak along wetland edges. Red maple/scrub-shrub swamp along northeast and southeast edges.
F	Southeast of the Farley Logging Road	38	Level upland. Dominated by large stands of managed white pine; bordered to the southwest by scrub-shrub swamp associated with Muddy Brook and SNE Bog. Some mature red and white oak along wetland edges.
G	West of Farley Logging Road adjacent to Area F.	30	Rolling uplands. Dominated by stands of managed white pine; bordered by scrub-shrub swamp associated with Muddy Brook and SNE Level Bog to the southeast and Pennichuck Pond to the northwest.
H	Keystone' piece between Area D, Area E and the northeast section of the Audubon Land	11	Red maple/scrub-shrub swamp - very wet
I	North of the Farley Logging Road (Conservation Easement from Pennichuck)	42	Level upland with a small wetland complex on the northeast and northwest sides. Dominated by large stands of managed white pine; bordered by scrub-shrub swamp associated with Pennichuck Pond and intermittent tributary to Pennichuck Brook. Mature Red and white oak along wetland edges.

Source: Informal Ecological Assessment and Natural Resources Inventory for the Northwest Conservation Land, E. Ann Poole, 2002.

Map by Nashua Regional Planning Commission utilizing data assembled and digitized by Camp Dresser and McKee (CDM), 1999-2001. Data was made available through the City of Nashua Assessor's office.

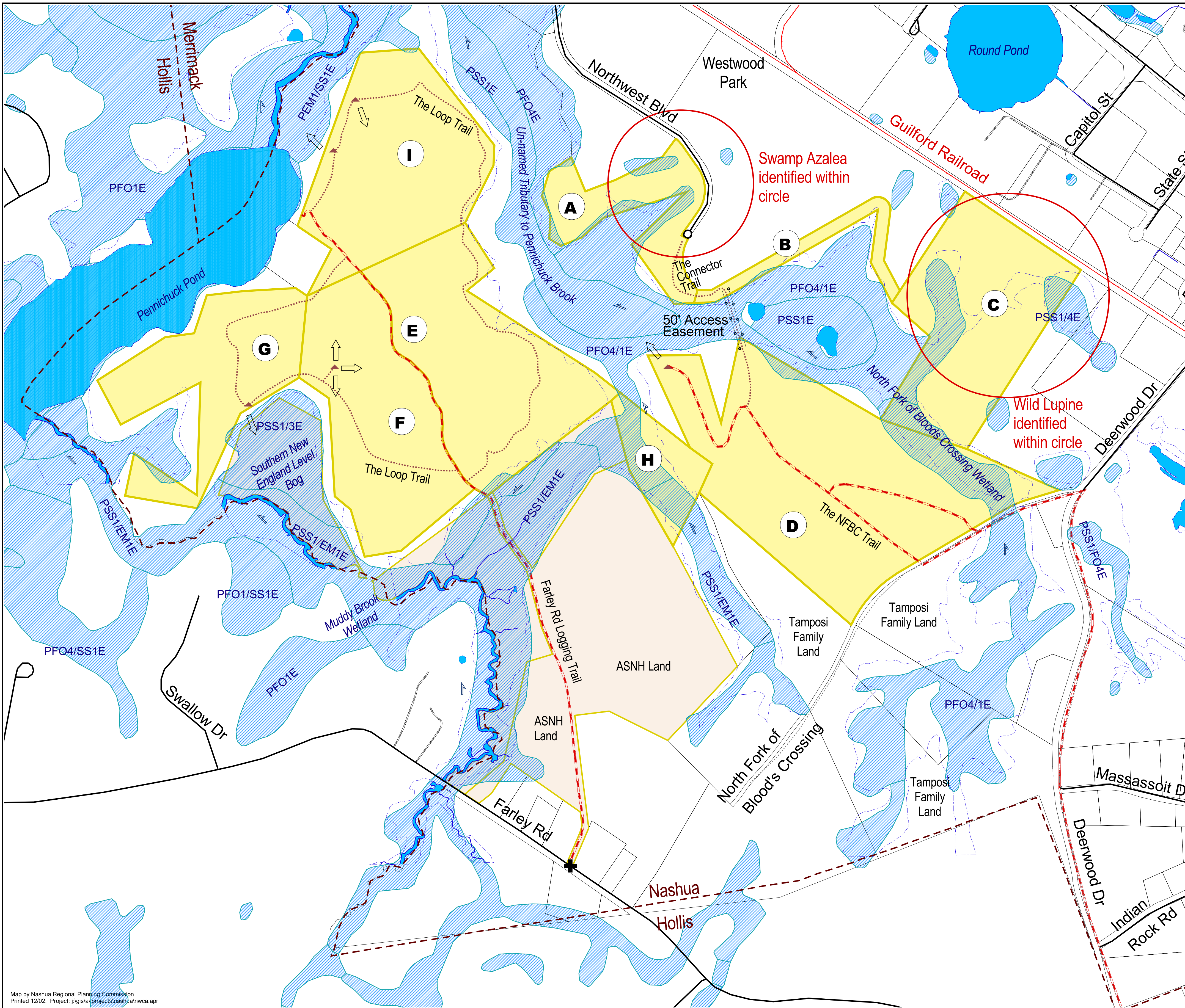
Analysis of properties and potential trail/vista sites was completed by Anne Poole, Environmental Consultant and reviewed by NRPC staff. This map has been prepared for planning purposes only.





