Village of Decatur
Van Buren County, Michigan
Asset Management Program
Drinking Water System

December, 2017

WIGHTMAN & ASSOCIATES, INC.
ENGINEERING ◆ SURVEYING ◆ ARCHITECTURE

2303 Pipestone Road
Benton Harbor, Michigan 49022

Phone: (269) 927-0100
Fax: (269) 927-1300

www.wightman-assoc.com

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ACRONYMS AND ABBREVIATIONS USED

AMFP – Asset management financial plan
AMP – Asset management program
CIP – Capital improvement plan
Decatur – Village of Decatur
DPW – Department of Public Works
GIS – Geographical information system
gpd – Gallons per day
gpm – Gallons per minute
GPS – Global positioning system
MDEQ – Michigan Department of Environmental Quality
NASSCO – National Association of Sewer Service Companies
O&M – Operation and maintenance
PACP – Pipeline Assessment Certification Program
PVC – Polyvinyl chloride
WAI – Wightman and Associates, Inc.

Executive Summary

An asset management program is a tool for community leaders and utility managers to proactively decide when to repair, replace, or rehabilitate assets and how those improvements will be funded to maintain a perpetual level of service. The program is organized into three components that answer the following questions:

Asset Management Program (AMP):

- What level of service will be provided?
- What improvements need to be made and when?
- What changes to operations need to be made?
- How will these improvements and changes be funded?
- How is the plan implemented?

Geographic Information System (GIS):

- What do we own, where is it, what is the condition, and what is the remaining life?
- What are the most critical assets?
- Where was maintenance performed and what was done?
- Where are improvements needed?

System User Manual:

- How will the asset management program tools be used?
- How will the asset management program be maintained and updated?
- Where are improvements needed?

System Description

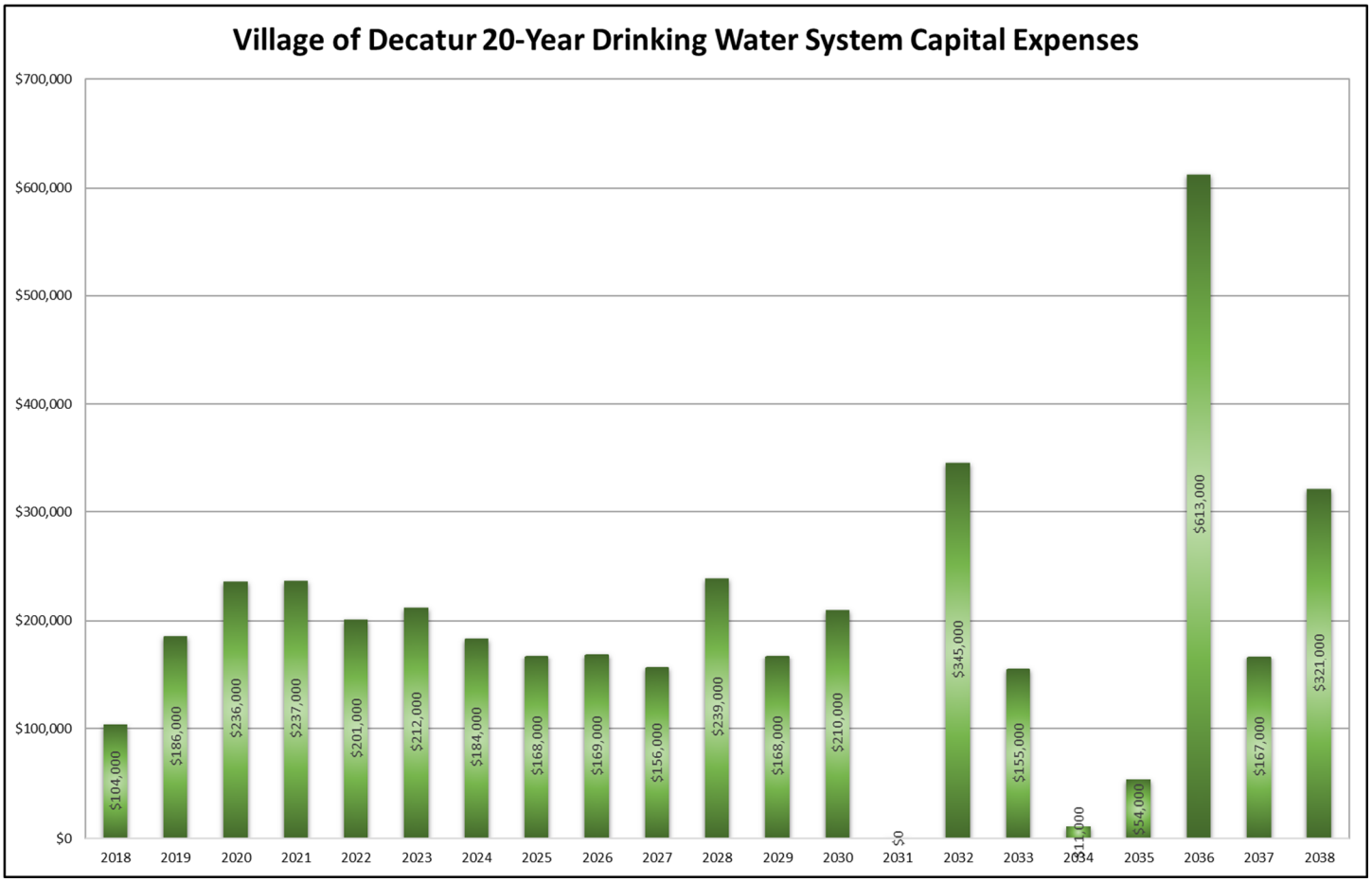
The Village of Decatur operates a water system consisting of three water supply wells, one elevated storage tank, and approximately 17.5 miles of piping, and currently serving about 773 customers. The wells have a total capacity of 1,750 gpm and a firm capacity of 750 gpm, while the elevated storage tank provides 200,000 gallons of storage for peak and fire demands. The system currently provides an average day demand of 199,500 gpd and a peak day demand of 354,000 gpd in 2016. The approximate replacement cost of the water system is $18,030,000.

System Condition

The Village of Decatur's water assets are generally in fair to good condition and, with recommended operation, maintenance, and replacement procedures, will be able to provide the desired level of service. The condition ratings for the major components of the wastewater system are based upon the National Association of Sewer Service Companies Condition Assessment Ratings.

Capital Improvements

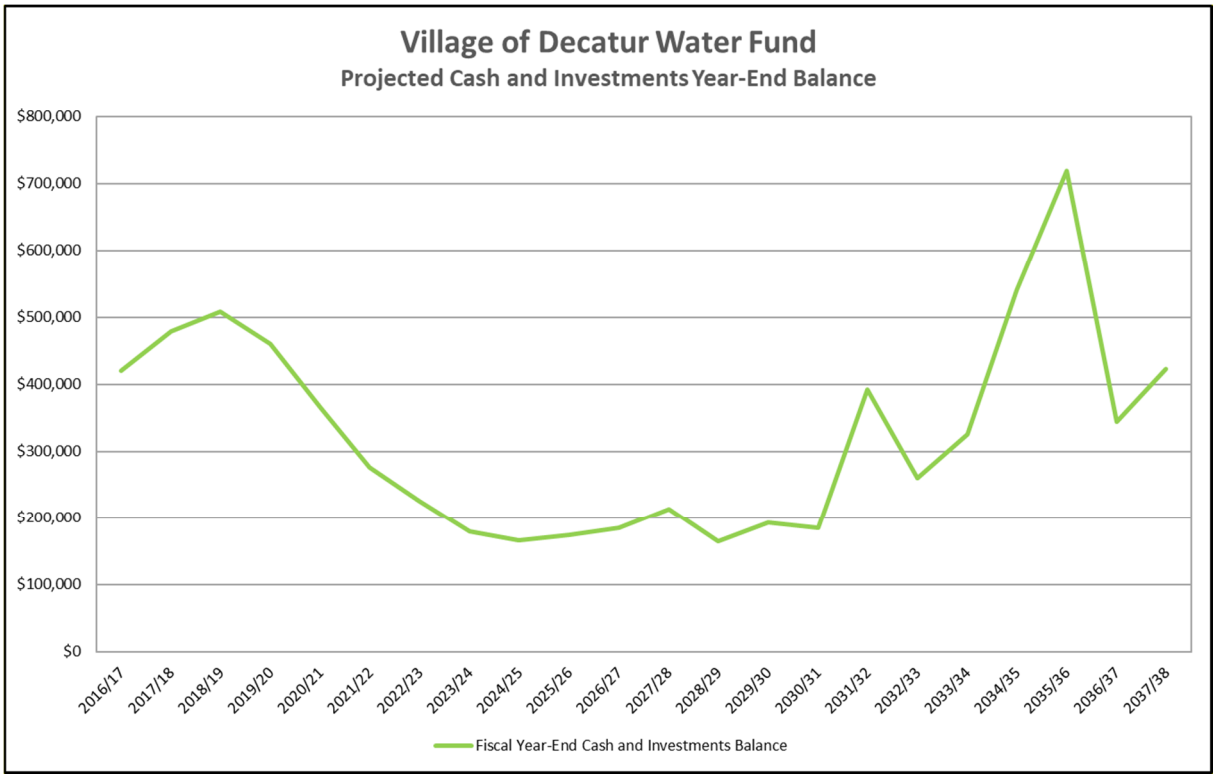
A capital improvement plan has been prepared to identify when critical assets should be improved. A list of the recommended improvements for the next 20 years is included in Section V of this report with additional details provided in Appendix D. The following chart identifies the estimated improvement costs for the next 20 years shown in future (adjusted for anticipated inflation) dollars.



Cash Flow and Rates

A long-term cash flow analysis was completed to determine the most cost-effective way to fund operations and capital improvements. The analysis indicates that the current rates could not support the projected annual operating costs and a total of $4,136,000 in additional capital improvements to maintain the desired level of service over the next 20 years without additional financing through rate increases.

The cash flow rate and capital improvement plan recommendations will improve the water system condition and provide the funding necessary to sustain the desired level of service. The following graph shows the projected cash balance for the next 20 years assuming the recommended improvements are made and the proposed rate increases are implemented.


Village of Decatur Water Fund
Projected Cash and Investments Year-End Balance
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
2016/17
2017/18
2018/19
2019/20
2020/21
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
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2032/33
2033/34
2034/35
2035/36
2036/37
2037/38
Fiscal Year-End Cash and Investments Balance

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I. Introduction, Team, and Mission Statement

A utility Asset Management Program (AMP) identifies the desired level of service for that utility at the lowest life cycle cost for rehabilitating, repairing, or replacing the assets associated with that utility system. By January 1, 2018, the State of Michigan Department of Environmental Quality (MDEQ) is requiring all public water systems serving populations of 1,000 or greater to have an AMP developed for their drinking water system and on file with the MDEQ. To comply with this regulation, the Village of Decatur (Decatur) retained the services of Wightman and Associates, Inc, (WAI) to develop their drinking water system AMP. This report outlines the various components of the drinking water system AMP, including implementation recommendations.

The purpose of this report is as follows:

- Develop an inventory and location map of all drinking water assets.
- Evaluate the condition and remaining life of all drinking water assets.
- Determine the desired level of service.
- Assign criticality to all identified assets as they relate to the desired level of service.
- Develop a capital improvements program for the system, identifying the improvements necessary to maintain the desired level of service.
- Develop revenue systems that will support the desired level of service.
- Summarize methods to implement the AMP.

A useful AMP is a continually changing process and needs to be periodically updated to reflect changes in the goals of the utility and the ongoing deterioration of the assets. The initial AMP was developed by the following team of officials, staff, and consultants (the Asset Management Team):

The Village of Decatur
- Aaron Mitchell: Village Manager
- Mathew Newton: Village Clerk and Treasurer
- Jim Ebeling: Public Works Foreman
- Evelyn Avery: Utility Billing Clerk

Wightman & Associates, Inc. staff
- Mickey Bittner, P.E.: Client Principal
- Jeff Edwards, P.E.: Project Engineer
- Ryan Miller: GIS Manager

The Asset Management Team came up with the following mission statement for the Decatur water system:

The Village of Decatur is committed to improving and maintaining protection of the environment, public health, and safety of the performance of our water utility system assets, while minimizing the long-term cost of operating those assets. We will strive to maintain the highest-quality customer service at the lowest life cycle cost possible.

II. Asset Inventory

The first step in developing an AMP is to identify the equipment, infrastructure, personnel, tools, and anything else that comprises or services the utility in question.

A. Description

The Decatur water system consists of three water supply wells, one elevated storage tank, and approximately 17.5 miles of mostly 4-inch, 6-inch, and 8-inch distribution piping. The wells are capable of supplying a total of 1,750 gpm of water with a firm capacity[1] of 750 gpm. The elevated storage tank helps maintain a steady pressure in the distribution system of 54 to 60 psi (as measured at the base of the tank), while providing a total of 200,000 gallons of storage to meet peak and fire demands. The system currently serves 724 single unit customers and 49 multiple unit customers (condominiums, apartment buildings, commercial/industrial properties, and schools), providing an average day demand of 199,500 gpd and a peak day demand of 354,000 gpd in 2016.

With a thorough knowledge of the basic layout of the water supply, storage, and distribution system, a comprehensive inventory of all drinking water system assets was performed using as-built utility drawings and on-site Global Positioning System (GPS) field locations. Using the data collected, detailed maps of the water distribution system were prepared using Geographical Information System (GIS) software. The mapping was prepared using the state plane coordinate system, allowing the operator to obtain coordinates for and accurately locate system assets in the field utilizing handheld GPS equipment. The ability to accurately locate utility assets will allow for quicker responses to and resolution of service calls, ensuring the highest level of customer service and ongoing efficiency in labor usage.

Condition assessments, available record/as-built drawings, maintenance records, and other data are also accessible through the GIS mentioned above, allowing staff easy access to all records for the drinking water collection system. This can also allow staff to access all available information while in the field with a hand-held device, eliminating the need to return to the office to gather additional information.

Table 1, on the next page, contains a summary of the drinking water system assets identified.

[1] Firm capacity is defined as the capacity of the equipment with the largest unit out of service. Well 4 is the largest well in Decatur with a rated capacity of 1,000 gpm.

Item	Quantity	Units
Water Main, 16-inch	595	LF
Water Main, 12-inch	15,810	LF
Water Main, 8-inch	16,780	LF
Water Main, 6-inch	31,225	LF
Water Main, 4-inch	27,610	LF
Water Main, 2-inch	585	LF
Gate Valve and Box, 16-inch	5	EA
Gate Valve and Box, 12-inch	51	EA
Gate Valve and Box, 8-inch	46	EA
Gate Valve and Box, 6-inch	156	EA
Gate Valve and Box, 4-inch	46	EA
Hydrant	117	EA
Water Service, 2-inch	2	EA
Water Service Pipe, 2-inch	160	LF
Water Service, 1.5-inch	1	EA
Water Service Pipe, 1.5-inch	370	LF
Water Service, 1-inch and smaller	630	EA
Water Service Pipe, 1-inch and smaller	15,140	LF
Well 2 (rated capacity of 250 gpm)	1	EA
Well 3 (rated capacity of 500 gpm)	1	EA
Well 4 (rated capacity of 1,000 gpm)	1	EA
Elevated storage tank (200,000 gallons)	1	EA

Table 1 - Drinking Water System Assets

B. System Maps

Maps of the drinking water system are included in Appendix A showing pipe material, pipe age, and pipe size. Electronic versions of these maps are available at the Decatur Village Offices on dedicated computers as well as on several handheld tablets for ease of use in the field.

C. Asset Conditions

After completing the comprehensive inventory of the utility system assets, conditional assessments of select asset components were performed. The condition assessment provides the critical information needed to assess the physical condition and functionality of the assets in the water supply, storage, and distribution system and estimate their remaining service life. The distribution system was assessed based upon the age and materials of the pipe along with a review of the water main break history. The wells and the elevated storage tank were assessed based upon the most recent third-party inspections completed on those assets.

After the field inspections and record reviews were complete, overall asset conditions were assessed using a systematic method to produce consistent, useful information. This information was used to make estimates of each asset's remaining useful life and its long-term performance. Furthermore, the information was used to make decisions about asset rehabilitation, replacement, and/or the need for further inspections.

The conditional assessments for the drinking water system assets were based on the National Association of Sewer Service Companies (NASSCO) numerical grading system, which defines the

severity of observed defects or the condition of the asset. Condition grades were assigned based on the conditions of the immediate defects, the overall condition of the asset, and the likelihood of further defect deterioration or asset failure. The numerical system uses numbers ranging from 1 to 5 as shown in Table 2 below.

Condition Rating	Condition Description	Defect/Deterioration Description
1	Very Good	New asset, no or minor defects
2	Good	Defects that have not begun to deteriorate
3	Fair	Moderate defects that will continue to deteriorate
4	Poor	Severe defects with significant deterioration
5	Very Poor	Defect requires immediate action

Table 2 - NASSCO conditional assessment system

The elevated storage tank was last inspected completely in 2004 by Dixon Engineering. The results of this inspection were summarized in the tank inspection report dated November 18, 2004. A copy of the 2004 inspection report is included in Appendix F. While tank inspections are recommended every 5 years, several projects have been completed since then, as recommended in the 2004 inspection report. Each of these projects has involved inspection of the tank to some degree. The last such inspection was performed in 2015 as a warranty inspection for a 2014 tank recoating project. This warranty inspection report, dated August 19, 2015, is also included in Appendix F. These reports were reviewed in detail to assess the condition of the elevated storage tank. Based upon these reports, the overall condition of the elevated storage tank was assessed to be “Good”.

The water supply wells were last inspected in 2015 by Peerless Midwest, Inc. The results of this inspection were summarized in a letter (with attachments) dated October 20, 2015. This letter, the attachments, as well as the 2014 well inspection summary letter and attachments are included in Appendix G of this AMP. In addition, Well #2 was chemically rehabilitated and the pump for Well #4 was overhauled in 2016. The results of this work are summarized in a letter (with attachments) dated January 30, 2017. This letter and the attachments are also included in Appendix G. These documents were reviewed in detail to assess the condition of the supply wells. Based upon these letters and the supporting documentation, the overall condition of Well #2 was assessed to be “Fair”, while Well #3 and Well #4 were assessed to be “Good”.