# Northwest Sanctuary, Nashua, NH

## Map 2 of 5: Landcover and Water Resources



### Map Legend

- Legend:**

  - Northwest Conservation Area Properties
  - Other Permanent Open Space Areas
  - Parcel Boundaries, (approx.)
  - Existing or Potential Trails
  - Existing Trails
  - Existing, Indistinct Trails
  - Proposed Trails
  - Pedestrian Easement
  - Access Locations
  - Hydrography**
    - Rivers or Streams
    - Intermittent Streams
    - Wetlands
    - Lakes or Ponds
    - Direction of flow
    - Wetlands (NWIS)
  - Local or State Roads**
    - State Roads
    - Local Roads
    - Private Roads
    - Class VI Roads
  - Political Boundaries
  - Railroad Tracks
  - Scenic Vista Sites and Direction of View

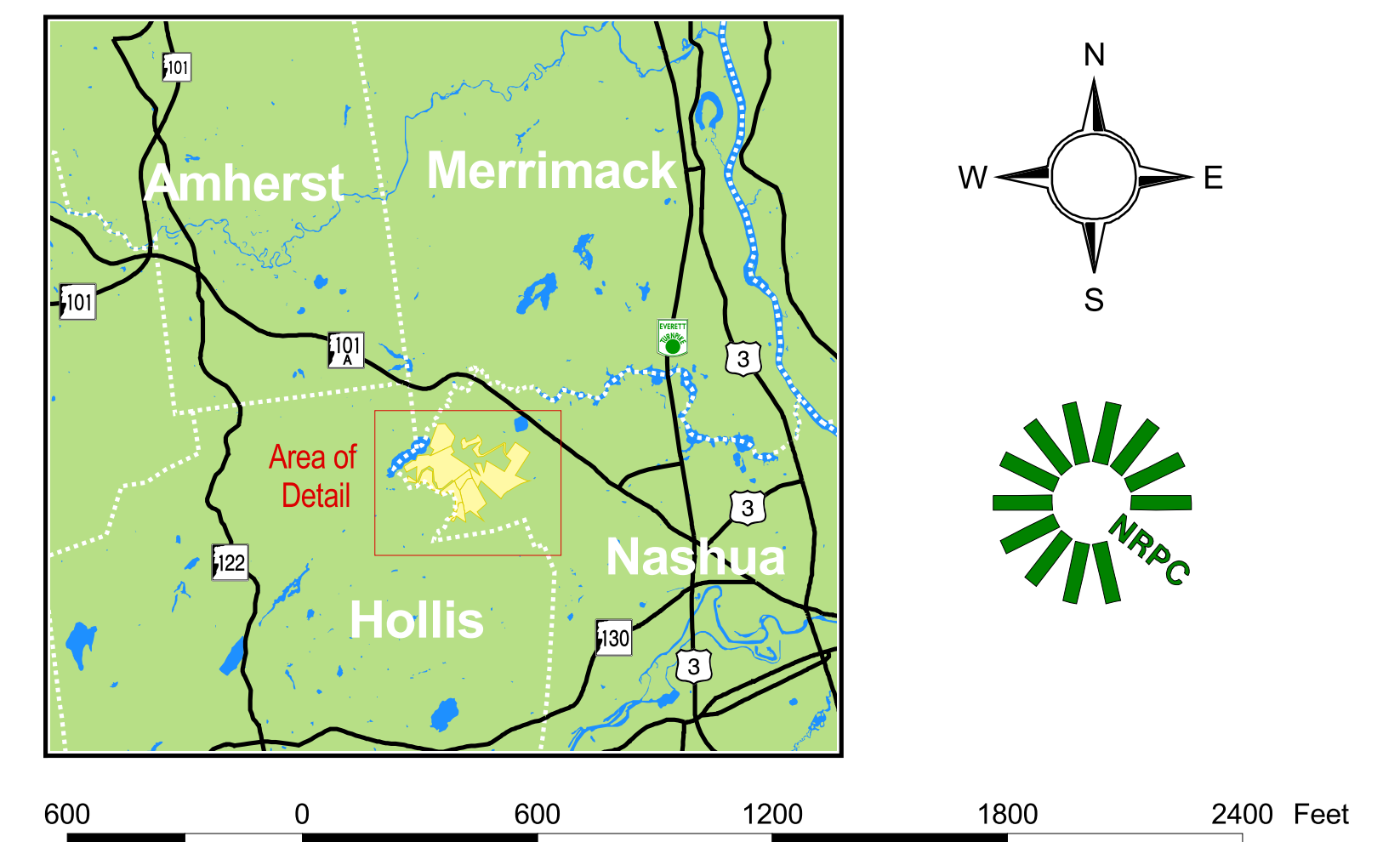
Wetland Functions & Values & Associated Species on the Northwest Sanctuary			
Wetland	Symbol/Class	Principle Function(s) / Value(s)	Identified &/or Potential Species Habitat on the Site
Pennichuck Pond	LUB4 Lacustrine, open water	<ul style="list-style-type: none"> <li>• Wildlife Habitat</li> <li>• Uniqueness/Heritage</li> <li>• Sediment/Toxicant Retention</li> <li>• Floodflow Alteration</li> <li>• Fish and Shellfish Habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Swamp Azalea</li> <li>• Bullfrog</li> <li>• Green frog</li> <li>• Spring peeper</li> <li>• Osprey</li> <li>• Common loon</li> <li>• Ducks</li> <li>• Great blue heron</li> </ul>
Muddy Brook	PSS/EMIE Palustrine scrub-shrub and emergent; seasonally flooded/saturated	<ul style="list-style-type: none"> <li>• Wildlife Habitat</li> <li>• Uniqueness/Heritage</li> <li>• Sediment/Toxicant Retention</li> <li>• Floodflow Alteration</li> <li>• Nutrient Removal</li> </ul>	<ul style="list-style-type: none"> <li>• Swamp Azalea</li> <li>• Bullfrog</li> <li>• Green frog</li> <li>• Spring peeper</li> <li>• American bittern</li> <li>• Black-crowned night-heron</li> <li>• Great blue heron</li> <li>• Virginia rail</li> <li>• Marsh wren</li> <li>• Cooper's hawk</li> </ul>
North Fork of Blood's Crossing	PFO1 and PSSIE Palustrine scrub-shrub and emergent; seasonally flooded/saturated	<ul style="list-style-type: none"> <li>• Wildlife Habitat</li> <li>• Sediment/Toxicant Retention</li> <li>• Floodflow Alteration</li> </ul>	<ul style="list-style-type: none"> <li>• Bullfrog</li> <li>• Green frog</li> <li>• Spring peeper</li> <li>• American bittern</li> <li>• Black-crowned night-heron</li> <li>• Great blue heron</li> <li>• Virginia rail</li> <li>• Marsh wren</li> <li>• Cooper's hawk</li> </ul>
Southern New England Bog	PSS/EMIE Palustrine scrub-shrub and emergent; seasonally flooded/saturated	<ul style="list-style-type: none"> <li>• Wildlife Habitat</li> <li>• Uniqueness/Heritage</li> <li>• Sediment/Toxicant Retention</li> <li>• Nutrient Removal</li> </ul>	<ul style="list-style-type: none"> <li>• Swamp Azalea</li> <li>• Bullfrog</li> <li>• Green frog</li> <li>• Spring peeper</li> <li>• American bittern</li> <li>• Black-crowned night-heron</li> <li>• Great blue heron</li> <li>• Virginia rail</li> <li>• Marsh wren</li> <li>• Cooper's hawk</li> </ul>