The age and materials for the water distribution system were determined based upon the most recent as-built drawings. Due to the age of some of the water distribution system, as-built drawings for many of the older portions of the distribution system could not be found. The ages of those watermains were estimated based on the casting dates of the fire hydrants in the general area. These watermains represent assets with “incomplete or low-confidence data”[2]. If additional as-built drawings are located, the ages of the appropriate watermains will be adjusted in the GIS database correspondingly. Otherwise, as the assets with estimated ages are replaced, the installation years will be updated in the GIS database to reflect the replacement. The watermains with estimated ages represent the only assets in the Decatur water system with incomplete or low-confidence data.

D. Remaining Useful Life

Remaining useful life estimation is another method commonly used to characterize the condition of assets – especially those assets that cannot be physically assessed (such as buried pressure piping). Remaining

[2] Terminology from the MDEQ Water AMP Review Checklist.

useful life is defined as the duration of time remaining until an unacceptable condition exists or an asset no longer meets its primary function.

Remaining useful life for drinking water piping and appurtenances is heavily dependent on the materials used in construction. Drinking water pipe materials have evolved over the years. Early piping was generally constructed of lead, ceramics, and hollowed-out logs and transitioned over the years to steel, reinforced concrete, cast iron, and asbestos cement. Watermains constructed today are typically constructed from ductile iron and PVC piping. Figure 1 shows the percentages of the various pipe materials that are present in the water distribution system. The pipe materials are included as an attribute in each asset's entry in the electronic GIS mapping database.

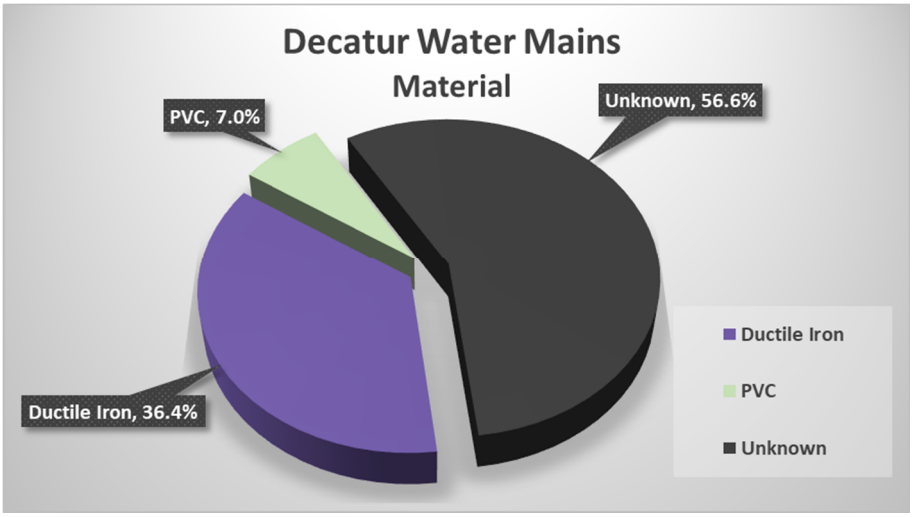


Figure 1 - Water distribution system pipe materials

There are several methods utilized to estimate the remaining useful life of an asset:

- The simplest method uses a typical useful life table, which lists the estimated total life of an asset type from its first day of use to when it is estimated to fail to function. Based upon the actual age of the asset, the remaining useful life is calculated. This method does not consider the current condition of the asset or any other factors.
- A second method utilizes a typical useful life table as well, but applies a factor to the calculation based upon the current condition of the asset.
- A third method utilizes actual decay curves based upon the maintenance and failure experience of a specific asset or asset class for the utility in question. This is the most accurate method. However, most utilities do not have the historical data necessary to develop the decay curves.

Determining the useful life of an asset is as much art as it is science. The remaining useful life has been calculated using the second method discussed above – a typical useful life table modified by current condition factors. Table 3 presents the typical useful lives for the asset types included in the drinking water system.

Asset Type	Typical Useful Life (years)
Ductile Iron Water Main	100 +
Cast Iron Water Main	85 to 120
PVC Water Main	100 +
Asbestos-Cement Water Main	70 to 100
Fire Hydrants	40 to 60
Valves	35 to 40
Elevated Storage Tanks	100
Water Wells	50+
Well Pumps	30
Electrical and Controls	20
Mechanical (Equipment, Valves, etc.)	30
Structural Components	50
Land	Unlimited

Table 3 - Typical useful lives for drinking water assets

These typical useful life values have been increased or decreased for each specific asset based upon industry-standard specifications for materials and components. The estimated remaining life of each asset in the drinking water system is included as an attribute for that asset in the GIS mapping database.

E. Replacement Value

The replacement value of an asset is the cost to replace the asset after it has exhausted its useful life. Obtaining exact costs for asset replacement is complex and can involve the development of detailed plans to aid in the development of the estimate. Developing a reasonable estimate of the replacement value of an asset utilizing average unit price construction costs is an adequate method and has been used for this plan. The average unit prices and the quantities of the various system components used to develop the replacement costs are shown in Appendix B. The costs shown include engineering costs, construction contingencies, and restoration costs such as paving, gravel, lawn, etc. The quantities of the various components of each asset class were obtained from the GIS system. The estimated replacement value for the drinking water system is $18,030,000.

III. Level of Service

The level of service defines the way in which the Owner desires the facility or utility to perform over the long term. The level of service should ensure that all regulatory requirements are met and should include any technical, managerial, or financial components the Owner deems necessary to meet customer expectations. The level of service is a fundamental part in defining how the water system will be operated and maintained in the future. As with all components of the AMP, defining the desired level of service will be an ongoing process.

The Asset Management Team selected the following statements to define the desired level of service for the water system:

1. We will strive to maintain compliance with all regulatory requirements at all times.

2. Should a break or pump failure occur causing a loss or interruption of service, we will correct the problem as soon as possible to minimize any environmental damage.

3. We will continue to develop and implement a preventative maintenance program that includes but is not limited to hydrant flushing, valve turning, and well service to reduce the occurrence of an interruption of service.

4. We will respond to customer complaints and system alarms within two hours for an emergency and within twenty-four hours for a non- emergency during normal business hours. Communication with the complainant or customers affected will be maintained until the issue is resolved.

5. We will maintain an asset management program for the system and provide reports on an as needed basis.

6. We will continue to improve a work order system to identify, assign, and track preventative and reactive work on the system and report on the status of work orders to the Village on an as needed basis.

7. We will inform the customers of our desired level of service and report on the compliance with the level of service to the Village on an as needed basis.

These goals will be tracked and assessed utilizing the GIS based work order system, which will allow the Village to track and report upon the status of all work within the system at any point in time and to track and analyze trends in the type and location of work required on the system.

IV. Criticality

Not all assets are equally important to a utility's operation. While some assets may have a high likelihood of failure, their failure may cause little to no disruption in the ability of the utility to meet their level of service. Correspondingly, some assets may be unlikely to fail but their failure may cause a catastrophic disruption to the utility's ability to meet their desired level of service. Criticality is a rating that is applied to the assets in an AMP that considers both the likelihood and the consequences of an asset failing.

Criticality is determined by multiplying the numerical likelihood of failure of an asset by its numerical consequence of failure and is a significant factor in prioritizing capital improvements. In general, the higher the criticality of an asset, the more resources that should be allocated to maintain the asset. However, criticality is only one tool that can be utilized to analyze and prioritize capital improvements and its use is subject to careful evaluation of the asset(s) in question and sound engineering judgement.

A. Likelihood of Failure

The likelihood of failure for all physically assessed supply, storage, and distribution assets or assets assessed via independent reports was determined based on the conditional rating of the asset with consideration given to the remaining asset life as shown below in Table 4. The methodology of examining the asset conditions and assigning conditional ratings to noted defects was discussed previously in Section II.C. The likelihood of failure for all assets assessed based only on the remaining asset life was determined in accordance with Table 4 below.

Likelihood of Failure Rating	Asset Condition/ Description	Remaining Useful Life
1	Very Good	More than 90%
2	Good	60 to 89.9%
3	Fair	30 to 59.9%
4	Poor	10 to 29.9%
5	Very Poor	Less than 10%

Table 4 - Likelihood of failure assessment methodology

It should be noted, however, that the condition descriptions are carried over in the GIS model as the likelihood of failure. In other words, if an asset's condition is rated as a "4" (Poor) or "5" (Very Poor), that same description carries over as the likelihood of failure indicating that the asset is in "Poor" or "Very Poor" condition rather than that the likelihood of failure is "Poor" or "Very Poor". The opposite applies as well, with assets whose condition is rated as a "1" (Very Good) or "2" (Good) showing a likelihood of failure of "Very Good" or "Good", again describing the condition of the asset rather than the likelihood that it will fail.

B. Consequence of Failure

To determine the consequence of failure, it is important to consider the significant costs of failure. These costs include not only the monetary cost of the repair, but could also include:

- Social costs associated with the failure of the asset.
- Repair/replacement costs related to collateral damage caused by the failure.
- Legal costs related to damage caused by the failure.
- Environmental costs (and possible environmental cleanup costs) created by the failure.
- Loss of business revenue to the community caused by the failure.

- Other miscellaneous costs associated with the asset failure.

The consequence of failure can be high if any one of these costs is significant or if the accumulation of several costs occurs due to a failure. In the case of the failure of a drinking water asset, the collateral damage to surface improvements can even exceed the cost of repairing the failure itself. The consequence of failure was assessed using the criteria presented in Table 5.

Consequence of Failure Rating	Social, Human, and Environmental Effects[3]	Collateral Damage Effects
1 (Insignificant)	< 10% loss of service, minimal property damage	Pipe/appurtenance outside of road right-of-way (ROW), no impact to traffic or other structures
2 (Minor)	10% to 24% loss of service, minimal property damage	Pipe/appurtenance located under the pavement or curb of a residential or minor local road
3 (Moderate)	25% to 49% loss of service, limited property damage, disruption to essential services/major industry	Pipe/appurtenance located under the pavement or curb of a major collector roadway
4 (Major)	50% to 89% loss of service, moderate property damage, disruption to multiple industries/essential services	Pipe/appurtenance located along state roadways, interstate highways, railroad ROW, or close enough to a building to cause collateral damage
5 (Catastrophic)	90+% loss of service, extensive property damage	Pipe/appurtenance located under the pavement or curb of state roadways or interstate highways, under railroad tracks, or underneath a building

Table 5 - Consequence of failure rating scheme for drinking water assets

Utilizing the above ranking system, a thorough knowledge of the service area, and sound engineering judgement, a consequence of failure was assigned to each asset in the drinking water system. These consequence of failure values for each asset are included as an attribute for that asset in the GIS mapping database. The consequence of failure for the piping in the water distribution system is shown in Figure 2. Due to redundancy of the remaining two wells and the firm capacity of the water supply, the consequence of failure for the supply wells was rated as “Moderate”. The elevated storage tank’s consequence of failure was rated as “Major” since, while the supply wells can maintain system pressure on their own without the tank in service, the tank does provide storage to help provide additional water during times of peak demands or fire flows.

[3] Loss of service for the drinking water system refers to the number of service connections impacted due to a single failure.

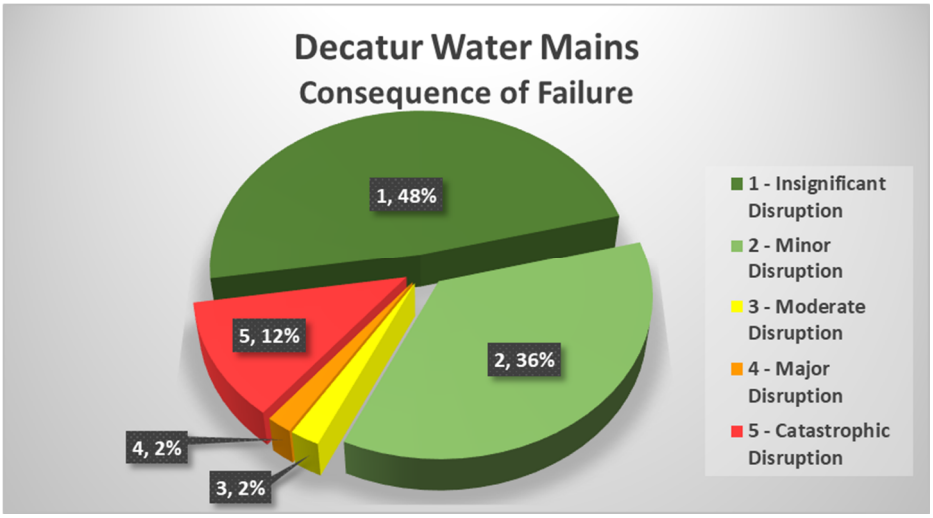


Figure 2 - Watermain consequence of failure rating

C. Criticality Maps

As previously discussed, the criticality of each asset was calculated by multiplying the likelihood of failure rating of the asset by the consequence of failure rating of the asset. As such, the range of criticality numbers that can be assigned to an asset is 1 to 25 with the criticality of the asset increasing the higher the number assigned to it, as shown in Table 6. The resulting criticality of each asset is included as an attribute for that asset in the GIS mapping database. A map of the water distribution system showing asset criticality is included in Appendix C.

Criticality Rating	Criticality Description
1 to 5	Very Low
6 to 10	Low
11 to 15	Moderate
16 to 20	High
21 to 25	Very High

Table 6 - Criticality rating descriptions

While the criticality ratings provide a point of reference to help in determining issues that may need to be addressed, it is only a tool. Sound engineering judgement still needs to be applied to determine if there is an issue with an asset that needs to be addressed by a capital improvement project. A low criticality number does not necessarily mean that there is not an issue that should be addressed by a capital improvement project. For example, if an area of watermain has had a history of recent breaks, it may be graded as a Level 5 defect with a likelihood of failure of Very Poor. If this defect occurred on a segment of pipe with a Level 1 consequence of failure, it would result in a criticality rating of 5, Very Low. That does not mean, however, that this issue does not need to be addressed. It may just be a lower priority for being addressed than other issues with higher criticality ratings.

V. Capital Improvement Plan

A. Description

Capital improvement projects are projects that a utility has an extended period of time to plan for and are typically projects that cover high-cost, non-recurring expenditures. To ensure that the desired level of service can be maintained, a long-term plan for required capital improvements, known as a Capital Improvement Plan (CIP), is required as part of an AMP. The CIP helps to ensure that the long-term reliability needs of the utility are met. The CIP is based upon planning for those capital improvements determined to be required or likely to be required due to the likelihood of failure of the assets and their criticality. The short-term planning period for a CIP is five years and the long-term planning period is 20 years to allow for the development of a rate structure adequate to finance those projects that can reasonably be predicted to be needed during those periods.

B. Recommended Water System Projects

Table 7 lists the recommended capital improvement projects as well as cyclical improvement projects (i.e. equipment rehabilitation and/or replacement) over the next 20 years for the drinking water system. Detailed descriptions and cost estimates for each project listed can be found in Appendix D. Where appropriate, the estimated project costs shown in Table 7 include engineering, construction observation, and contingency costs, thus representing the total estimated cost for the project. All costs shown in Table 7 are in current costs (no inflation) unless otherwise noted.

Priority	CIP Year	Project Name	Estimated Cost
1	2018	SCADA System	$ 80,000
2	2018	Water Tapping Machine	$ 5,000
3	2018	Well 4 Rehabilitation	$ 19,000
4	2019	Cedar Street - Pine to Phelps	$ 175,000
5	2019	Update General Plan	$ 7,000
6	2020	Pine Street Water Main	$ 207,000
7	2020	Well 2 Pump Maintenance - 2020	$ 19,000
8	2021	Austin Boulevard and Pine Street Water Main	$ 210,000
9	2021	Well 3 Pump Maintenance - 2021	$ 13,000
10	2022	Lee Avenue and Memory Lane Water Main	$ 185,000
11	2023	Kinney Street and Douglas Drive Water Main	$ 192,000
12	2024	Hand Held Meter Reader	$ 9,000
13	2024	Well 4 Pump Maintenance - 2024	$ 19,000
14	2024	White Oak Street Water Main	$ 135,000
15	2025	Miscellaneous Hydrant Replacements	$ 44,000
16	2025	Rosewood Avenue Water Main	$ 70,000
17	2025	Well 3 Rehabilitation	$ 25,000
18	2025	Well 4 VFD Replacement	$ 7,000
19	2026	Beers Street Water Main - 2026	$ 144,000
20	2027	Beers Street Water Main - 2027	$ 130,000
21	2028	Beers Street Water Main - 2028	$ 108,000
22	2028	Recoat the Elevated Storage Tank - Exterior	$ 69,000
23	2028	Well 2 Pump Maintenance - 2028	$ 19,000
24	2029	Well 3 Pump Maintenance - 2029	$ 19,000

25	2029	Williams Street Water Main	$	116,000
26	2030	Replace Well 3 and 4 Standby Generator	$	65,000
27	2030	Water Meter Replacement - 2030	$	100,000
28	2032	George Street Water Main	$	242,000
29	2032	Well 4 Pump Maintenance - 2032	$	19,000
30	2033	Replace Well 2 and Well 3 Control Panels	$	11,000
31	2033	Water Meter Replacement - 2033	$	100,000
32	2033	Well 4 Maintenance	$	4,000
33	2034	Well 2 Building Maintenance	$	4,000
34	2034	Well 3 Maintenance	$	4,000
35	2035	Replace Portable Generator for Well 2	$	32,000
36	2035	Replace Well 4 Control Panel	$	6,000
37	2036	Edgar Bergen Boulevard and N. East Street Water Main	$	410,000
38	2036	Well 2 Pump Maintenance - 2036	$	19,000
39	2037	Recoat the Elevated Storage Tank - Interior	$	88,000
40	2037	Well 3 Pump Maintenance - 2037	$	19,000
41	2037	Well 3 VFD Replacement	$	7,000
42	2038	John Street Water Main	$	216,000
		Total Estimated Project Cost for 20 Year CIP (current dollars) =	$	3,372,000
		Total Estimated Project Cost for 20 Year CIP (inflation adjusted[4] costs) =	$	4,136,000

Table 7 - Recommended Water System Capital Improvement Projects

Once the above projects are completed, there are currently no other significant improvements required to maintain the desired level of service.

C. Water Quality Improvement

One area of concern for Decatur, as expressed by both Village Officials and the public, is the taste and odor of the water supplied by the wells – especially the water from Well #3 and Well #4. Since there are currently no water treatment assets in the system, assessing the treatment of the water supply would not normally be a part of this AMP. However, to allow the Village to weigh the option of adding treatment, a capital improvement project has been added to the CIP in one of the financial models. This allows the Village water revenue structure discussed in Section VI and Appendix E to reflect the effects on the Village water rates of adding treatment.

For the purposes of this rate analysis, the water treatment plant was assumed to be an iron removal plant based on the input from the Public Works Foreman. It was assumed that the plant would be built on the existing Village owned property around Wells 3 and 4, that the piping from the wells would be re-routed to the treatment building, and that the treated water from the plant would be discharged to the existing distribution system piping from Wells 3 and 4. Before a treatment plant is considered, however, a full engineering study should be conducted to definitively identify the offensive constituent(s) that need to be removed. A cost (including engineering and contingency fees) of $3,500,000 was estimated for the treatment equipment and a building to house it.

[4] Twenty-year inflation adjusted calculations assumed a compounded annual inflation rate of 2% per year.

VI. Asset Management Financial Plan and Revenue Structure

A primary goal of Asset Management is to develop a long-term plan for revenue support of capital improvements, as well as operating cost. The following Asset Management Financial Plan (AMFP) is intended to help your community formulate policy in the areas of rate management, capital spending, and fund balance. *The AMFP is a living document. It is most effective as a tool used annually for budget and user rate decisions.*

A. AMFP Methodology

A significant effort has been made by Decatur to inventory assets, evaluate the infrastructure, and determine asset criticality. The result is the identification of asset investment cost by project and by year. The AMFP covers an extended forecast period to take this asset evaluation into account. The AMFP is a four-step process:

1) Historical comparison with audits and budgets.
2) Test year, or normalized budget year, along with inflation assumptions for purposes of forecasting.
3) Proof of rate to revenue for reliance on customer data.
4) Cash flow forecast including revenue, operating expense, capital spending, debt, and fund balance (i.e., actual cash and investment balance).

The analysis was conducted using a “cash basis” approach as described in the AWWA Manual of Rate Making Practices. From year to year, this AMFP may be used to implement policy regarding rate management and budgeting.

1. Audit Comparison

One key indicator of financial health is found in Appendix E in the Comparative Statement of Net Position of the Water Fund: “Cash” and “Investments”. Decatur has maintained this cash and investment balance well for the size of their system. The cash and investments balance has averaged around 20 months compared to operating expenditures for the past few years. Management of the cash balance will be discussed further below under Forecast - Cash Balance. The Water Fund audited Revenues, Expenses and Changes in Net Position comparison reveals steady growth in annual revenues and corresponding annual operating expenses (other than one-time expenditures).

2. Budget Comparison / Test Year

The current year budget shows a comparable amount of expenditures in total compared to previous years (other than one-time expenditures) with the exceptions noted in Appendix E. The most notable exceptions are the expenses to add another full time Department of Public Works (DPW) staff member and to bring the current part time DPW staff member to full time. This is due to the increase in recommended system maintenance in both the water and sewer systems. These increased Operation and Maintenance (O&M) costs shown in Appendix E are proportioned to reflect the approximate average percentage of time currently spent by DPW staff working on the water system.

The current year budget (with the exceptions noted in Appendix E) has been utilized to develop the Test Year budget including expected percent inflation factors.

3. Proof of Rate to Revenue

Decatur bills its customers based on widely used and accepted methods. Customers are charged a meter equivalent unit rate plus a commodity rate based upon readings of their water meter. The amount of

meter equivalents billed and the commodity billed at the current rates tie out to the revenue reflected in the audit and budget, such that we can rely on the numbers in forecasting.

4. Forecast - Capital Cost

Annual cost has been forecasted based on an engineering evaluation of asset inventory, condition assessment, and criticality as discussed previously. The forecast reflects cash-funded capital costs not already included in the operating and maintenance budget. Given projected revenues and cash balance, as well as the dollar amount of anticipated capital spending, no new debt issuance was modeled for the standard capital cost forecast. However, as previously discussed, there was a forecast completed including construction of a water treatment plant financed by a 40-year bond to allow Village officials to weigh the effect that construction of a water treatment plant would have on water rates.

5. Forecast - Cash Balance

Our financial partners recommend a standard minimum target of cash and investment to operating expenses (net of depreciation) of six months. It would not be advisable to bring the cash balance any lower than six months given the potential variation in the amount and timing of capital cost. The cash and investments balance is anticipated to bottom out at just over six months (6.73 months) over the 20 year projected period. The balance is projected to average about 15 months over that same time frame.

6. Forecast - Rate Management

The revenue support based on current rates supports operations, debt, and capital cost while solving to cash balance. The cash flow forecast demonstrates a rate track with an immediate 40% rate increase to both the meter equivalent charges and the commodity charges along with an additional 10% rate increase in 2022/23 to both the meter equivalent charges and the commodity charges. In all other years, a 2% rate increase is modeled on both the meter equivalent charges and the commodity charges to offset the effects of inflation. The actual annual increase should be tied to the Consumer Price Index (CPI) for Utilities. These rate increases will need to be reviewed in a few years to make sure all of the assumptions are remaining accurate.

7. Management Summary

Rates: Immediate 40% increases to both the meter equivalent charges and the commodity charges along with annual increases to both charges (tied to the CPI for Utilities) to offset inflation. Review in the next 3-5 years.

Cash Balance: Maintain cash balances above six months.

Capital Cost: A cash, as opposed to debt, approach as modeled in the cash flow.

VII. Asset Management Program Implementation

AMPs are designed to provide a plan for effectively meeting level of service goals, which may change over time as new requirements are imposed by regulatory agencies and expectations from customers and communities change. The program is also intended to work in conjunction with the GIS component of the AMP to provide a reference for personnel who will become part of the Asset Management Team after implementation.

Implementation of the AMP involves maintaining the six-month cash balance minimum outlined in the AMFP section (Section VI above), execution of the CIP projects identified in Section V, and sustaining the current level of system Operation and Maintenance. While performing regular maintenance and routine replacement of components, the work order tracking system provided with the GIS software will allow the DPW and Decatur officials to monitor the progress of routine and preventative maintenance activities.

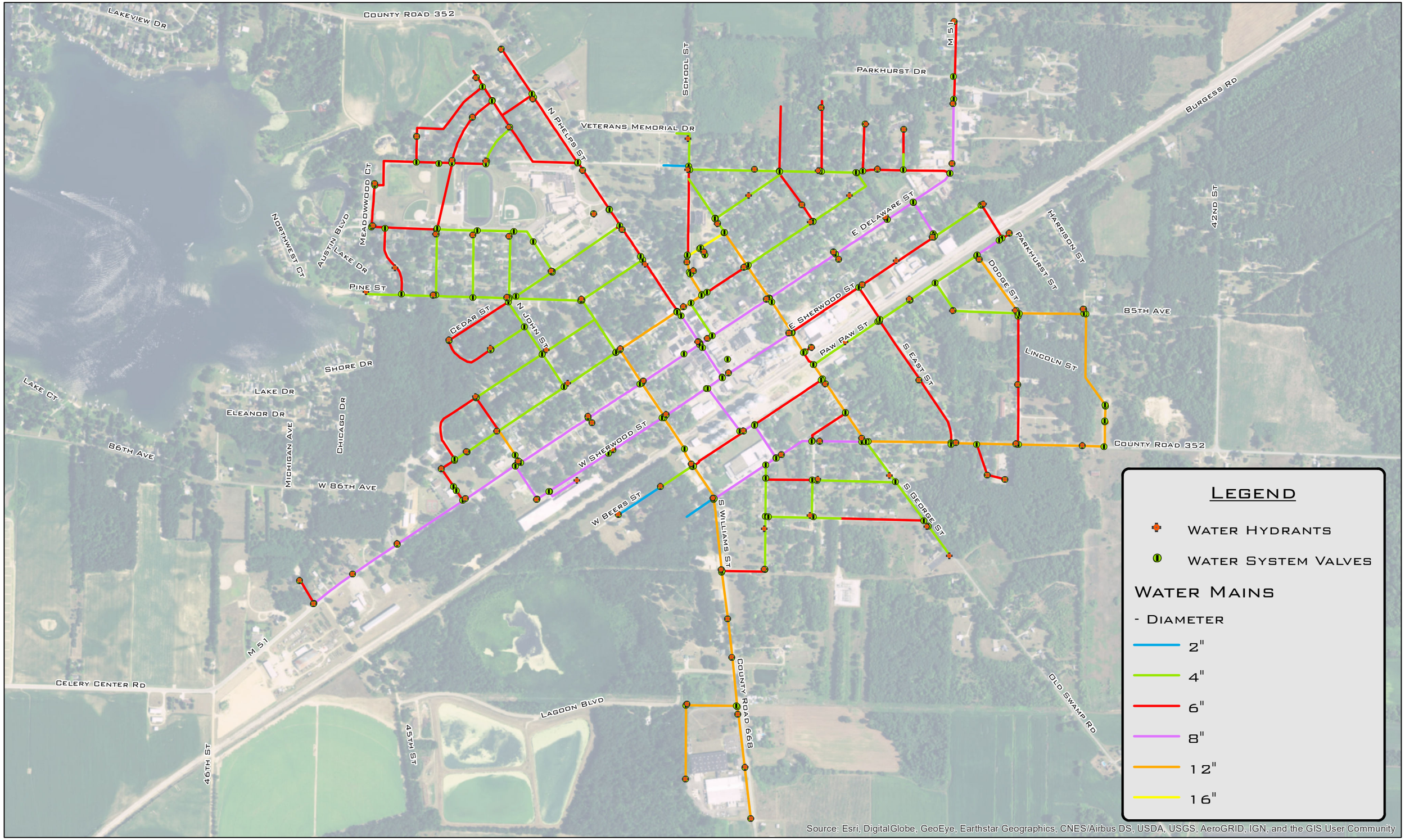
The GIS component of the AMP requires consistent updating to ensure that the most current information is available for DPW and Decatur staff/officials. This includes entering service lead information into the database to track new customer service lines, updating equipment information as it is replaced and updated, and tracking routine and non-routine maintenance activities. This information will be of use in determining if specific areas of the system will require additional resources or repairs moving forward.

Completion of many of the projects within the CIP will require planning, design, permitting, and bidding services to be performed by an engineering services provider. Estimated costs for these activities are included in the project estimates for each project identified within the CIP (as appropriate). Community budgeting should also include the cost of maintenance of the GIS program, either using community staffing rates or through an annual maintenance agreement with a GIS consultant.

It will be important to review the system on a regular basis and anticipate upcoming projects as identified in the CIP and other improvements, repairs, or upgrades that may arise as the system ages. Decatur should look to begin planning two years ahead of a project's projected implementation date to allow time for design, permitting, bidding, construction, and implementation.

Appendix A

Water System Maps



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172173

VILLAGE OF DECATUR

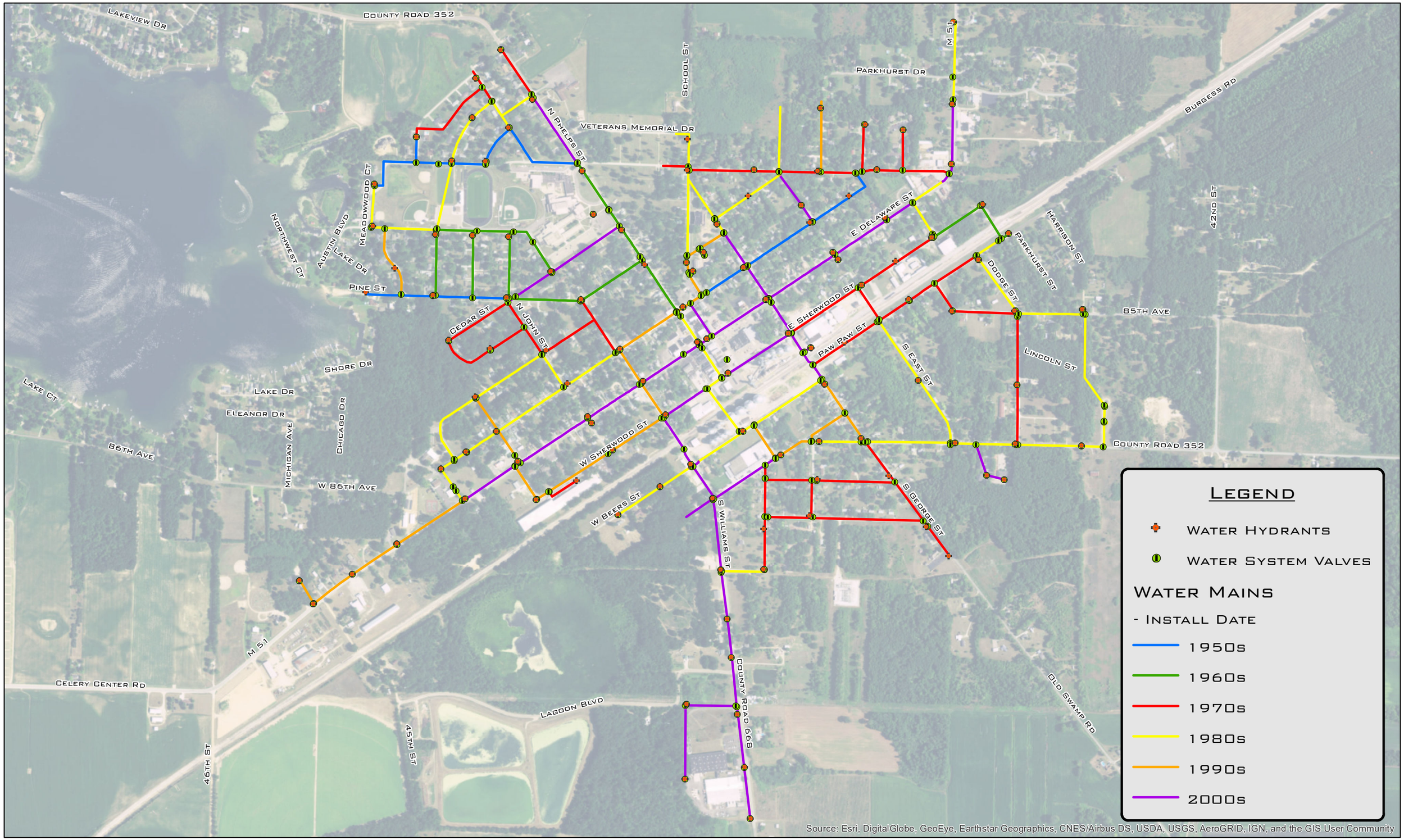
WATER AMP

0 250 500 1,000

1 inch = 850 Feet

WATER SYSTEM - PIPE SIZE

12/14/2017



Wightman & Associates, Inc.

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VILLAGE OF DECATUR

WATER AMP

0 250 500 1,000

1 inch = 850 Feet

WATER SYSTEM - INSTALL DATE

12/13/2017

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Village of Decatur

Water AMP

0 250 500 1,000

1 inch = 850 Feet

Water System - Material

12/13/2017

Appendix B

Replacement Values

REPLACEMENT COST ESTIMATE

PROJECT: **Drinking Water Asset Management Program**

CLIENT: **Village of Decatur, Van Buren County, Michigan**

DATE: December, 2017

Estimated Water Distribution System Replacement Value

Quantity	Unit of Measure	Item		Unit Price *		Subtotal
595	LF	Water Main, 16-inch	@	$ 210	$	125,000
15,810	LF	Water Main, 12-inch	@	$ 185	$	2,925,000
16,780	LF	Water Main, 8-inch	@	$ 150	$	2,517,000
31,225	LF	Water Main, 6-inch	@	$ 145	$	4,528,000
27,610	LF	Water Main, 4-inch	@	$ 135	$	3,727,000
585	LF	Water Main, 2-inch	@	$ 80	$	47,000
5	EA	Gate Valve and Box, 16-inch	@	$ 5,750	$	29,000
51	EA	Gate Valve and Box, 12-inch	@	$ 4,310	$	220,000
46	EA	Gate Valve and Box, 8-inch	@	$ 2,590	$	119,000
156	EA	Gate Valve and Box, 6-inch	@	$ 2,300	$	359,000
46	EA	Gate Valve and Box, 4-inch	@	$ 1,440	$	66,000
117	EA	Hydrant	@	$ 3,090	$	362,000
2	EA	Water Service, 2-inch	@	$ 1,440	$	3,000
160	LF	Water Service Pipe, 2-inch	@	$ 80	$	13,000
1	EA	Water Service, 1.5-inch	@	$ 1,295	$	1,000
370	LF	Water Service Pipe, 1.5-inch	@	$ 70	$	26,000
630	EA	Water Service, 1-inch and smaller	@	$ 1,150	$	725,000
15,140	LF	Water Service Pipe, 1-inch and smaller	@	$ 65	$	984,000
1	EA	Well 2 (rated capacity of 250 gpm)	@	$ 86,250	$	86,000
1	EA	Well 3 (rated capacity of 500 gpm)	@	$ 100,625	$	101,000
1	EA	Well 4 (rated capacity of 1000 gpm)	@	$ 115,000	$	115,000
1	EA	Elevated storage tank (200,000 gallons)	@	$ 950,000	$	950,000