Source: *Informal Ecological Assessment and Natural Resources Inventory for the Northwest Conservation Land*, E. Ann Poole, 2002.

The Nashua Water Supply Protection District consists of all area located within 300' of Pennichuck Pond and all land area within 150' from all water bodies connected via surface water to Pennichuck Pond and the wetlands associated with it.

Map by Nashua Regional Planning Commission  
utilizing data assembled and digitized by Camp  
Dresser and McKee (CDM), 1999-2001. Data was  
made available through the City of Nashua  
Assessor's office.

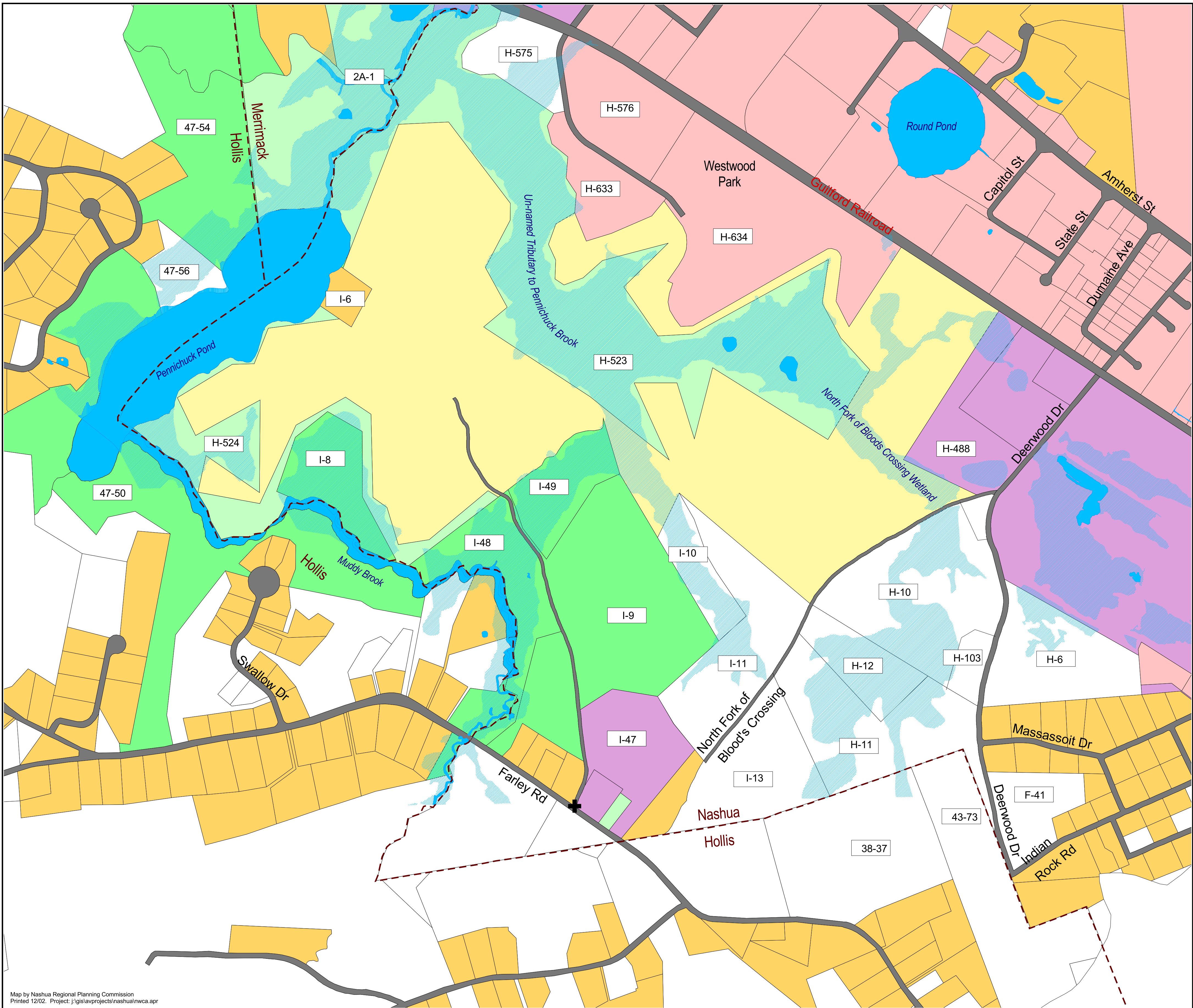
Analysis of properties and potential trail/vista sites was completed by Anne Poole, Environmental Consultant and reviewed by NRPC staff. This map has been prepared for planning purposes only.