ESTIMATED WATER DISTRIBUTION SYSTEM REPLACEMENT VALUE = $ 18,030,000

** Note - Unit prices include construction and restoration costs, engineering fees, and construction contingencies.*

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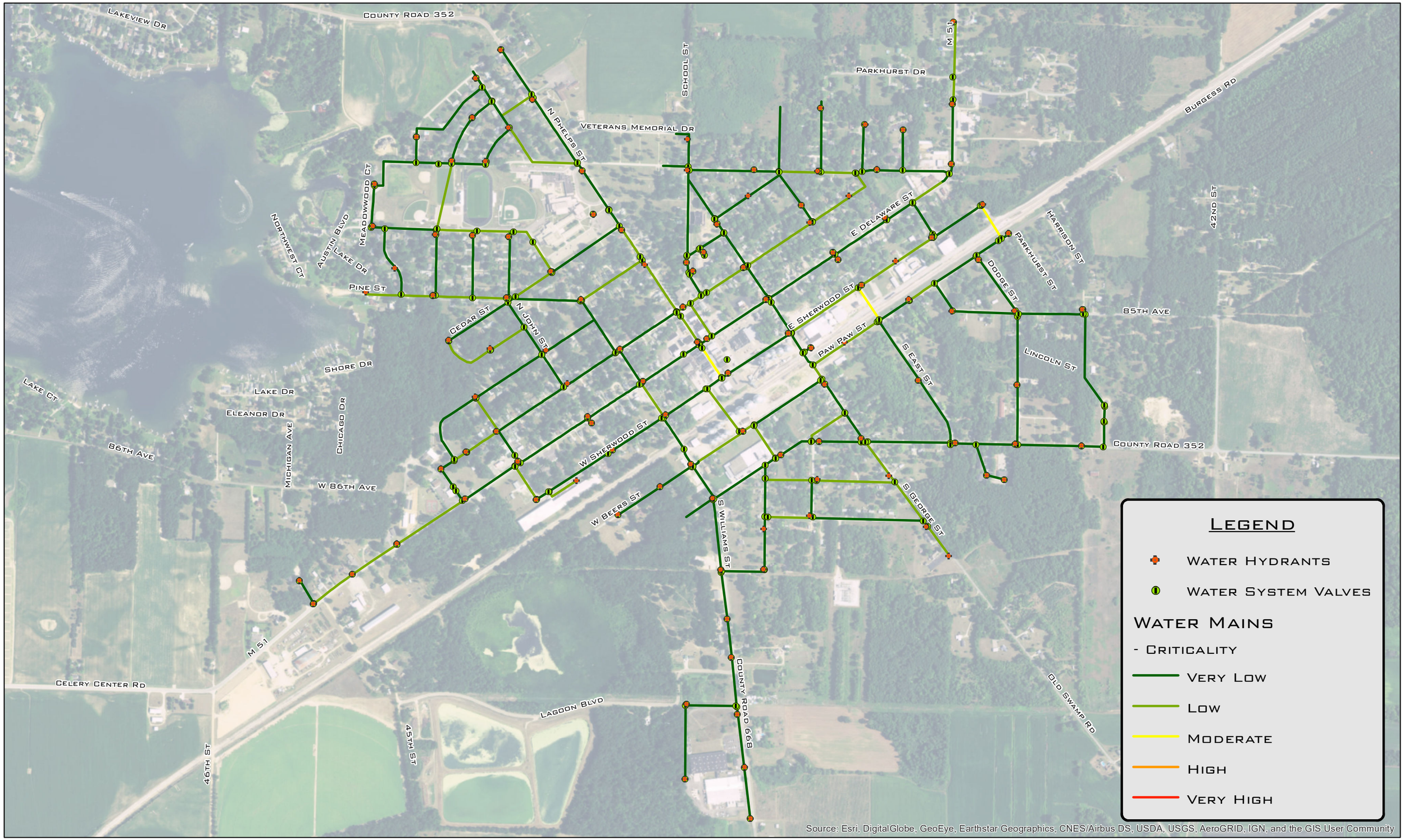
Appendix C

Water System Criticality Map



Legend

- Water Hydrants
- Water System Valves

Water Mains

- Criticality
  - Very Low
  - Low
  - Moderate
  - High
  - Very High

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Village of Decatur

Water AMP

0 250 500 1,000

1 inch = 850 Feet

Water System - Criticality

12/13/2017

Appendix D

Water System CIP Project Descriptions and Cost Estimates

Summary of Drinking Water Capital Improvement Projects

Village of Decatur

Year	Project Name	Estimated Cost
2018	SCADA System	$80,000
2018	Water Tapping Machine	$5,000
2018	Well 4 Rehabilitation	$19,000
2019	Cedar Street - Pine to Phelps	$175,000
2019	Update General Plan	$7,000
2020	Pine Street Water Main	$207,000
2020	Well 2 Pump Maintenance - 2020	$19,000
2021	Austin Boulevard and Pine Street Water Main	$210,000
2021	Well 3 Pump Maintenance - 2021	$13,000
2022	Lee Avenue and Memory Lane Water Main	$185,000
2023	Kinney Street and Douglas Drive Water Main	$192,000
2024	Hand Held Meter Reader	$9,000
2024	Well 4 Pump Maintenance - 2024	$19,000
2024	White Oak Street Water Main	$135,000
2025	Miscellaneous Hydrant Replacements	$44,000
2025	Rosewood Avenue Water Main	$70,000
2025	Well 3 Rehabilitation	$25,000
2025	Well 4 VFD Replacement	$7,000
2026	Beers Street Water Main - 2026	$144,000
2027	Beers Street Water Main - 2027	$130,000
2028	Beers Street Water Main - 2028	$108,000
2028	Recoat the Elevated Storage Tank - Exterior	$69,000
2028	Well 2 Pump Maintenance - 2028	$19,000
2029	Well 3 Pump Maintenance - 2029	$19,000
2029	Williams Street Water Main	$116,000
2030	Replace Well 3 and 4 Standby Generator	$65,000
2030	Water Meter Replacement - 2030	$100,000
2032	George Street Water Main	$242,000
2032	Well 4 Pump Maintenance - 2032	$19,000
2033	Replace Well 2 and Well 3 Control Panels	$11,000
2033	Water Meter Replacement - 2033	$100,000
2033	Well 4 Maintenance	$4,000
2034	Well 2 Building Maintenance	$4,000

Capital Improvement Project List Continued On Next Page

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Summary of Drinking Water Capital Improvement Projects (cont.)

Village of Decatur

Year	Project Name	Estimated Cost
2034	Well 3 Maintenance	$4,000
2035	Replace Portable Generator for Well 2	$32,000
2035	Replace Well 4 Control Panel	$6,000
2036	Edgar Bergen Boulevard and N. East Street Water Main	$410,000
2036	Well 2 Pump Maintenance - 2036	$19,000
2037	Recoat the Elevated Storage Tank - Interior	$88,000
2037	Well 3 Pump Maintenance - 2037	$19,000
2037	Well 3 VFD Replacement	$7,000
2038	John Street Water Main	$216,000

Total Estimated Project Cost for Twenty Year Drinking Water CIP =	**$3,372,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2018**
Total Project Cost:	**$80,000**

Project Title: SCADA System

System: Drinking Water

Project Description

Purchase and install a Supervisory Control And Data Acquisition (SCADA) system.

Project Justification/Benefit

A SCADA system will help the operator with monitoring the water system and issuing process commands through an operator interface.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	80,000
TOTAL	**$**	**80,000**

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Village of Decatur

Project Title: SCADA System

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	SCADA System	$ 50,000	$ 50,000

Project Costs			
Construction Costs (Subtotal)		$	50,000
Engineering	20 %	$	10,000
Construction Observation	8 %	$	4,000
Contingency	25 %	$	16,000
TOTAL		**$**	**80,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2018**
Total Project Cost:	**$5,000**

Project Title: Water Tapping Machine

System: Drinking Water

Project Description

Buy a new water tapping machine.

Project Justification/Benefit

The current water tapping machine was purchased in 1995. Water tapping machines have an intended useful life of approximately 22 years and the current machine is on the verge of complete failure.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	5,000
TOTAL	**$**	**5,000**

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Village of Decatur

Project Title: Water Tapping Machine

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Water Taping Machine	$ 4,000	$ 4,000

Project Costs		
Construction Costs (Subtotal)		$ 4,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 1,000
TOTAL		**$ 5,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2018**
Total Project Cost:	**$19,000**

Project Title: Well 4 Rehabilitation

System: Drinking Water

Project Description

Chemically clean and rehabilitate Well 4.

Project Justification/Benefit

The screens of drinking water wells can become clogged over time with mineral deposits and/or biomass growth, while the surrounding strata can become clogged with clay or silt. These issues cause the performance of a well to deteriorate. Periodic chemical cleaning and well rehabilitation will restore the performance (specific capacity) of the well to near- or like-new conditions and extend the useful life of the well.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

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Project Title: Well 4 Rehabilitation

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 Rehabilitation	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)		$ 15,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 3,800
TOTAL		**$ 19,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2019**
Total Project Cost:	**$175,000**

Project Title: Cedar Street - Pine to Phelps

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Cedar Street from Pine Street to N. Phelps Street with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, there have been four recent water main breaks in this area, all of which resulted from shear forces likely due to poor quality soil used for backfill when the water main was originally installed. Replacing the water main will allow for good quality backfill to be installed and for the pipe to be properly bedded, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	175,000
TOTAL	**$**	**175,000**

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Project Title: Cedar Street - Pine to Phelps

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1,215	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 121,500

Project Costs		
Construction Costs (Subtotal)	$	121,500
Engineering 7 %	$	8,600
Construction Observation 8 %	$	9,800
Contingency 25 %	$	35,000
TOTAL	**$**	**175,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2019**
Total Project Cost:	**$7,000**

Project Title: Update General Plan

System: Drinking Water

Project Description

Update the 2015 version of the General Plan for the water system.

Project Justification/Benefit

Updating the General Plan to reflect improvements and changed conditions since the last update in 2015 will keep the General Plan "current" and allow it to be a useful tool for use in day-to-day operations and planning for future improvements.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	7,000
TOTAL	**$**	**7,000**

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Project Title: Update General Plan

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	LS	Update General Plan	$ 5,000	$ 5,000

Project Costs		
Construction Costs (Subtotal)		$ 5,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 1,300
TOTAL		**$ 7,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2020**
Total Project Cost:	**$207,000**

Project Title: Pine Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Pine Street from Cedar Street to Lake Drive with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, there have been three recent water main breaks in this area, all of which resulted from shear forces likely due to poor quality soil used for backfill when the water main was originally installed. Replacing the water main will allow for good quality backfill to be installed and for the pipe to be properly bedded, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	207,000
TOTAL	**$**	**207,000**

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Project Title: Pine Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1,435	FT	Water Main, DI, 6 inch, Tr Det G - Pine	$ 100	$ 143,500

Project Costs		
Construction Costs (Subtotal)	$	143,500
Engineering 7 %	$	10,100
Construction Observation 8 %	$	11,500
Contingency 25 %	$	41,300
TOTAL	**$**	**207,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2020**
Total Project Cost:	**$19,000**

Project Title: Well 2 Pump Maintenance - 2020

System: Drinking Water

Project Description

Remove the pump from Well 2, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 2 was last rehabilitated in 2012.

Project Funding Source		
Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

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Project Title: Well 2 Pump Maintenance - 2020

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 2 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)	$	15,000
Engineering 0 %	$	-
Construction Observation 0 %	$	-
Contingency 25 %	$	3,800
TOTAL	**$**	**19,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2021**
Total Project Cost:	**$210,000**

Project Title: Austin Boulevard and Pine Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Pine Street from Cedar Street to Williams Street and under Austin Boulevard from Kinney Road to Memory Lane with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, there have been three recent water main breaks in this area, all of which resulted from shear forces likely due to poor quality soil used for backfill when the water main was originally installed. Replacing the water main will allow for good quality backfill to be installed and for the pipe to be properly bedded, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	210,000
TOTAL	**$**	**210,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Austin Boulevard and Pine Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
715	FT	Water Main, DI, 6 inch, Tr Det G - Pine	$ 100	$ 71,500
740	FT	Water Main, DI, 6 inch, Tr Det G - Austin	$ 100	$ 74,000

Project Costs		
Construction Costs (Subtotal)	$	145,500
Engineering 7 %	$	10,200
Construction Observation 8 %	$	11,700
Contingency 25 %	$	41,900
TOTAL	**$**	**210,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2021**
Total Project Cost:	**$13,000**

Project Title: Well 3 Pump Maintenance - 2021

System: Drinking Water

Project Description

Remove the pump from Well 3, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 3 was last rehabilitated in 2013.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	13,000
TOTAL	**$**	**13,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 3 Pump Maintenance - 2021

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 3 pump and motor maintenance	$ 10,000	$ 10,000

Project Costs		
Construction Costs (Subtotal)		$ 10,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 2,500
TOTAL		**$ 13,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2022**
Total Project Cost:	**$185,000**

Project Title: Lee Avenue and Memory Lane Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Lee Avenue from Pine Street to Austin Boulevard and under Memory Lane from Cedar Street to Austin Boulevard with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, there have been two recent water main breaks in this area, all of which resulted from shear forces likely due to poor quality soil used for backfill when the water main was originally installed. Replacing the water main will allow for good quality backfill to be installed and for the pipe to be properly bedded, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	185,000
TOTAL	**$**	**185,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Village of Decatur

Project Title: Lee Avenue and Memory Lane Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
670	FT	Water main, DI, 6 inch, Tr Det G - Lee	$ 100	$ 67,000
610	FT	Water main, DI, 6 inch, Tr Det G - Memory	$ 100	$ 61,000

Project Costs		
Construction Costs (Subtotal)	$	128,000
Engineering 7 %	$	9,000
Construction Observation 8 %	$	10,300
Contingency 25 %	$	36,900
TOTAL	**$**	**185,000**

(269) 673-8465 1670 LINCOLN ROAD, ALLEGAN, MI
(269) 927-0100 2303 PIPESTONE ROAD, BENTON HARBOR, MI
(269) 327-3532 9835 PORTAGE ROAD, PORTAGE, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2023**
Total Project Cost:	**$192,000**

Project Title: Kinney Street and Douglas Drive Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Kinney Street and Douglas Drive from Pine Street to Austin Boulevard with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, there has been a recent water main break in this area, which resulted from shear forces likely due to poor quality soil used for backfill when the water main was originally installed. Replacing the water main will allow for good quality backfill to be installed and for the pipe to be properly bedded, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	192,000
TOTAL	**$**	**192,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Village of Decatur

Project Title: Kinney Street and Douglas Drive Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
660	FT	Water main, DI, 6 inch, Tr Det G - Kinney	$ 100	$ 66,000
670	FT	Water main, DI, 6 inch, Tr Det G - Douglas	$ 100	$ 67,000

Project Costs		
Construction Costs (Subtotal)	$	133,000
Engineering 7 %	$	9,400
Construction Observation 8 %	$	10,700
Contingency 25 %	$	38,300
TOTAL	**$**	**192,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2024**
Total Project Cost:	**$9,000**

Project Title: Hand Held Meter Reader

System: Drinking Water

Project Description

Buy a hand held meter reader.

Project Justification/Benefit

Water meter readers are subject to a rough environment and potentially have a short life span. Purchasing an additional water meter reader will provide a level of redundancy in the ability to automatically read water meters. Doing the readings automatically increases the accuracy of reading the individual water meters and reduces the amount of labor required to do so.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	9,000
TOTAL	**$**	**9,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
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Village of Decatur

Project Title: Hand Held Meter Reader

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Hand held meter reader	$ 7,000	$ 7,000

Project Costs		
Construction Costs (Subtotal)		$ 7,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 1,800
TOTAL		**$ 9,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2024**
Total Project Cost:	**$19,000**

Project Title: Well 4 Pump Maintenance - 2024

System: Drinking Water

Project Description

Remove the pump from Well 4, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 4 was last rehabilitated in 2012.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

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Village of Decatur

Project Title: Well 4 Pump Maintenance - 2024

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)		$ 15,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 3,800
TOTAL		**$ 19,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2024**
Total Project Cost:	**$135,000**

Project Title: White Oak Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under White Oak Street from Champion Street to Sorbak Lane with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, this water main was installed at a relatively shallow depth and there have been three recent water main breaks in this area. Replacing the water main will allow for the main to be installed deeper and to have good quality backfill installed, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	135,000
TOTAL	**$**	**135,000**

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Village of Decatur

Project Title: White Oak Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
900	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 90,000

Project Costs		
Construction Costs (Subtotal)		$ 90,000
Engineering	10 %	$ 9,000
Construction Observation	10 %	$ 9,000
Contingency	25 %	$ 27,000
TOTAL		**$ 135,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2025**
Total Project Cost:	**$44,000**

Project Title: Miscellaneous Hydrant Replacements

System: Drinking Water

Project Description

Replace existing hydrants that have issues such as leaking nuts and/or no pumper heads.

Project Justification/Benefit

Some of the existing fire hydrants in the Village have mechanical issues such as leaking nuts, or are older-model hydrants lacking modern pumper head connections. Replacing these hydrants separate from a water main project would alleviate mechanical issues with the fire hydrants in the Village and would bring the hydrants up to current standards, increasing their ability to provide enough flow in the event of a fire.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	44,000
TOTAL	**$**	**44,000**

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Village of Decatur

Project Title: Miscellaneous Hydrant Replacements

Quantity	Unit of Measure	Item	Unit Price	Subtotal
10	EA	Hydrant Replacement	$ 3,500	$ 35,000

Project Costs		
Construction Costs (Subtotal)		$ 35,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 8,800
TOTAL		**$ 44,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
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(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2025**
Total Project Cost:	**$70,000**

Project Title: Rosewood Avenue Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Rosewood Avenue from Shady Lane to Edgar Bergen Boulevard with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. In addition, this water main has had two recent water main breaks. Replacing the water main will allow for any underlying issues contributing to the breaks to be addressed, reducing the likelihood of further water main breaks.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	70,000
TOTAL	**$**	**70,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Village of Decatur

Project Title: Rosewood Avenue Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
400	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 40,000

Project Costs			
Construction Costs (Subtotal)		$	40,000
Engineering	25 %	$	10,000
Construction Observation	15 %	$	6,000
Contingency	25 %	$	14,000
TOTAL		**$**	**70,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2025**
Total Project Cost:	**$25,000**

Project Title: Well 3 Rehabilitation

System: Drinking Water

Project Description

Chemically clean and rehabilitate Well 3.

Project Justification/Benefit

The screens of drinking water wells can become clogged over time with mineral deposits and/or biomass growth, while the surrounding strata can become clogged with clay or silt. These issues cause the performance of a well to deteriorate. Periodic chemical cleaning and well rehabilitation will restore the performance (specific capacity) of the well to near- or like-new conditions and extend the useful life of the well.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	25,000
TOTAL	**$**	**25,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
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Village of Decatur

Project Title: Well 3 Rehabilitation

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 3 Rehabilitation	$ 20,000	$ 20,000

Project Costs		
Construction Costs (Subtotal)		$ 20,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 5,000
TOTAL		**$ 25,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2025**
Total Project Cost:	**$7,000**

Project Title: Well 4 VFD Replacement

System: Drinking Water

Project Description

Replace the variable frequency drive (VFD) for Well 4.

Project Justification/Benefit

VFDs used in water service have an expected useful life of approximately 20 years. Planning for replacement of the VFD, though it is not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	7,000
TOTAL	**$**	**7,000**

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Village of Decatur

Project Title: Well 4 VFD Replacement

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 VFD	$ 5,000	$ 5,000

Project Costs		
Construction Costs (Subtotal)		$ 5,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 1,300
TOTAL		**$ 7,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2026**
Total Project Cost:	**$144,000**

Project Title: Beers Street Water Main - 2026

System: Drinking Water

Project Description

Replace the existing 4-inch and 2-inch water main running under Beers Street from S. Williams Street to the dead end with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch and 2-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	144,000
TOTAL	**$**	**144,000**

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Village of Decatur

Project Title: Beers Street Water Main - 2026

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1,000	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 100,000

Project Costs		
Construction Costs (Subtotal)	$	100,000
Engineering 7 %	$	7,000
Construction Observation 8 %	$	8,000
Contingency 25 %	$	28,800
TOTAL	**$**	**144,000**

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(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2027**
Total Project Cost:	**$130,000**

Project Title: Beers Street Water Main - 2027

System: Drinking Water

Project Description

Replace the existing 6-inch water main running under Beers Street from George Street to Phelps Street.

Project Justification/Benefit

This segment of water main has been targeted for replacement in conjunction with a road project due to the age of the pipe. In addition, it is believed that sections (or the entire length) of this water main are actually 4-inch diameter. The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing any existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents.

Project Funding Source		
Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	130,000
TOTAL	**$**	**130,000**

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Village of Decatur

Project Title: Beers Street Water Main - 2027

Quantity	Unit of Measure	Item	Unit Price	Subtotal
900	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 90,000

Project Costs			
Construction Costs (Subtotal)		$	90,000
Engineering	7 %	$	6,300
Construction Observation	8 %	$	7,200
Contingency	25 %	$	25,900
TOTAL		**$**	**130,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2028**
Total Project Cost:	**$108,000**

Project Title: Beers Street Water Main - 2028

System: Drinking Water

Project Description

Replace the existing 6-inch water main running under Beers Street from Park Street to Williams Street.

Project Justification/Benefit

This segment of water main has been targeted for replacement in conjunction with a road project due to the age of the pipe. In addition, it is believed that sections (or the entire length) of this water main are actually 4-inch diameter. The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing any existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	108,000
TOTAL	**$**	**108,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
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Village of Decatur

Project Title: Beers Street Water Main - 2028

Quantity	Unit of Measure	Item	Unit Price	Subtotal
750	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 75,000

Project Costs		
Construction Costs (Subtotal)	$	75,000
Engineering 7 %	$	5,300
Construction Observation 8 %	$	6,000
Contingency 25 %	$	21,600
TOTAL	**$**	**108,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2028**
Total Project Cost:	**$69,000**

Project Title: Recoat the Elevated Storage Tank - Exterior

System: Drinking Water

Project Description

Recoat the exterior of the elevated storage tank.

Project Justification/Benefit

Elevated storage tank coatings are exposed to harsh weather conditions and eventually begin to break down, fading and losing some of their ability to protect the underlying surfaces from corrosion. Periodically cleaning and re-coating the exterior of the elevated storage tank will restore the aesthetics of the tank, extend the life of the coating system, and extend the life of the elevated storage tank itself.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	69,000
TOTAL	**$**	**69,000**

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Village of Decatur

Project Title: Recoat the Elevated Storage Tank - Exterior

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Elevated storage tank exterior recoating	$ 50,000	$ 50,000

Project Costs		
Construction Costs (Subtotal)	$	50,000
Engineering 0 %	$	-
Construction Observation 10 %	$	5,000
Contingency 25 %	$	13,800
TOTAL	**$**	**69,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2028**
Total Project Cost:	**$19,000**

Project Title: Well 2 Pump Maintenance - 2028

System: Drinking Water

Project Description

Remove the pump from Well 2, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 2 was last scheduled for rehabilitation in 2020.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 2 Pump Maintenance - 2028

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 2 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)		$ 15,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 3,800
TOTAL		**$ 19,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2029**
Total Project Cost:	**$19,000**

Project Title: Well 3 Pump Maintenance - 2029

System: Drinking Water

Project Description

Remove the pump from Well 3, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 3 was last scheduled for rehabilitation in 2021.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 3 Pump Maintenance - 2029

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 3 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)	$	15,000
Engineering 0 %	$	-
Construction Observation 0 %	$	-
Contingency 25 %	$	3,800
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2029**
Total Project Cost:	**$116,000**

Project Title: Williams Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under Williams Street from Pine Street to St. Mary's Street with 6-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water main to 6-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	116,000
TOTAL	**$**	**116,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Williams Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
700	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 70,000

Project Costs			
Construction Costs (Subtotal)		$	70,000
Engineering	20 %	$	14,000
Construction Observation	12 %	$	8,400
Contingency	25 %	$	23,100
TOTAL		**$**	**116,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2030**
Total Project Cost:	**$65,000**

Project Title: Replace Well 3 and 4 Standby Generator

System: Drinking Water

Project Description

Replace the 150 kW standby emergency generator for Well 3 and 4.

Project Justification/Benefit

The generator provides backup power to Well 3 and Well 4 in the event of a power outage and is a necessity to ensure that water is available to the Village under all conditions. Standby generators used in water service have an expected useful life of approximately 20 years. Planning on replacement of the generator, though not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	65,000
TOTAL	**$**	**65,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Replace Well 3 and 4 Standby Generator

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	150 kW Generator	$ 45,000	$ 45,000

Project Costs		
Construction Costs (Subtotal)	$	45,000
Engineering 10 %	$	4,500
Construction Observation 5 %	$	2,300
Contingency 25 %	$	13,000
TOTAL	**$**	**65,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2030**
Total Project Cost:	**$100,000**

Project Title: Water Meter Replacement - 2030

System: Drinking Water

Project Description

Replace 400 water meters throughout the Village on an as-needed basis.

Project Justification/Benefit

The expected life span for water meters is approximately 20 years. All of the Village water meters were installed in 2013. While the Village plans to replace the water meters as needed (i.e. as the old meters fail), planning on replacement of the meters as a batch project at about the time of the end of their useful life will ensure that sufficient capital exists to purchase the new water meters as needed. To reduce the one time cost of this replacement, the meter purchases have been split over two separate years (2030 and 2033).

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	100,000
TOTAL	**$**	**100,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Water Meter Replacement - 2030

Quantity	Unit of Measure	Item	Unit Price	Subtotal
400	EA	Water Meter	$ 200	$ 80,000

Project Costs		
Construction Costs (Subtotal)		$ 80,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 20,000
TOTAL		**$ 100,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2032**
Total Project Cost:	**$242,000**

Project Title: George Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under George Street from Mason Street to the southeast Village limits with 8-inch water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. In addition, due to this line being a dead end pipe, the latest Water Reliability Study indicated an 8-inch pipe is necessary to provide the recommended fire flows along the length of the pipe. Increasing the existing 4-inch water main to 8-inch will help to increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	242,000
TOTAL	**$**	**242,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: George Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1,600	FT	Water Main, DI, 8 inch, Tr Det G	$ 105	$ 168,000

Project Costs		
Construction Costs (Subtotal)	$	168,000
Engineering 7 %	$	11,800
Construction Observation 8 %	$	13,500
Contingency 25 %	$	48,400
TOTAL	**$**	**242,000**

(269) 673-8465 1670 LINCOLN ROAD, ALLEGAN, MI
(269) 927-0100 2303 PIPESTONE ROAD, BENTON HARBOR, MI
(269) 327-3532 9835 PORTAGE ROAD, PORTAGE, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2032**
Total Project Cost:	**$19,000**

Project Title: Well 4 Pump Maintenance - 2032

System: Drinking Water

Project Description

Remove the pump from Well 4, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 4 was last scheduled for rehabilitation in 2020.

Project Funding Source		
Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 4 Pump Maintenance - 2032

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)	$	15,000
Engineering 0 %	$	-
Construction Observation 0 %	$	-
Contingency 25 %	$	3,800
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2033**
Total Project Cost:	**$11,000**

Project Title: Replace Well 2 and Well 3 Control Panels

System: Drinking Water

Project Description

Plan for replacement of the control panel at Well 2 and Well 3.

Project Justification/Benefit

Electrical equipment used in water service has an expected useful life of approximately 20 years. Planning on replacement of these well control panels, though not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	11,000
TOTAL	**$**	**11,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Replace Well 2 and Well 3 Control Panels

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 2 control panel	$ 3,000	$ 3,000
1	EA	Well 3 control panel	$ 3,000	$ 3,000

Project Costs			
Construction Costs (Subtotal)		$	6,000
Engineering	25 %	$	1,500
Construction Observation	15 %	$	900
Contingency	25 %	$	2,100
TOTAL		**$**	**11,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2033**
Total Project Cost:	**$100,000**

Project Title: Water Meter Replacement - 2033

System: Drinking Water

Project Description

Replace 400 water meters throughout the Village on an as-needed basis.

Project Justification/Benefit

The expected life span for water meters is approximately 20 years. All of the Village water meters were installed in 2013. While the Village plans to replace the water meters as needed (i.e. as the old meters fail), planning on replacement of the meters as a batch project at about the time of the end of their useful life will ensure that sufficient capital exists to purchase the new water meters as needed. To reduce the one time cost of this replacement, the meter purchases have been split over two separate years (2030 and 2033).

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	100,000
TOTAL	**$**	**100,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Village of Decatur

Project Title: Water Meter Replacement - 2033

Quantity	Unit of Measure	Item	Unit Price	Subtotal
400	EA	Water Meter	$ 200	$ 80,000

Project Costs		
Construction Costs (Subtotal)		$ 80,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 20,000
TOTAL		**$ 100,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2033**
Total Project Cost:	**$4,000**

Project Title: Well 4 Maintenance

System: Drinking Water

Project Description

Perform maintenance on the building for well 4.

Project Justification/Benefit

While there is not much maintenance required on the well buildings, due to their method of construction, some comprehensive building maintenance will be required periodically. The last time major maintenance was done on the well buildings was 2013. As such, a new roof and lighting/electrical upgrades should be anticipated approximately every 20 years to ensure sufficient capital exists to address the maintenance when it is needed.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	4,000
TOTAL	**$**	**4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Village of Decatur

Project Title: Well 4 Maintenance

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 building maintenance	$ 2,500	$ 2,500

Project Costs		
Construction Costs (Subtotal)		$ 2,500
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 700
TOTAL		**$ 4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2034**
Total Project Cost:	**$4,000**

Project Title: Well 2 Building Maintenance

System: Drinking Water

Project Description

Perform building maintenance on well 2.

Project Justification/Benefit

While there is not much maintenance required on the well buildings, due to their method of construction, some comprehensive building maintenance will be required periodically. The last time major maintenance was done on the well buildings was 2013. As such, a new roof and lighting/electrical upgrades should be anticipated approximately every 20 years to ensure sufficient capital exists to address the maintenance when it is needed.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	4,000
TOTAL	**$**	**4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 2 Building Maintenance

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 2 Building Maintenance	$ 2,500	$ 2,500

Project Costs		
Construction Costs (Subtotal)		$ 2,500
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 700
TOTAL		**$ 4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2034**
Total Project Cost:	**$4,000**

Project Title: Well 3 Maintenance

System: Drinking Water

Project Description

Perform building maintenance on well 3.

Project Justification/Benefit

While there is not much maintenance required on the well buildings, due to their method of construction, some comprehensive building maintenance will be required periodically. The last time major maintenance was done on the well buildings was 2013. As such, a new roof and lighting/electrical upgrades should be anticipated approximately every 20 years to ensure sufficient capital exists to address the maintenance when it is needed.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	4,000
TOTAL	**$**	**4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Well 3 Maintenance

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 3 building maintenance	$ 2,500	$ 2,500

Project Costs		
Construction Costs (Subtotal)		$ 2,500
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 700
TOTAL		**$ 4,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2035**
Total Project Cost:	**$32,000**

Project Title: Replace Portable Generator for Well 2

System: Drinking Water

Project Description

Replace the portable generator for Well 2.

Project Justification/Benefit

The portable generator is used for multiple purposes, one of which is to provide backup power to Well 2 in the event of a power outage. This is a necessity to ensure that water is available to the Village under all conditions. Standby generators used in water service have an expected useful life of approximately 20 years. Planning on replacement of the generator, though not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	32,000
TOTAL	**$**	**32,000**

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(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Replace Portable Generator for Well 2

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Portable generator	$ 25,000	$ 25,000

Project Costs		
Construction Costs (Subtotal)		$ 25,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 6,300
TOTAL		**$ 32,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2035**
Total Project Cost:	**$6,000**

Project Title: Replace Well 4 Control Panel

System: Drinking Water

Project Description

Plan for replacement of the control panel at Well 4.

Project Justification/Benefit

Electrical equipment used in water service has an expected useful life of approximately 20 years. Planning on replacement of the well control panel, though not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	6,000
TOTAL	**$**	**6,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Replace Well 4 Control Panel

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 Control Panel	$ 3,000	$ 3,000

Project Costs			
Construction Costs (Subtotal)		$	3,000
Engineering	25 %	$	800
Construction Observation	15 %	$	500
Contingency	25 %	$	1,100
TOTAL		**$**	**6,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2036**
Total Project Cost:	**$410,000**

Project Title: Edgar Bergen Boulevard and N. East Street Water Main

System: Drinking Water

Project Description

Replace the existing 2-inch water main running under Edgar Bergen Boulevard from Phelps Street to School Street with 6-inch water main. Install new 6-inch water main under the portion of Edgar Bergen Boulevard from Phelps Street to School Street where there is currently no water main.

Replace the existing 4-inch water main running under Edgar Bergen Boulevard from School Street to Rogers Street with 6-inch water main.

Install new 6-inch water main from the intersection of Edgar Bergen Boulevard, Prospect Street, and N. East Street southeast under N. East Street where there is currently no water main to the existing 6-inch water main that dead ends on N. East Street northeast of St. Mary's Street.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 2-inch and 4-inch water mains to 6-inch will help to increase the water flow rate for fire fighting efforts. In addition, installing new water main on Edgar Bergen Boulevard to complete a loop to Phelps Street and on N. East Street to complete a loop to St. Mary's Street will also increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. These new loops will also create more redundancy in the water system and reduce the number of people who would be without water service due to an emergency repair.

Project Funding Source		
Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	410,000
TOTAL	**$**	**410,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
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Village of Decatur

Project Title: Edgar Bergen Boulevard and N. East Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
2,450	FT	Water main, 6 inch, DI, Tr Det G - Edgar Bergen	$ 100	$ 245,000
400	FT	Water main, 6 inch, DI, Tr Det G - N. East Street	$ 100	$ 40,000

Project Costs		
Construction Costs (Subtotal)	$	285,000
Engineering 7 %	$	20,000
Construction Observation 8 %	$	22,800
Contingency 25 %	$	82,000
TOTAL	**$**	**410,000**

(269) 673-8465 1670 Lincoln Road, Allegan, MI
(269) 927-0100 2303 Pipestone Road, Benton Harbor, MI
(269) 327-3532 9835 Portage Road, Portage, MI
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Capital Improvement Plan

Village of Decatur

Project Year:	**2036**
Total Project Cost:	**$19,000**

Project Title: Well 2 Pump Maintenance - 2036

System: Drinking Water

Project Description

Remove the pump from Well 2, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 2 was last scheduled for rehabilitation in 2028.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
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Village of Decatur

Project Title: Well 2 Pump Maintenance - 2036

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 2 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)	$	15,000
Engineering 0 %	$	-
Construction Observation 0 %	$	-
Contingency 25 %	$	3,800
TOTAL	**$**	**19,000**

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
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Capital Improvement Plan

Village of Decatur

Project Year:	**2037**
Total Project Cost:	**$88,000**

Project Title: Recoat the Elevated Storage Tank - Interior

System: Drinking Water

Project Description

Recoat both the wet and dry interior of the elevated storage tank.

Project Justification/Benefit

Elevated storage tank coatings eventually begin to break down, losing some of their ability to protect the underlying surfaces from corrosion. Periodically cleaning and re-coating both the wet portion and the dry portion of the interior of the elevated storage tank will extend the life of the coating system, and extend the life of the elevated storage tank itself.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	88,000
TOTAL	**$**	**88,000**

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Project Title: Recoat the Elevated Storage Tank - Interior

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Elevated storage tank wet interior recoating	$ 60,000	$ 60,000
1	EA	Elevated storage tank dry interior recoating	$ 4,000	$ 4,000

Project Costs		
Construction Costs (Subtotal)	$	64,000
Engineering 0 %	$	-
Construction Observation 10 %	$	6,400
Contingency 25 %	$	17,600
TOTAL	**$**	**88,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2037**
Total Project Cost:	**$19,000**

Project Title: Well 3 Pump Maintenance - 2037

System: Drinking Water

Project Description

Remove the pump from Well 3, rehabilitate the pump, and rehabilitate or replace the motor.

Project Justification/Benefit

Regular pump maintenance can extend the life of a well pump and restore performance to near- or like-new conditions. Recommended maintenance intervals are 8 to 10 years and the pump for Well 3 was last scheduled for rehabilitation in 2029.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	19,000
TOTAL	**$**	**19,000**

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Project Title: Well 3 Pump Maintenance - 2037

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 3 pump and motor maintenance	$ 15,000	$ 15,000

Project Costs		
Construction Costs (Subtotal)	$	15,000
Engineering 0 %	$	-
Construction Observation 0 %	$	-
Contingency 25 %	$	3,800
TOTAL	**$**	**19,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2037**
Total Project Cost:	**$7,000**

Project Title: Well 3 VFD Replacement

System: Drinking Water

Project Description

Replace the variable frequency drive (VFD) for Well 3.

Project Justification/Benefit

VFDs used in water service have an expected useful life of approximately 20 years. Planning for replacement of the VFD, though it is not in need of replacement now, will ensure that sufficient capital exists when replacement becomes necessary.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	7,000
TOTAL	**$**	**7,000**

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Project Title: Well 3 VFD Replacement

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1	EA	Well 4 VFD	$ 5,000	$ 5,000

Project Costs		
Construction Costs (Subtotal)		$ 5,000
Engineering	0 %	$ -
Construction Observation	0 %	$ -
Contingency	25 %	$ 1,300
TOTAL		**$ 7,000**

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Capital Improvement Plan

Village of Decatur

Project Year:	**2038**
Total Project Cost:	**$216,000**

Project Title: John Street Water Main

System: Drinking Water

Project Description

Replace the existing 4-inch water main running under John Street from Pine Street to St. Mary's Street with 6-inch water main. Install new 6-inch water main under the portion of John Street from St. Mary's Street to Delaware Street where there is currently no water main.