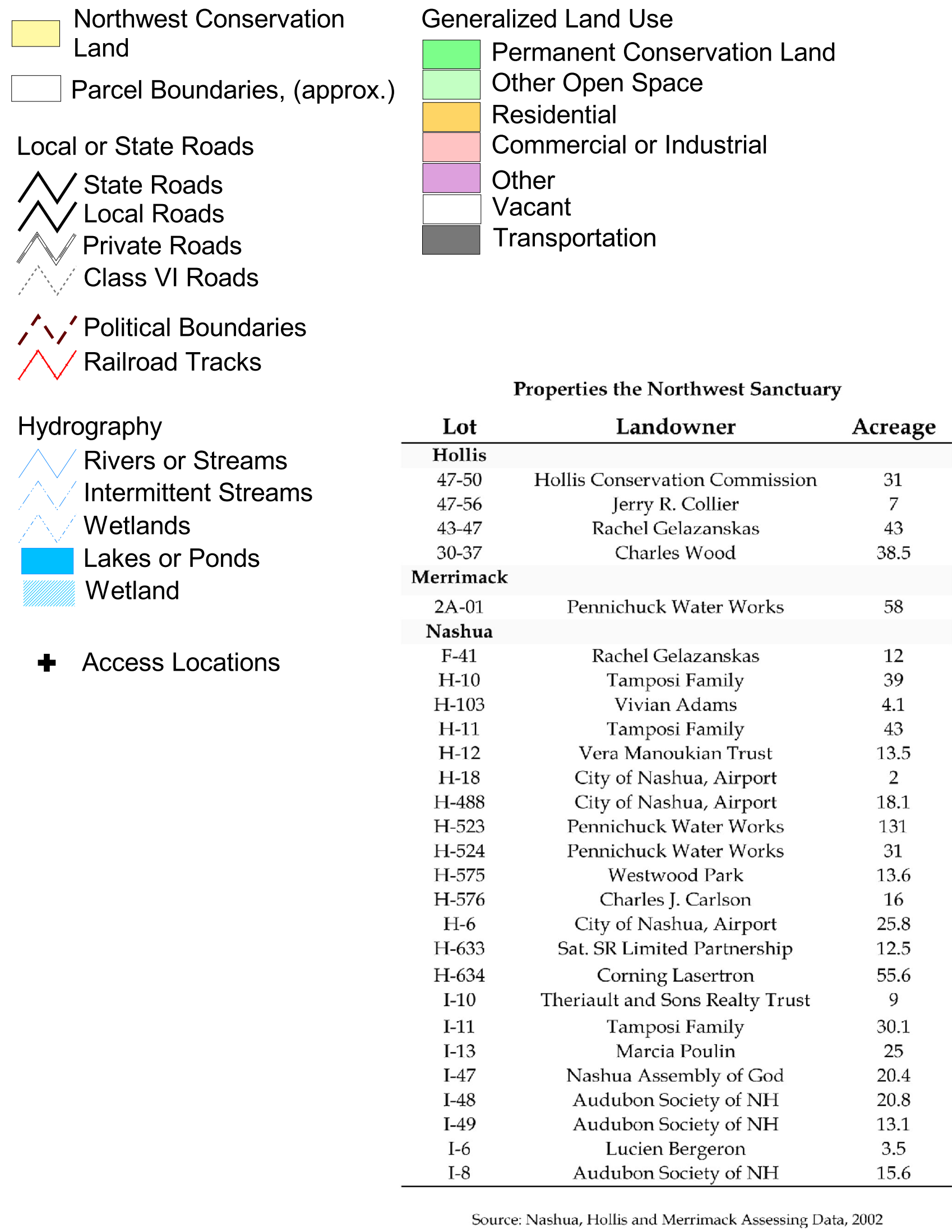


# Northwest Sanctuary, Nashua, NH

## Map 3 of 5: Land Use and Abutters

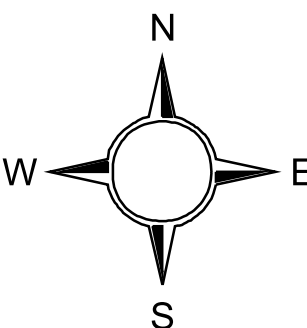
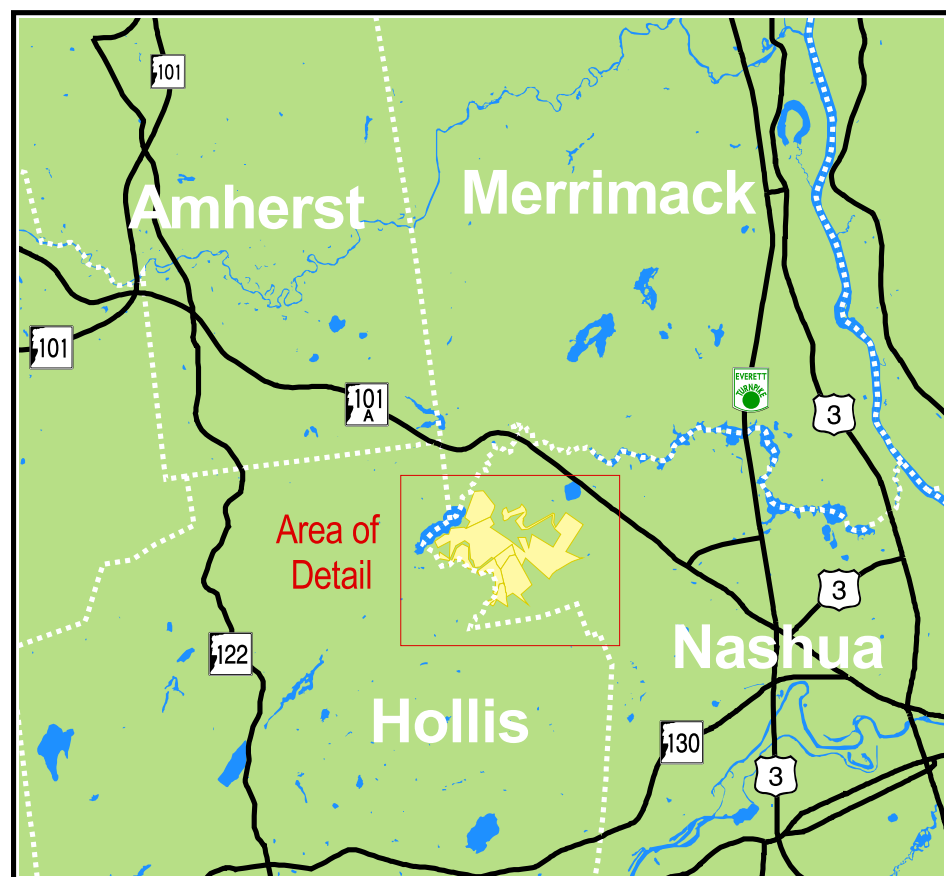


## Map Legend



Map by Nashua Regional Planning Commission  
utilizing data assembled and digitized by Camp  
Dresser and McKee (CDM), 1999-2001. Data was  
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Assessor's office.

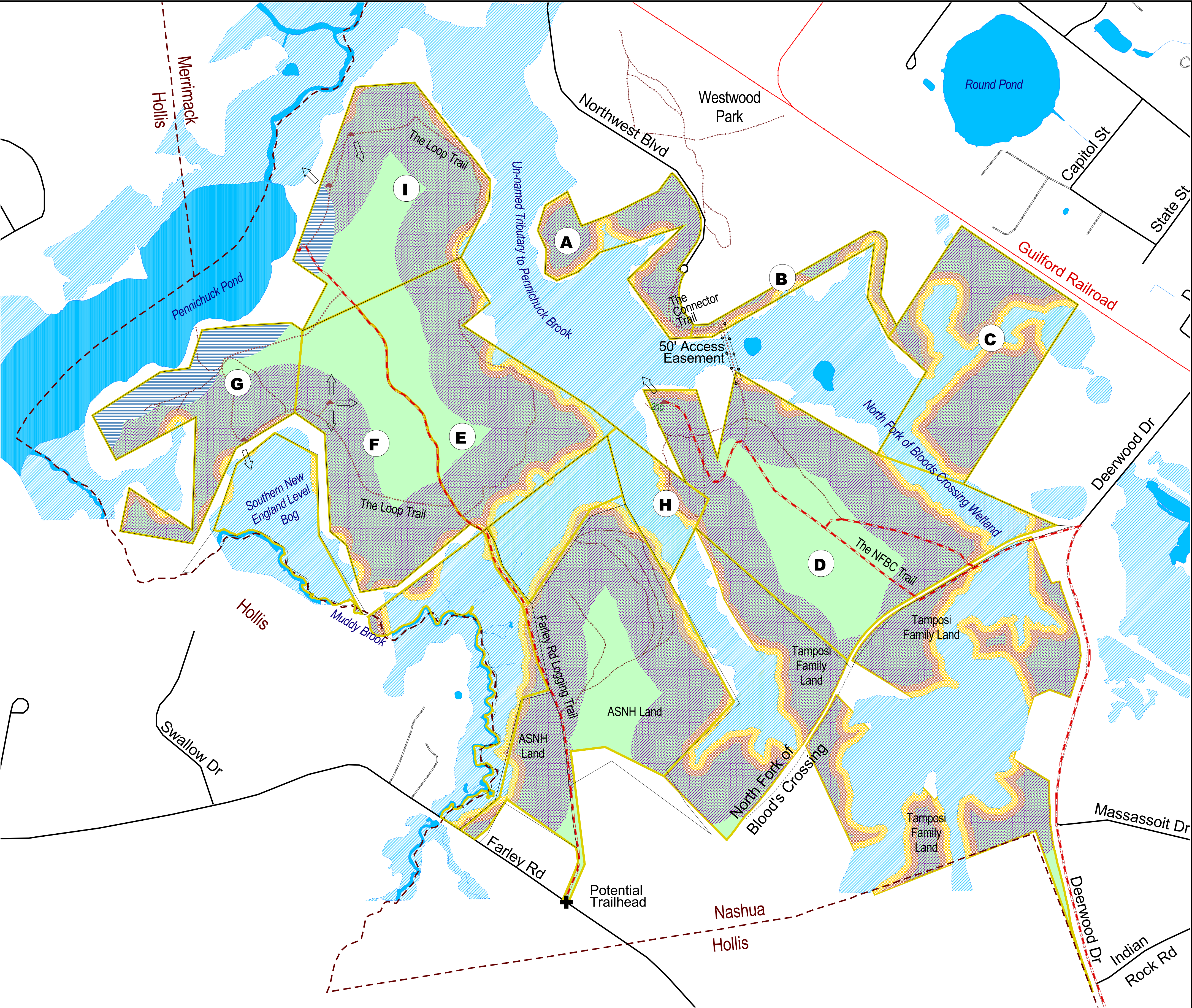
Analysis of properties and potential trail/vista sites was completed by Anne Poole, Environmental Consultant and reviewed by NRPC staff. This map has been prepared for planning purposes only.