Project Justification/Benefit

The minimum water main size allowed in the current version of the Ten States Standards for Water Works in water systems providing fire protection is 6-inch. Increasing the existing 4-inch water mains to 6-inch will help to increase the water flow rate for fire fighting efforts. In addition, installing new water main on John Street to complete a loop between St. Mary's Street and Delaware Street will also increase the water flow rate for fire fighting efforts and can, in conjunction with other projects identified in the most recent Water Reliability Study, help to lower the Insurance Service Office (ISO) rating for the Village which could lower insurance rates for Village residents. The new loop will also create more redundancy in the water system and reduce the number of people who would be without water service due to an emergency repair.

Project Funding Source

Drinking Water Revolving Fund Loan		
Bonds/Grants/Other Financing Source		
Assessments		
Water Fund	$	216,000
TOTAL	**$**	**216,000**

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Village of Decatur

Project Title: John Street Water Main

Quantity	Unit of Measure	Item	Unit Price	Subtotal
1,500	FT	Water Main, DI, 6 inch, Tr Det G	$ 100	$ 150,000

Project Costs		
Construction Costs (Subtotal)	$	150,000
Engineering 7 %	$	10,500
Construction Observation 8 %	$	12,000
Contingency 25 %	$	43,200
TOTAL	**$**	**216,000**

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Year	Project	Total	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2018	SCADA System	$80,000	$ 80,000											
2018	Water Tapping Machine	$5,000	$ 5,000											
2018	Well 4 Rehabilitation	$19,000	$ 19,000											
2019	Cedar Street - Pine to Phelps	$175,000		$ 178,500										
2019	Update General Plan	$7,000		$ 7,140										
2020	Pine Street Water Main	$207,000			$ 215,363									
2020	Well 2 Pump Maintenance - 2020	$19,000			$ 19,768									
2021	Austin Boulevard and Pine Street Water Main	$210,000				$ 222,854								
2021	Well 3 Pump Maintenance - 2021	$13,000				$ 13,796								
2022	Lee Avenue and Memory Lane Water Main	$185,000					$ 200,250							
2023	Kinney Street and Douglas Drive Water Main	$192,000						$ 211,984						
2024	Hand Held Meter Reader	$9,000							$ 10,135					
2024	Well 4 Pump Maintenance - 2024	$19,000							$ 21,397					
2024	White Oak Street Water Main	$135,000							$ 152,032					
2025	Miscellaneous Hydrant Replacements	$44,000								$ 50,542				
2025	Rosewood Avenue Water Main	$70,000								$ 80,408				
2025	Well 3 Rehabilitation	$25,000								$ 28,717				
2025	Well 4 VFD Replacement	$7,000								$ 8,041				
2026	Beers Street Water Main - 2026	$144,000									$ 168,719			
2027	Beers Street Water Main - 2027	$130,000										$ 155,362		
2028	Beers Street Water Main - 2028	$108,000											$ 131,651	
2028	Recoat the Elevated Storage Tank - Exterior	$69,000											$ 84,111	
2028	Well 2 Pump Maintenance - 2028	$19,000											$ 23,161	
2029	Well 3 Pump Maintenance - 2029	$19,000												$ 23,624
2029	Williams Street Water Main	$116,000												$ 144,231
2030	Replace Well 3 and 4 Standby Generator	$65,000												
2030	Water Meter Replacement - 2030	$100,000												
2032	George Street Water Main	$242,000												
2032	Well 4 Pump Maintenance - 2032	$19,000												
2033	Replace Well 2 and Well 3 Control Panels	$11,000												
2033	Water Meter Replacement - 2033	$100,000												
2033	Well 4 Maintenance	$4,000												
2034	Well 2 Building Maintenance	$4,000												
2034	Well 3 Maintenance	$4,000												
2035	Replace Portable Generator for Well 2	$32,000												
2035	Replace Well 4 Control Panel	$6,000												
2036	Edgar Bergen Boulevard and N. East Street Water Main	$410,000												
2036	Well 2 Pump Maintenance - 2036	$19,000												
2037	Recoat the Elevated Storage Tank - Interior	$88,000												
2037	Well 3 Pump Maintenance - 2037	$19,000												
2037	Well 3 VFD Replacement	$7,000												
2038	John Street Water Main	$216,000												
	Subtotal of Non-Inflated Costs =		$ 104,000	$ 182,000	$ 226,000	$ 223,000	$ 185,000	$ 192,000	$ 163,000	$ 146,000	$ 144,000	$ 130,000	$ 196,000	$ 135,000
	Inflation Adjusted Subtotal =		$ 104,000	$ 185,640	$ 235,130	$ 236,649	$ 200,250	$ 211,984	$ 183,564	$ 167,708	$ 168,719	$ 155,362	$ 238,923	$ 167,856
	Total CIP =		**$ 104,000**	**$ 186,000**	**$ 236,000**	**$ 237,000**	**$ 201,000**	**$ 212,000**	**$ 184,000**	**$ 168,000**	**$ 169,000**	**$ 156,000**	**$ 239,000**	**$ 168,000**

Assumptions:

1) Inflation Factor:	2.0%	1.00000	1.02000	1.04040	1.06121	1.08243	1.10408	1.12616	1.14869	1.17166	1.19509	1.21899	1.24337

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Year	Project	Total	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Totals
2018	SCADA System	$80,000											$ 80,000
2018	Water Tapping Machine	$5,000											$ 5,000
2018	Well 4 Rehabilitation	$19,000											$ 19,000
2019	Cedar Street - Pine to Phelps	$175,000											$ 178,500
2019	Update General Plan	$7,000											$ 7,140
2020	Pine Street Water Main	$207,000											$ 215,363
2020	Well 2 Pump Maintenance - 2020	$19,000											$ 19,768
2021	Austin Boulevard and Pine Street Water Main	$210,000											$ 222,854
2021	Well 3 Pump Maintenance - 2021	$13,000											$ 13,796
2022	Lee Avenue and Memory Lane Water Main	$185,000											$ 200,250
2023	Kinney Street and Douglas Drive Water Main	$192,000											$ 211,984
2024	Hand Held Meter Reader	$9,000											$ 10,135
2024	Well 4 Pump Maintenance - 2024	$19,000											$ 21,397
2024	White Oak Street Water Main	$135,000											$ 152,032
2025	Miscellaneous Hydrant Replacements	$44,000											$ 50,542
2025	Rosewood Avenue Water Main	$70,000											$ 80,408
2025	Well 3 Rehabilitation	$25,000											$ 28,717
2025	Well 4 VFD Replacement	$7,000											$ 8,041
2026	Beers Street Water Main - 2026	$144,000											$ 168,719
2027	Beers Street Water Main - 2027	$130,000											$ 155,362
2028	Beers Street Water Main - 2028	$108,000											$ 131,651
2028	Recoat the Elevated Storage Tank - Exterior	$69,000											$ 84,111
2028	Well 2 Pump Maintenance - 2028	$19,000											$ 23,161
2029	Well 3 Pump Maintenance - 2029	$19,000											$ 23,624
2029	Williams Street Water Main	$116,000											$ 144,231
2030	Replace Well 3 and 4 Standby Generator	$65,000	$ 82,436										$ 82,436
2030	Water Meter Replacement - 2030	$100,000	$ 126,824										$ 126,824
2032	George Street Water Main	$242,000			$ 319,314								$ 319,314
2032	Well 4 Pump Maintenance - 2032	$19,000			$ 25,070								$ 25,070
2033	Replace Well 2 and Well 3 Control Panels	$11,000				$ 14,805							$ 14,805
2033	Water Meter Replacement - 2033	$100,000				$ 134,587							$ 134,587
2033	Well 4 Maintenance	$4,000				$ 5,383							$ 5,383
2034	Well 2 Building Maintenance	$4,000					$ 5,491						$ 5,491
2034	Well 3 Maintenance	$4,000					$ 5,491						$ 5,491
2035	Replace Portable Generator for Well 2	$32,000						$ 44,808					$ 44,808
2035	Replace Well 4 Control Panel	$6,000						$ 8,401					$ 8,401
2036	Edgar Bergen Boulevard and N. East Street Water Main	$410,000							$ 585,581				$ 585,581
2036	Well 2 Pump Maintenance - 2036	$19,000							$ 27,137				$ 27,137
2037	Recoat the Elevated Storage Tank - Interior	$88,000								$ 128,199			$ 128,199
2037	Well 3 Pump Maintenance - 2037	$19,000								$ 27,679			$ 27,679
2037	Well 3 VFD Replacement	$7,000								$ 10,198			$ 10,198
2038	John Street Water Main	$216,000									$ 320,965		$ 320,965
	Subtotal of Non-Inflated Costs =		$ 165,000	$ -	$ 261,000	$ 115,000	$ 8,000	$ 38,000	$ 429,000	$ 114,000	$ 216,000	$ -	$ 3,372,000
	Inflation Adjusted Subtotal =		$ 209,260	$ -	$ 344,384	$ 154,775	$ 10,982	$ 53,209	$ 612,718	$ 166,076	$ 320,965	$ -	$ 4,128,154
	Total CIP =		**$ 210,000**	**$ -**	**$ 345,000**	**$ 155,000**	**$ 11,000**	**$ 54,000**	**$ 613,000**	**$ 167,000**	**$ 321,000**	**$ -**	**$ 4,136,000**

Assumptions:

1) Inflation Factor:	2.0%	1.26824	1.29361	1.31948	1.34587	1.37279	1.40024	1.42825	1.45681	1.48595	1.51567	

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Appendix E

Detailed Rate Analysis

Village of Decatur (Michigan) Water Fund

Comparative Statement of Net Position

	As of				
	2/28/2013	2/28/2014	2/28/2015	2/29/2016	2/28/2017
	(---------- Per Audit ----------)				
Assets					
Current Assets					
Cash	$ 362,622	$ 311,868	$ 304,594	$ 370,348	$ 419,843
Investments	$ -	$ -	$ -	$ -	$ -
Accounts receivable	$ 27,493	$ 24,714	$ 24,102	$ 19,364	$ 22,161
Due from other funds	$ 272	$ 126	$ 40	$ 190	$ 827
Prepaids	$ 1,337	$ 1,318	$ 2,341	$ 245	$ 795
Total Current Assets	*$ 391,724*	*$ 338,026*	*$ 331,077*	*$ 390,147*	*$ 443,626*
Noncurrent Assets					
Capital assets not being depreciated	$ 20,246	$ 20,246	$ 118,161	$ 20,246	$ 20,246
Capital assets, net of accum. depreciation	$ 884,893	$ 994,334	$ 946,273	$ 987,301	$ 935,110
Total Noncurrent Assets	*$ 905,139*	*$ 1,014,580*	*$ 1,064,434*	*$ 1,007,547*	*$ 955,356*
Total Assets	***$ 1,296,863***	***$ 1,352,606***	***$ 1,395,511***	***$ 1,397,694***	***$ 1,398,982***
Deferred Outflows of Resources					
Deferred outflows of resources	$ -	$ -	$ -	$ -	$ -
Total Deferred Outflows of Resources	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Liabilities					
Current Liabilities					
Accounts payable	$ 527	$ 678	$ 13,273	$ 678	$ 696
Accrued liabilities	$ 1,827	$ 3,732	$ 2,763	$ -	$ -
Due to other funds	$ -	$ -	$ -	$ 6,751	$ -
Customer deposits payable	$ 27,200	$ 27,755	$ 28,480	$ 28,790	$ 29,270
Current portion of compensated absences	$ 2,754	$ 4,687	$ 7,011	$ 1,894	$ 3,990
Total Current Liabilities	*$ 32,308*	*$ 36,852*	*$ 51,527*	*$ 38,113*	*$ 33,956*
Total Liabilities	***$ 32,308***	***$ 36,852***	***$ 51,527***	***$ 38,113***	***$ 33,956***
Deferred Inflows of Resources					
Deferred inflows of resources	$ -	$ -	$ -	$ -	$ -
Total Deferred Inflows of Resources	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Net Position					
Investment in Capital Assets	$ 905,139	$ 1,014,580	$ 1,064,434	$ 1,007,547	$ 955,356
Unrestricted	$ 359,416	$ 301,174	$ 279,550	$ 352,034	$ 409,670
Total Net Position	**$ 1,264,555**	**$ 1,315,754**	**$ 1,343,984**	**$ 1,359,581**	**$ 1,365,026**

Village of Decatur (Michigan) Water Fund

Comparative Statement of Revenues, Expenses, and Changes in Net Position

	Fiscal Year Ended				
	2/28/2013	2/28/2014	2/28/2015	2/29/2016	2/28/2017
	(---------- Per Audit ----------)				
Operating Income (Loss)					
Operating Revenues					
Charges for services	$ 196,000	$ 195,091	$ 230,858	$ 230,631	$ 239,287
Total operating revenues	*$ 196,000*	*$ 195,091*	*$ 230,858*	*$ 230,631*	*$ 239,287*
Operating Expenses					
Personnel services	$ 82,702	$ 99,202	$ 98,211	$ 92,561	$ 90,146
Supplies	$ 14,871	$ 18,771	$ 25,970	$ 20,447	$ 56,717
Contractual services	$ 13,373	$ 19,882	$ 19,276	$ 18,805	$ 17,736
Repairs and maintenance	$ 32,137	$ 29,225	$ 1,212	$ 6,660	$ 7,634
Utilities	$ 8,830	$ 8,689	$ 10,060	$ 9,607	$ 9,636
Depreciation	$ 42,634	$ 45,414	$ 48,061	$ 48,716	$ 52,191
Total operating expenses	$ 194,547	$ 221,183	$ 202,790	$ 196,796	$ 234,060
Net Operating Income (Loss)	***$ 1,453***	***$ (26,092)***	***$ 28,068***	***$ 33,835***	***$ 5,227***
Non-Operating Revenues (Expenses)					
Non-Operating Revenues					
Investment earnings	$ 295	$ 160	$ 162	$ 303	$ 218
Insurance reimbursements	$ -	$ -	$ -	$ -	$ -
Proceeds from the sale of capital assets	$ -	$ -	$ -	$ -	$ -
Federal grants	$ -	$ -	$ -	$ -	$ -
Intergovernmental grants	$ -	$ -	$ -	$ -	$ -
Other revenue	$ -	$ -	$ -	$ -	$ -
Total non-operating revenues	*$ 295*	*$ 160*	*$ 162*	*$ 303*	*$ 218*
Income (Loss) Before Transfers	***$ 1,748***	***$ (25,932)***	***$ 28,230***	***$ 34,138***	***$ 5,445***
Transfers					
Transfers in	$ -	$ 77,131	$ -	$ -	$ -
Transfers out	$ -	$ -	$ -	$ -	$ -
Total Transfers	$ -	$ 77,131	$ -	$ -	$ -
Change in Net Position					
Total Change In Net Position	**$ 1,748**	**$ 51,199**	**$ 28,230**	**$ 34,138**	**$ 5,445**
Net Position, Beginning of Year	**$ 1,262,807**	**$ 1,264,555**	**$ 1,315,754**	**$ 1,343,984**	**$ 1,359,581**
Prior Period Adjustment	*$ -*	*$ -*	*$ -*	*$ (18,541)*	*$ -*
Net Position, End of Year	**$ 1,264,555**	**$ 1,315,754**	**$ 1,343,984**	**$ 1,359,581**	**$ 1,365,026**

Village of Decatur (Michigan) Water Fund

Schedule of 2017/18 Budgeted Operating Revenues and Expenses

		Fiscal Year Ended			
		2/28/2015	2/29/2016	2/28/2017	2/28/2018
		(Activity)	(Activity)	(Activity)	(Budget)
Fund 591 - Water		(---------- Per Village ----------)			
Revenues					
Department 000					
591-000-413.000	Delinquent special assessments	$ -	$ -	$ -	$ -
591-000-501.000	Federal grants	$ -	$ -	$ -	$ -
591-000-539.000	State grants	$ -	$ -	$ -	$ -
591-000-608.000	NSF check fee	$ 65	$ 40	$ 40	$ 100
591-000-629.000	Penalties	$ 4,820	$ 4,872	$ 4,824	$ 3,500
591-000-642.000	Water turn ons	$ 860	$ 1,320	$ 920	$ 1,200
591-000-643.000	Metered sales	$ 224,138	$ 224,399	$ 232,903	$ 225,000
591-000-645.000	Water tap fees	$ 500	$ -	$ 600	$ 1,000
591-000-664.000	Interest on CD's - Receiving	$ -	$ 125	$ -	$ -
591-000-664.100	Interest - Water operating	$ 52	$ 29	$ 91	$ 100
591-000-664.120	Interest on checking - Receiving	$ 110	$ 149	$ 127	$ 200
591-000-664.130	Interest - Water bond redempt	$ -	$ -	$ -	$ -
591-000-664.140	Interest - Water reserve	$ -	$ -	$ -	$ -
591-000-671.000	Reimbursements special services	$ 347	$ -	$ -	$ -
591-000-672.000	Special assessments	$ -	$ -	$ -	$ -
591-000-679.003	Transfer from CD	$ -	$ -	$ -	$ -
591-000-679.010	Transfer from General Fund	$ -	$ -	$ -	$ -
591-000-679.390	Transfer from Fund Balance	$ -	$ -	$ -	$ -
591-000-679.900	Salary transfer - sewer fund	$ -	$ -	$ -	$ -
591-000-694.000	Cash over and short	$ -	$ -	$ -	$ -
591-000-699.000	Transfers in	$ -	$ -	$ -	$ -
Total for Department 000		*$ 230,892*	*$ 230,934*	*$ 239,504*	*$ 231,100*
TOTAL REVENUES		**$ 230,892**	**$ 230,934**	**$ 239,504**	**$ 231,100**
Expenses					
Department 290					
591-290-969.000	Contingency	$ -	$ -	$ -	$ 37,534
Total for Department 290		*$ -*	*$ -*	*$ -*	*$ 37,534*
Department 483					
591-483-703.172	Manager salary	$ 6,605	$ 6,453	$ 7,146	$ 8,550
591-483-703.215	Clerk salary	$ 7,659	$ 7,882	$ 7,071	$ 8,300
591-483-715.000	FICA/Medicare	$ 1,091	$ 1,070	$ 1,099	$ 1,200
591-483-715.172	Manager FICA	$ -	$ -	$ -	$ -
591-483-715.215	Clerk FICA	$ -	$ -	$ -	$ -
591-483-718.000	Pension	$ -	$ -	$ -	$ -
591-483-718.172	Manager pension	$ -	$ -	$ -	$ -
591-483-718.215	Clerk pension	$ -	$ -	$ -	$ -
591-483-719.000	Health insurance	$ -	$ 160	$ 818	$ -
591-483-719.172	Manager health insurance	$ -	$ -	$ -	$ 1,727
591-483-719.215	Clerk health insurance	$ -	$ -	$ -	$ 995
591-483-999.010	General fund salary transfer	$ -	$ -	$ -	$ -
Totals for Department 483		*$ 15,355*	*$ 15,565*	*$ 16,134*	*$ 20,772*
Department 550					
591-550-703.000	Salaries-clerical	$ 10,091	$ 9,920	$ 9,778	$ 12,000
591-550-703.010	Overtime pay	$ -	$ -	$ -	$ -
591-550-703.020	Holiday pay	$ 394	$ 360	$ 505	$ 410
591-550-703.030	Vacation pay	$ 175	$ 656	$ 1,133	$ 1,046
591-550-703.040	Sick/personal	$ (127)	$ 756	$ 513	$ 600
591-550-703.060	Bonus	$ -	$ -	$ -	$ -
591-550-715.000	FICA/Medicare	$ 923	$ 922	$ 954	$ 1,000
591-550-716.000	Unemployment compensation	$ -	$ 1	$ -	$ 10
591-550-717.000	Workman's comp	$ 55	$ 65	$ 39	$ 66
591-550-718.000	Pension	$ 342	$ 364	$ 537	$ 800