# Northwest Sanctuary, Nashua, NH

## Map 4 of 5: Use Constraints



### Map Legend

- Local or State Roads

  - State Roads
  - Local Roads
  - Private Roads
  - Class VI Roads

Political Boundaries

Railroad Tracks

Hydrography

  - Rivers or Streams
  - Intermittent Streams
  - Wetlands
  - Lakes or Ponds
  - Wetland

Scenic Vista Sites and Direction of View
- Existing or Potential Trails

  - Existing Trails
  - Existing, Indistinct Trails
  - Proposed Trails
  - Pedestrian Easement
  - Access Locations

Use Constraints

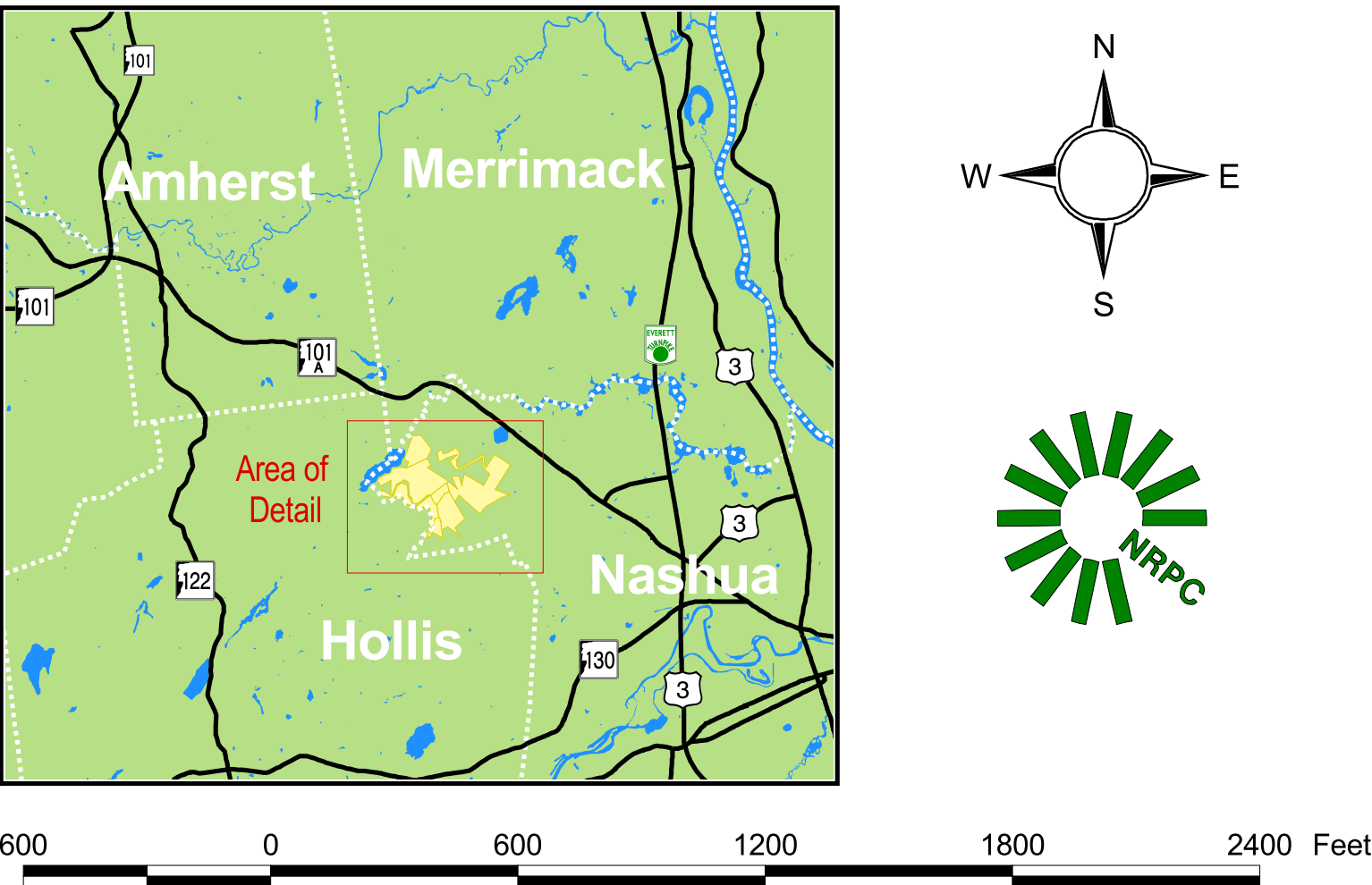
  - 50' Recommended No-cut Zone around wetland areas
  - 100' Buffer around wetland areas
  - Mandated 300' Buffer around Pennichuck Pond
  - 500' Buffer of wetland areas; upland habitat required by wetland species
  - Area outside of recommended buffers

Easements and Restrictions on the Northwest Sanctuary	
Easement or Restriction	Enforcement Entity
Motor vehicle access for water supply reasons only	Deed from Marcia Poulin to Audubon Society
No ATV use	Source Water Protection Grant
100-Foot buffer on all wetlands - 50-foot no-disturbance zone, remaining 50 feet is limited vegetation removal	Pennichuck Water Works
300 foot buffer on Pennichuck Pond - 50-foot no-disturbance zone, remaining 250 feet is limited vegetation removal	Pennichuck Water Works
Audubon restrictions as they apply to access adjacent to the site (see Appendix K)	New Hampshire Audubon Society
300-Foot buffer on Pennichuck Pond and 150-foot buffer on all wetlands associated with Pennichuck Pond	City of Nashua Water Supply Protection District

Restricted Activities in Watershed Protection Areas		
Area	Resource at Risk	Restrictions to Activities
Wetland Crossing on Farley Road Logging trail on Audubon Land	Muddy Brook Wetland	<ul style="list-style-type: none"><li>Limited vegetation cutting</li><li>Signage to keep bikes on the trail</li><li>No fill to widen the trail</li><li>Signage to alert visitors of wildlife migration in the spring</li></ul>
Western tip near the 1 <sup>st</sup> lookout on the Loop Trail (Areas F and G)	Southern New England Level Bog	<ul style="list-style-type: none"><li>No bicycles (install physical barriers)</li><li>Limited clearing</li><li>Signage to alert visitors of wildlife migration in the spring</li></ul>
Wetland crossing from Area B to Area D	North Fork of Blood's Crossing Wetland	<ul style="list-style-type: none"><li>Railing on the boardwalk crossing the trail and 100 feet on either side of the trail</li><li>Physical barriers to prevent wanderers</li><li>Limit the boardwalk width to six feet</li><li>Signage regarding the sensitivity of this area and significance to Pennichuck Watershed</li><li>Signage to alert visitors of wildlife migration in the spring</li></ul>
Trail crossing wetland in Area D	North Fork of Blood's Crossing Wetland	<ul style="list-style-type: none"><li>Limited vegetation cutting</li><li>Install a series of elevated boardwalks</li><li>Signage to keep bikes on the trail</li><li>Signage to alert visitors of wildlife migration in the spring</li></ul>

Map by Nashua Regional Planning Commission utilizing data assembled and digitized by Camp Dresser and McKee (CDM), 1999-2001. Data was made available through the City of Nashua Assessor's office.

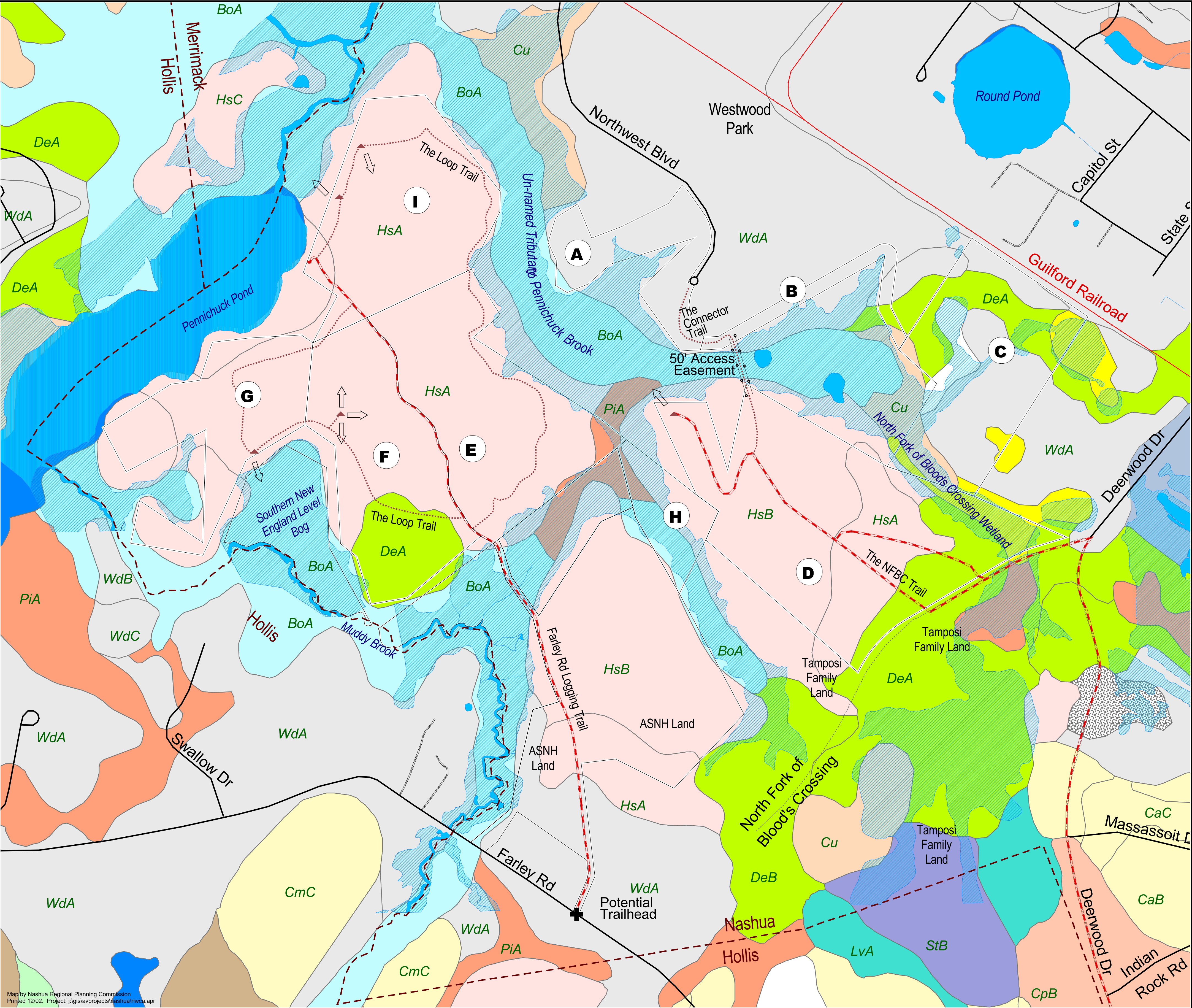
Analysis of properties and potential trail/vista sites was completed by E. Ann Poole, Environmental Consultant and reviewed by NRPC staff. This map has been prepared for planning purposes only.