Village of Decatur (Michigan) Water Fund

Schedule of 2017/18 Budgeted Operating Revenues and Expenses

		Fiscal Year Ended			
		2/28/2015	2/29/2016	2/28/2017	2/28/2018
		(Activity)	(Activity)	(Activity)	(Budget)
Fund 591 - Water		(---------- Per Village ----------)			
591-550-719.000	Health insurance	$ 4,295	$ 5,129	$ 5,754	$ 5,447
591-550-720.000	Life insurance	$ 86	$ 62	$ 53	$ 89
591-550-722.000	Vision reimbursement	$ -	$ -	$ -	$ 125
591-550-728.000	Office supplies	$ 662	$ 570	$ 543	$ 650
591-550-730.000	Postage	$ 1,735	$ 1,583	$ 1,330	$ 2,000
591-550-801.000	Consultant fees	$ -	$ -	$ -	$ -
591-550-807.000	Audit	$ 810	$ 810	$ 810	$ 810
591-550-853.000	Telephone	$ 483	$ 449	$ 371	$ 500
591-550-853.020	Cell phone	$ -	$ -	$ -	$ -
591-550-853.040	Internet service	$ -	$ -	$ -	$ -
591-550-864.000	Conferences/Workshops	$ -	$ -	$ -	$ 300
591-550-901.000	Printing	$ 388	$ 319	$ 256	$ 300
591-550-921.000	Electric	$ -	$ -	$ -	$ -
591-550-923.000	Heat	$ -	$ -	$ -	$ -
591-550-925.000	Water & sewer	$ -	$ -	$ -	$ -
591-550-931.000	Maint-services	$ -	$ -	$ -	$ -
591-550-934.000	Service contracts	$ 212	$ 233	$ 198	$ 400
591-550-936.000	Tech services	$ 765	$ 680	$ 1,306	$ 800
591-550-958.000	Dues/Memberships	$ -	$ -	$ -	$ -
591-550-959.000	Miscellaneous	$ 70	$ 240	$ 374	$ 150
591-550-960.000	Bonds	$ -	$ -	$ -	$ -
591-550-963.000	Liability insurance	$ -	$ -	$ -	$ -
591-550-964.000	NSF check charges	$ 20	$ 10	$ 10	$ 50
591-550-965.000	Equipment purchase	$ 77	$ -	$ 375	$ 750
591-550-968.000	Depreciation	$ 1,123	$ 48,715	$ 52,191	$ -
591-550-981.000	Capital outlay	$ -	$ -	$ -	$ -
591-550-990.000	Bond payment-principal	$ -	$ -	$ -	$ -
591-550-999.010	General fund salary transfer	$ -	$ -	$ -	$ -
591-550-999.020	Transfer to Major	$ -	$ -	$ -	$ -
591-550-999.300	Transfer to Water Bond Redemption	$ -	$ -	$ -	$ -
Totals for Department 550		*$ 22,578*	*$ 71,844*	*$ 77,028*	*$ 28,303*
Department 551					
591-551-870.000	Power pumping-gas & oil	$ -	$ -	$ -	$ -
591-551-921.000	Power pumping-electric	$ 9,146	$ 8,662	$ 8,572	$ 9,500
591-551-923.000	Heat	$ -	$ -	$ -	$ -
591-551-957.000	Gas and oil-non transportation	$ -	$ -	$ -	$ -
Totals for Department 551		*$ 9,146*	*$ 8,662*	*$ 8,572*	*$ 9,500*
Department 552					
591-552-703.000	Salaries-distribution	$ 28,460	$ 28,131	$ 24,470	$ 42,500
591-552-703.010	Overtime pay	$ 1,942	$ 2,403	$ 921	$ 1,500
591-552-703.020	Holiday pay	$ 2,467	$ 2,525	$ 2,811	$ 2,270
591-552-703.030	Vacation pay	$ 1,715	$ 3,615	$ 4,982	$ 2,904
591-552-703.040	Sick/personal pay	$ 401	$ 2,122	$ 2,690	$ 3,025
591-552-715.000	FICA/Medicare	$ 3,090	$ 3,566	$ 2,801	$ 3,628
591-552-716.000	Unemployment insurance	$ 16	$ 30	$ -	$ 50
591-552-717.000	Workman's comp	$ 1,877	$ 1,271	$ 1,215	$ 2,050
591-552-718.000	Pension	$ 1,795	$ 2,090	$ 2,984	$ 2,450
591-552-719.000	Health insurance	$ 13,467	$ 12,407	$ 11,427	$ 11,730
591-552-720.000	Life insurance	$ 313	$ 373	$ 323	$ 322
591-552-722.000	Vision reimbursement	$ -	$ -	$ 125	$ 500
591-552-756.000	Operating supplies	$ -	$ -	$ -	$ -
591-552-768.000	Uniforms/Boots/Etc.	$ 550	$ 465	$ 492	$ 500
591-552-776.000	Supplies & maintenance	$ 4,590	$ 4,418	$ 5,235	$ 5,000
591-552-807.000	Audit	$ 1,215	$ 1,215	$ 1,215	$ 1,215
591-552-812.000	Engineering	$ -	$ -	$ -	$ -
591-552-820.000	MISS DIG	$ 571	$ 294	$ 49	$ 522

Village of Decatur (Michigan) Water Fund

Schedule of 2017/18 Budgeted Operating Revenues and Expenses

		Fiscal Year Ended			
		2/28/2015	2/29/2016	2/28/2017	2/28/2018
		(Activity)	(Activity)	(Activity)	(Budget)
Fund 591 - Water		(---------- Per Village ----------)			
591-552-821.000	Water testing	$ 3,094	$ 3,989	$ 3,300	$ 3,750
591-552-822.000	Contractual Services	$ 5,240	$ 4,920	$ 4,920	$ 4,920
591-552-853.000	Phone expense transfer to GF	$ -	$ -	$ -	$ -
591-552-853.020	Cell phone	$ 430	$ 495	$ 693	$ 600
591-552-864.000	Conf/Workshops	$ 1,431	$ 802	$ 75	$ 1,500
591-552-870.000	Gas & oil	$ -	$ -	$ -	$ -
591-552-943.000	Equipment rental-water fund	$ 12,398	$ 8,558	$ 17,792	$ 10,500
591-552-958.000	Dues/Memberships	$ 670	$ 505	$ 575	$ 600
591-552-959.000	Miscellaneous	$ -	$ -	$ -	$ -
591-552-963.000	Liability insurance	$ 2,514	$ 2,514	$ 2,537	$ 2,565
591-552-965.000	Equipment purchase	$ -	$ -	$ -	$ -
591-552-968.000	Depreciation	$ 31,975	$ -	$ -	$ -
591-552-970.000	Distribution equipment	$ -	$ -	$ -	$ -
591-552-981.000	Capital outlay	$ -	$ -	$ -	$ -
591-552-985.000	Capital projects	$ 18,541	$ 6,352	$ 6,936	$ -
Totals for Department 552		*$ 138,761*	*$ 93,060*	*$ 98,568*	*$ 104,601*
Department 553					
591-553-703.000	Salaries-wells & tower	$ 184	$ 211	$ -	$ 600
591-553-703.010	Overtime pay	$ 3,596	$ -	$ -	$ -
591-553-715.000	FICA/Medicare	$ 289	$ 16	$ -	$ 40
591-553-931.000	Maint.-water services	$ 1,212	$ 308	$ 698	$ 1,500
591-553-934.000	Repair wells	$ -	$ -	$ -	$ -
591-553-959.000	Miscellaneous	$ 215	$ 4	$ -	$ 150
591-553-963.000	Liability insurance	$ 3,017	$ 3,020	$ 3,061	$ 3,100
591-553-968.000	Depreciation	$ 14,964	$ -	$ -	$ -
591-553-981.000	Capital outlay	$ 84,375	$ 4,105	$ 30,000	$ 25,000
Totals for Department 553		*$ 107,852*	*$ 7,664*	*$ 33,759*	*$ 30,390*
Department 990					
591-990-999.010	Transfer to General Fund	$ -	$ -	$ -	$ -
Totals for Department 553		$ -	$ -	$ -	$ -
TOTAL EXPENSES		**$ 293,693**	**$ 196,796**	**$ 234,060**	**$ 231,100**
Net Of Revenues/Expenses - Fund 591		**$ (62,801)**	**$ 34,138**	**$ 5,444**	**$ -**
Beginning Fund Balance		$ 1,315,754	$ 1,343,984	$ 1,359,581	$ 1,365,026
Fund Balance Adjustments		$ 91,031	$ (18,541)	$ -	$ -
Ending Fund Balance		**$ 1,343,984**	**$ 1,359,581**	**$ 1,365,026**	**$ 1,365,026**

Village of Decatur (Michigan) Water Fund

Schedule of 2017/18 Budgeted Operating Expenses and Test Year Adjustments

		2017/18 Budget (Per Village)	Adjustments (Per Village)	Test Year
Fund 591 - Water				
Operating Expenses				
Department 483				
591-483-703.172	Manager salary	$ 8,550	$ -	$ 8,550
591-483-703.215	Clerk salary	$ 8,300	$ -	$ 8,300
591-483-715.000	FICA/Medicare	$ 1,200	$ -	$ 1,200
591-483-715.172	Manager FICA	$ -	$ -	$ -
591-483-715.215	Clerk FICA	$ -	$ -	$ -
591-483-718.000	Pension	$ -	$ -	$ -
591-483-718.172	Manager pension	$ -	$ -	$ -
591-483-718.215	Clerk pension	$ -	$ -	$ -
591-483-719.000	Health insurance	$ -	$ -	$ -
591-483-719.172	Manager health insurance	$ 1,727	$ -	$ 1,727
591-483-719.215	Clerk health insurance	$ 995	$ -	$ 995
591-483-999.010	General fund salary transfer	$ -	$ -	$ -
Department 550				
591-550-703.000	Salaries-clerical	$ 12,000	$ -	$ 12,000
591-550-703.010	Overtime pay	$ -	$ -	$ -
591-550-703.020	Holiday pay	$ 410	$ -	$ 410
591-550-703.030	Vacation pay	$ 1,046	$ -	$ 1,046
591-550-703.040	Sick/personal	$ 600	$ -	$ 600
591-550-703.060	Bonus	$ -	$ -	$ -
591-550-715.000	FICA/Medicare	$ 1,000	$ -	$ 1,000
591-550-716.000	Unemployment compensation	$ 10	$ -	$ 10
591-550-717.000	Workman's comp	$ 66	$ -	$ 66
591-550-718.000	Pension	$ 800	$ -	$ 800
591-550-719.000	Health insurance	$ 5,447	$ -	$ 5,447
591-550-720.000	Life insurance	$ 89	$ -	$ 89
591-550-722.000	Vision reimbursement	$ 125	$ -	$ 125
591-550-728.000	Office supplies	$ 650	$ -	$ 650
591-550-730.000	Postage	$ 2,000	$ -	$ 2,000
591-550-801.000	Consultant fees	$ -	$ -	$ -
591-550-807.000	Audit	$ 810	$ -	$ 810
591-550-853.000	Telephone	$ 500	$ -	$ 500
591-550-853.020	Cell phone	$ -	$ -	$ -
591-550-853.040	Internet service	$ -	$ -	$ -
591-550-864.000	Conferences/Workshops	$ 300	$ -	$ 300
591-550-901.000	Printing	$ 300	$ -	$ 300
591-550-921.000	Electric	$ -	$ -	$ -
591-550-923.000	Heat	$ -	$ -	$ -
591-550-925.000	Water & sewer	$ -	$ -	$ -
591-550-931.000	Maint-services	$ -	$ -	$ -
591-550-934.000	Service contracts	$ 400	$ -	$ 400
591-550-936.000	Tech services	$ 800	$ -	$ 800
591-550-958.000	Dues/Memberships	$ -	$ -	$ -
591-550-959.000	Miscellaneous	$ 150	$ -	$ 150
591-550-960.000	Bonds	$ -	$ -	$ -
591-550-963.000	Liability insurance	$ -	$ -	$ -
591-550-964.000	NSF check charges	$ 50	$ -	$ 50
591-550-965.000	Equipment purchase	$ 750	$ -	$ 750
591-550-968.000	Depreciation	$ -	$ - [1]	$ -
591-550-981.000	Capital outlay	$ -	$ -	$ -
591-550-990.000	Bond payment-principal	$ -	$ -	$ -
591-550-999.010	General fund salary transfer	$ -	$ -	$ -
591-550-999.020	Transfer to Major	$ -	$ -	$ -
591-550-999.300	Transfer to Water Bond Redemption	$ -	$ -	$ -
Department 551				
591-551-870.000	Power pumping-gas & oil	$ -	$ -	$ -
591-551-921.000	Power pumping-electric	$ 9,500	$ -	$ 9,500
591-551-923.000	Heat	$ -	$ -	$ -
591-551-957.000	Gas and oil-non transportation	$ -	$ -	$ -

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Village of Decatur (Michigan) Water Fund

Schedule of 2017/18 Budgeted Operating Expenses and Test Year Adjustments

		2017/18 Budget (Per Village)	Adjustments (Per Village)		Test Year
Fund 591 - Water					
Department 552					
591-552-703.000	Salaries-distribution	$ 42,500	$ 7,020	[5]	$ 49,520
591-552-703.010	Overtime pay	$ 1,500	$ 270	[5]	$ 1,770
591-552-703.020	Holiday pay	$ 2,270	$ 1,320	[5]	$ 3,590
591-552-703.030	Vacation pay	$ 2,904	$ 600	[5]	$ 3,504
591-552-703.040	Sick/personal pay	$ 3,025	$ 1,440	[5]	$ 4,465
591-552-715.000	FICA/Medicare	$ 3,628	$ 150	[5]	$ 3,778
591-552-716.000	Unemployment insurance	$ 50	$ -		$ 50
591-552-717.000	Workman's comp	$ 2,050	$ 416	[5]	$ 2,466
591-552-718.000	Pension	$ 2,450	$ 2,808	[5]	$ 5,258
591-552-719.000	Health insurance	$ 11,730	$ 8,000	[5]	$ 19,730
591-552-720.000	Life insurance	$ 322	$ 176	[5]	$ 498
591-552-722.000	Vision reimbursement	$ 500	$ 250	[5]	$ 750
591-552-756.000	Operating supplies	$ -	$ -		$ -
591-552-768.000	Uniforms/Boots/Etc.	$ 500	$ 150	[5]	$ 650
591-552-776.000	Supplies & maintenance	$ 5,000	$ -		$ 5,000
591-552-807.000	Audit	$ 1,215	$ -		$ 1,215
591-552-812.000	Engineering	$ -	$ -		$ -
591-552-820.000	MISS DIG	$ 522	$ -		$ 522
591-552-821.000	Water testing	$ 3,750	$ -		$ 3,750
591-552-822.000	Contractual Services	$ 4,920	$ 7,000	[2]	$ 11,920
591-552-853.000	Phone expense transfer to GF	$ -	$ -		$ -
591-552-853.020	Cell phone	$ 600	$ -		$ 600
591-552-864.000	Conf/Workshops	$ 1,500	$ -		$ 1,500
591-552-870.000	Gas & oil	$ -	$ -		$ -
591-552-943.000	Equipment rental-water fund	$ 10,500	$ -		$ 10,500
591-552-958.000	Dues/Memberships	$ 600	$ -		$ 600
591-552-959.000	Miscellaneous	$ -	$ -		$ -
591-552-963.000	Liability insurance	$ 2,565	$ -		$ 2,565
591-552-965.000	Equipment purchase	$ -	$ -		$ -
591-552-968.000	Depreciation	$ -	$ -	[1]	$ -
591-552-970.000	Distribution equipment	$ -	$ -		$ -
591-552-981.000	Capital outlay	$ -	$ -		$ -
591-552-985.000	Capital projects	$ -	$ -		$ -
Department 553					
591-553-703.000	Salaries-wells & tower	$ 600	$ -		$ 600
591-553-703.010	Overtime pay	$ -	$ -		$ -
591-553-715.000	FICA/Medicare	$ 40	$ -		$ 40
591-553-931.000	Maint.-water services	$ 1,500	$ 700	[3]	$ 2,200
591-553-934.000	Repair wells	$ -	$ -		$ -
591-553-959.000	Miscellaneous	$ 150	$ -		$ 150
591-553-963.000	Liability insurance	$ 3,100	$ -		$ 3,100
591-553-968.000	Depreciation	$ -	$ -	[1]	$ -
591-553-981.000	Capital outlay	$ 25,000	$ 500	[4]	$ 25,500
Department 990					
591-990-999.010	Transfer to General Fund	$ -	$ -		$ -
Total Operation & Maintenance - Water		**$ 193,566**	**$ 30,800**		**$ 224,366**

[1] Depreciation expenses are removed from this report as this study is performed on the cash basis.