# Northwest Sanctuary, Nashua, NH

## Map 5 of 5: Soils



### Map Legend

- Northwest Conservation Area Properties

Hydrography

Soil Name and Symbol
- Existing or Potential Trails

Local or State Roads

Political Boundaries
- Existing Trails

Existing, Indistinct Trails

Proposed Trails

Pedestrian Easement

Access Locations

State Roads

Local Roads

Private Roads

Class VI Roads

Railroad Tracks

Scenic Vista Sites and Direction of View
- Rivers or Streams

Intermittent Streams

Wetlands

Lakes or Ponds

Belgrade (Be)

Borohemists (Bo, Bp)

Canton (Ca, Cm, Cn)

Chocorua (Cu)

Deerfield (De)

Hinckley (Hs)

Leicester-Walpole (Lt, Lv)

Pennichuck (Ph)

Pipestone (Pi)

Pits

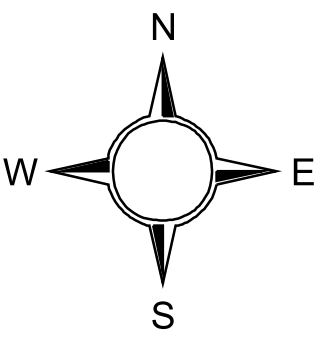
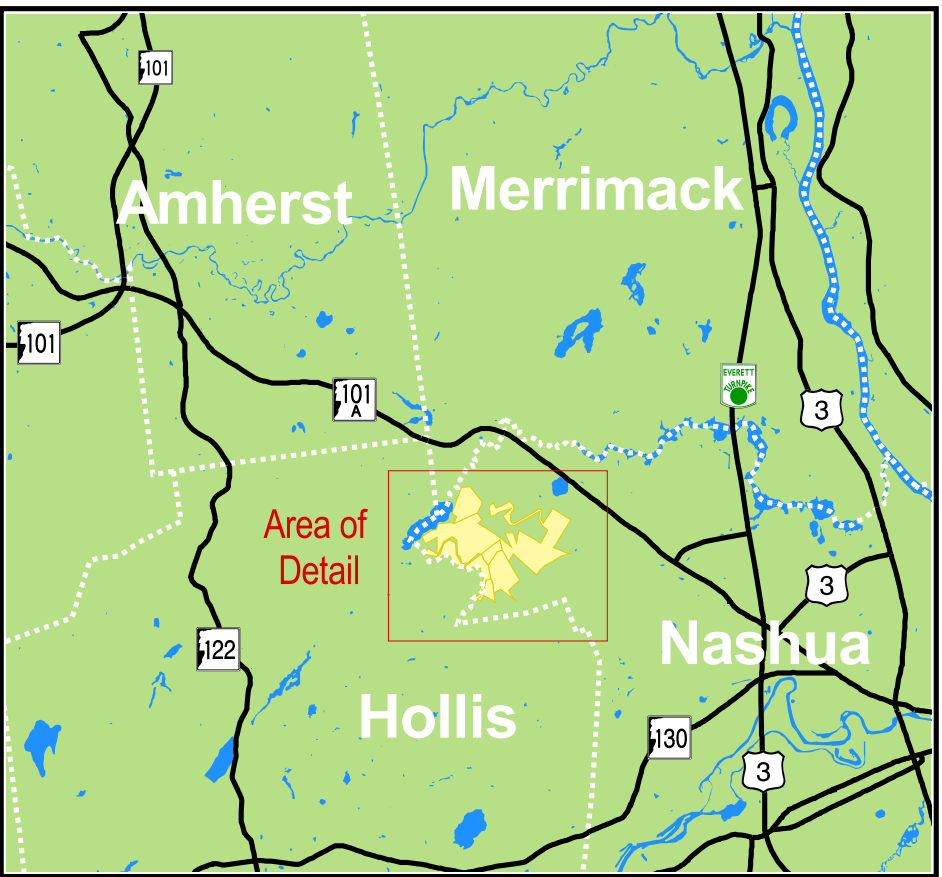
Scarboro (So, Sr)

Udipsamments, (Ud)

Windsor (Wd)

Map by Nashua Regional Planning Commission utilizing data assembled and digitized by Camp Dresser and McKee (CDM), 1999-2001. Data was made available through the City of Nashua Assessor's office.

Analysis of properties and potential trail/vista sites was completed by Anne Poole, Environmental Consultant and reviewed by NRPC staff. This map has been prepared for planning purposes only.



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