[2] Additional amount to cover the annual generator maintenance contract ($2,500) plus 1/5 of the cost of a Reliability Study and Asset Management Program Update (MDEQ requires a Reliability Study every 5 years and the Asset Management Program should be updated at the same time or shortly thereafter - total cost for both is $22,500).

[3] Partial amount (1/5 of cost) to cover cleaning of the elevated storage tank exterior every 5 years (total cost for cleaning is $3,500).

[4] Partial amount (1/5 of cost) to cover inspections of the elevated storage tank every 5 years (total cost for the inspection is $2,500).

[5] Additional amount from the water fund to cover increasing one current part time DPW staff member to full time and adding another full time DPW staff member (estimated portion of the new staff members' salaries and benefits to be paid for from the water fund based on an average of 11.25% of DPW staff time currently spent working on the water system).

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Village of Decatur (Michigan) Water Fund

Projected Operating Expenses

		Fiscal Year Ended 2/29/2016	Fiscal Year Ended 2/28/2017	Budgeted 2017/18	Test Year	Inflation Multiplier	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Fund 591 - Water		(---------- Per Village ----------)													
Operating Expenses															
Department 483															
591-483-703.172	Manager salary	$ 6,453	$ 7,146	$ 8,550	$ 8,550	2.0%	$ 8,721	$ 8,895	$ 9,073	$ 9,255	$ 9,440	$ 9,629	$ 9,821	$ 10,018	$ 10,218
591-483-703.215	Clerk salary	$ 7,882	$ 7,071	$ 8,300	$ 8,300	2.0%	$ 8,466	$ 8,635	$ 8,808	$ 8,984	$ 9,164	$ 9,347	$ 9,534	$ 9,725	$ 9,919
591-483-715.000	FICA/Medicare	$ 1,070	$ 1,099	$ 1,200	$ 1,200	2.0%	$ 1,224	$ 1,248	$ 1,273	$ 1,299	$ 1,325	$ 1,351	$ 1,378	$ 1,406	$ 1,434
591-483-715.172	Manager FICA	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-715.215	Clerk FICA	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.000	Pension	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.172	Manager pension	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.215	Clerk pension	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-719.000	Health insurance	$ 160	$ 818	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-719.172	Manager health insurance	$ -	$ -	$ 1,727	$ 1,727	2.0%	$ 1,762	$ 1,797	$ 1,833	$ 1,869	$ 1,907	$ 1,945	$ 1,984	$ 2,023	$ 2,064
591-483-719.215	Clerk health insurance	$ -	$ -	$ 995	$ 995	2.0%	$ 1,015	$ 1,035	$ 1,056	$ 1,077	$ 1,099	$ 1,121	$ 1,143	$ 1,166	$ 1,189
591-483-999.010	General fund salary transfer	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 550															
591-550-703.000	Salaries-clerical	$ 9,920	$ 9,778	$ 12,000	$ 12,000	2.0%	$ 12,240	$ 12,485	$ 12,734	$ 12,989	$ 13,249	$ 13,514	$ 13,784	$ 14,060	$ 14,341
591-550-703.010	Overtime pay	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-703.020	Holiday pay	$ 360	$ 505	$ 410	$ 410	2.0%	$ 418	$ 427	$ 435	$ 444	$ 453	$ 462	$ 471	$ 480	$ 490
591-550-703.030	Vacation pay	$ 656	$ 1,133	$ 1,046	$ 1,046	2.0%	$ 1,067	$ 1,088	$ 1,110	$ 1,132	$ 1,155	$ 1,178	$ 1,202	$ 1,226	$ 1,250
591-550-703.040	Sick/personal	$ 756	$ 513	$ 600	$ 600	2.0%	$ 612	$ 624	$ 637	$ 649	$ 662	$ 676	$ 689	$ 703	$ 717
591-550-703.060	Bonus	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-715.000	FICA/Medicare	$ 922	$ 954	$ 1,000	$ 1,000	2.0%	$ 1,020	$ 1,040	$ 1,061	$ 1,082	$ 1,104	$ 1,126	$ 1,149	$ 1,172	$ 1,195
591-550-716.000	Unemployment compensation	$ 1	$ -	$ 10	$ 10	2.0%	$ 10	$ 10	$ 11	$ 11	$ 11	$ 11	$ 11	$ 12	$ 12
591-550-717.000	Workman's comp	$ 65	$ 39	$ 66	$ 66	2.0%	$ 67	$ 69	$ 70	$ 71	$ 73	$ 74	$ 76	$ 77	$ 79
591-550-718.000	Pension	$ 364	$ 537	$ 800	$ 800	2.0%	$ 816	$ 832	$ 849	$ 866	$ 883	$ 901	$ 919	$ 937	$ 956
591-550-719.000	Health insurance	$ 5,129	$ 5,754	$ 5,447	$ 5,447	2.0%	$ 5,556	$ 5,667	$ 5,780	$ 5,896	$ 6,014	$ 6,134	$ 6,257	$ 6,382	$ 6,510
591-550-720.000	Life insurance	$ 62	$ 53	$ 89	$ 89	2.0%	$ 91	$ 93	$ 94	$ 96	$ 98	$ 100	$ 102	$ 104	$ 106
591-550-722.000	Vision reimbursement	$ -	$ -	$ 125	$ 125	2.0%	$ 128	$ 130	$ 133	$ 135	$ 138	$ 141	$ 144	$ 146	$ 149
591-550-728.000	Office supplies	$ 570	$ 543	$ 650	$ 650	2.0%	$ 663	$ 676	$ 690	$ 704	$ 718	$ 732	$ 747	$ 762	$ 777
591-550-730.000	Postage	$ 1,583	$ 1,330	$ 2,000	$ 2,000	2.0%	$ 2,040	$ 2,081	$ 2,122	$ 2,165	$ 2,208	$ 2,252	$ 2,297	$ 2,343	$ 2,390
591-550-801.000	Consultant fees	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-807.000	Audit	$ 810	$ 810	$ 810	$ 810	2.0%	$ 826	$ 843	$ 860	$ 877	$ 894	$ 912	$ 930	$ 949	$ 968
591-550-853.000	Telephone	$ 449	$ 371	$ 500	$ 500	2.0%	$ 510	$ 520	$ 531	$ 541	$ 552	$ 563	$ 574	$ 586	$ 598
591-550-853.020	Cell phone	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-853.040	Internet service	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-864.000	Conferences/Workshops	$ -	$ -	$ 300	$ 300	2.0%	$ 306	$ 312	$ 318	$ 325	$ 331	$ 338	$ 345	$ 351	$ 359
591-550-901.000	Printing	$ 319	$ 256	$ 300	$ 300	2.0%	$ 306	$ 312	$ 318	$ 325	$ 331	$ 338	$ 345	$ 351	$ 359
591-550-921.000	Electric	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-923.000	Heat	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-925.000	Water & sewer	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-931.000	Maint-services	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-934.000	Service contracts	$ 233	$ 198	$ 400	$ 400	2.0%	$ 408	$ 416	$ 424	$ 433	$ 442	$ 450	$ 459	$ 469	$ 478
591-550-936.000	Tech services	$ 680	$ 1,306	$ 800	$ 800	2.0%	$ 816	$ 832	$ 849	$ 866	$ 883	$ 901	$ 919	$ 937	$ 956
591-550-958.000	Dues/Memberships	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-959.000	Miscellaneous	$ 240	$ 374	$ 150	$ 150	2.0%	$ 153	$ 156	$ 159	$ 162	$ 166	$ 169	$ 172	$ 176	$ 179
591-550-960.000	Bonds	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-963.000	Liability insurance	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-964.000	NSF check charges	$ 10	$ 10	$ 50	$ 50	2.0%	$ 51	$ 52	$ 53	$ 54	$ 55	$ 56	$ 57	$ 59	$ 60
591-550-965.000	Equipment purchase	$ -	$ 375	$ 750	$ 750	2.0%	$ 765	$ 780	$ 796	$ 812	$ 828	$ 845	$ 862	$ 879	$ 896
591-550-968.000	Depreciation [1]	$ 48,715	$ 52,191	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-981.000	Capital outlay	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-990.000	Bond payment-principal	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.010	General fund salary transfer	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.020	Transfer to Major	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.300	Transfer to Water Bond Redem.	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 551															
591-551-870.000	Power pumping-gas & oil	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-551-921.000	Power pumping-electric	$ 8,662	$ 8,572	$ 9,500	$ 9,500	2.0%	$ 9,690	$ 9,884	$ 10,081	$ 10,283	$ 10,489	$ 10,699	$ 10,913	$ 11,131	$ 11,353
591-551-923.000	Heat	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-551-957.000	Gas and oil-non transportation	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 552															
591-552-703.000	Salaries-distribution	$ 28,131	$ 24,470	$ 42,500	$ 49,520	2.0%	$ 50,510	$ 51,521	$ 52,551	$ 53,602	$ 54,674	$ 55,768	$ 56,883	$ 58,021	$ 59,181
591-552-703.010	Overtime pay	$ 2,403	$ 921	$ 1,500	$ 1,770	2.0%	$ 1,805	$ 1,842	$ 1,878	$ 1,916	$ 1,954	$ 1,993	$ 2,033	$ 2,074	$ 2,115
591-552-703.020	Holiday pay	$ 2,525	$ 2,811	$ 2,270	$ 3,590	2.0%	$ 3,662	$ 3,735	$ 3,810	$ 3,886	$ 3,964	$ 4,043	$ 4,124	$ 4,206	$ 4,290
591-552-703.030	Vacation pay	$ 3,615	$ 4,982	$ 2,904	$ 3,504	2.0%	$ 3,574	$ 3,646	$ 3,718	$ 3,793	$ 3,869	$ 3,946	$ 4,025	$ 4,105	$ 4,188
591-552-703.040	Sick/personal pay	$ 2,122	$ 2,690	$ 3,025	$ 4,465	2.0%	$ 4,554	$ 4,645	$ 4,738	$ 4,833	$ 4,930	$ 5,028	$ 5,129	$ 5,231	$ 5,336
591-552-715.000	FICA/Medicare	$ 3,566	$ 2,801	$ 3,628	$ 3,778	2.0%	$ 3,854	$ 3,931	$ 4,009	$ 4,089	$ 4,171	$ 4,255	$ 4,340	$ 4,427	$ 4,515

(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
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Village of Decatur (Michigan) Water Fund

Projected Operating Expenses

		Fiscal Year Ended 2/29/2016	2/28/2017	Budgeted 2017/18	Test Year	Inflation Multiplier	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Fund 591 - Water		(---------- Per Village ----------)													
591-552-716.000	Unemployment insurance	$ 30	$ -	$ 50	$ 50	2.0%	$ 51	$ 52	$ 53	$ 54	$ 55	$ 56	$ 57	$ 59	$ 60
591-552-717.000	Workman's comp	$ 1,271	$ 1,215	$ 2,050	$ 2,466	2.0%	$ 2,515	$ 2,566	$ 2,617	$ 2,669	$ 2,723	$ 2,777	$ 2,833	$ 2,889	$ 2,947
591-552-718.000	Pension	$ 2,090	$ 2,984	$ 2,450	$ 5,258	2.0%	$ 5,363	$ 5,470	$ 5,580	$ 5,691	$ 5,805	$ 5,921	$ 6,040	$ 6,161	$ 6,284
591-552-719.000	Health insurance	$ 12,407	$ 11,427	$ 11,730	$ 19,730	2.0%	$ 20,125	$ 20,527	$ 20,938	$ 21,356	$ 21,784	$ 22,219	$ 22,664	$ 23,117	$ 23,579
591-552-720.000	Life insurance	$ 373	$ 323	$ 322	$ 498	2.0%	$ 508	$ 518	$ 528	$ 539	$ 550	$ 561	$ 572	$ 583	$ 595
591-552-722.000	Vision reimbursement	$ -	$ 125	$ 500	$ 750	2.0%	$ 765	$ 780	$ 796	$ 812	$ 828	$ 845	$ 862	$ 879	$ 896
591-552-756.000	Operating supplies	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-768.000	Uniforms/Boots/Etc.	$ 465	$ 492	$ 500	$ 650	2.0%	$ 663	$ 676	$ 690	$ 704	$ 718	$ 732	$ 747	$ 762	$ 777
591-552-776.000	Supplies & maintenance	$ 4,418	$ 5,235	$ 5,000	$ 5,000	2.0%	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520	$ 5,631	$ 5,743	$ 5,858	$ 5,975
591-552-807.000	Audit	$ 1,215	$ 1,215	$ 1,215	$ 1,215	2.0%	$ 1,239	$ 1,264	$ 1,289	$ 1,315	$ 1,341	$ 1,368	$ 1,396	$ 1,424	$ 1,452
591-552-812.000	Engineering	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-820.000	MISS DIG	$ 294	$ 49	$ 522	$ 522	2.0%	$ 532	$ 543	$ 554	$ 565	$ 576	$ 588	$ 600	$ 612	$ 624
591-552-821.000	Water testing	$ 3,989	$ 3,300	$ 3,750	$ 3,750	2.0%	$ 3,825	$ 3,902	$ 3,980	$ 4,059	$ 4,140	$ 4,223	$ 4,308	$ 4,394	$ 4,482
591-552-822.000	Contractual Services	$ 4,920	$ 4,920	$ 4,920	$ 11,920	2.0%	$ 12,158	$ 12,402	$ 12,650	$ 12,903	$ 13,161	$ 13,424	$ 13,692	$ 13,966	$ 14,246
591-552-853.000	Phone expense transfer to GF	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-853.020	Cell phone	$ 495	$ 693	$ 600	$ 600	2.0%	$ 612	$ 624	$ 637	$ 649	$ 662	$ 676	$ 689	$ 703	$ 717
591-552-864.000	Conf/Workshops	$ 802	$ 75	$ 1,500	$ 1,500	2.0%	$ 1,530	$ 1,561	$ 1,592	$ 1,624	$ 1,656	$ 1,689	$ 1,723	$ 1,757	$ 1,793
591-552-870.000	Gas & oil	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-943.000	Equipment rental-water fund	$ 8,558	$ 17,792	$ 10,500	$ 10,500	2.0%	$ 10,710	$ 10,924	$ 11,143	$ 11,366	$ 11,593	$ 11,825	$ 12,061	$ 12,302	$ 12,548
591-552-958.000	Dues/Memberships	$ 505	$ 575	$ 600	$ 600	2.0%	$ 612	$ 624	$ 637	$ 649	$ 662	$ 676	$ 689	$ 703	$ 717
591-552-959.000	Miscellaneous	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-963.000	Liability insurance	$ 2,514	$ 2,537	$ 2,565	$ 2,565	2.0%	$ 2,616	$ 2,669	$ 2,722	$ 2,776	$ 2,832	$ 2,889	$ 2,946	$ 3,005	$ 3,065
591-552-965.000	Equipment purchase	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-968.000	Depreciation [1]	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-970.000	Distribution equipment	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-981.000	Capital outlay	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-985.000	Capital projects	$ 6,352	$ 6,936	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 553															
591-553-703.000	Salaries-wells & tower	$ 211	$ -	$ 600	$ 600	2.0%	$ 612	$ 624	$ 637	$ 649	$ 662	$ 676	$ 689	$ 703	$ 717
591-553-703.010	Overtime pay	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-715.000	FICA/Medicare	$ 16	$ -	$ 40	$ 40	2.0%	$ 41	$ 42	$ 42	$ 43	$ 44	$ 45	$ 46	$ 47	$ 48
591-553-931.000	Maint.-water services	$ 308	$ 698	$ 1,500	$ 2,200	2.0%	$ 2,244	$ 2,289	$ 2,335	$ 2,381	$ 2,429	$ 2,478	$ 2,527	$ 2,578	$ 2,629
591-553-934.000	Repair wells	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-959.000	Miscellaneous	$ 4	$ -	$ 150	$ 150	2.0%	$ 153	$ 156	$ 159	$ 162	$ 166	$ 169	$ 172	$ 176	$ 179
591-553-963.000	Liability insurance	$ 3,020	$ 3,061	$ 3,100	$ 3,100	2.0%	$ 3,162	$ 3,225	$ 3,290	$ 3,356	$ 3,423	$ 3,491	$ 3,561	$ 3,632	$ 3,705
591-553-968.000	Depreciation [1]	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-981.000	Capital outlay	$ 4,105	$ 30,000	$ 25,000	$ 25,500	2.0%	$ 26,010	$ 26,530	$ 27,061	$ 27,602	$ 28,154	$ 28,717	$ 29,291	$ 29,877	$ 30,475
Department 990															
591-990-999.010	Transfer to General Fund	$ -	$ -	$ -	$ -	2.0%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Totals for dept 537-Operation & Maintenance		**$ 196,796**	**$ 234,060**	**$ 193,566**	**$ 224,366**		**$ 228,853**	**$ 233,430**	**$ 238,099**	**$ 242,861**	**$ 247,718**	**$ 252,673**	**$ 257,726**	**$ 262,881**	**$ 268,138**

[1] Depreciation expense is removed from this report as this study is performed on the cash basis.

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Village of Decatur (Michigan) Water Fund

Projected Operating Expenses

		2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
Fund 591 - Water														
Operating Expenses														
Department 483														
591-483-703.172	Manager salary	$ 10,422	$ 10,631	$ 10,843	$ 11,060	$ 11,282	$ 11,507	$ 11,737	$ 11,972	$ 12,212	$ 12,456	$ 12,705	$ 12,959	$ 13,218
591-483-703.215	Clerk salary	$ 10,118	$ 10,320	$ 10,526	$ 10,737	$ 10,952	$ 11,171	$ 11,394	$ 11,622	$ 11,854	$ 12,092	$ 12,333	$ 12,580	$ 12,832
591-483-715.000	FICA/Medicare	$ 1,463	$ 1,492	$ 1,522	$ 1,552	$ 1,583	$ 1,615	$ 1,647	$ 1,680	$ 1,714	$ 1,748	$ 1,783	$ 1,819	$ 1,855
591-483-715.172	Manager FICA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-715.215	Clerk FICA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.000	Pension	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.172	Manager pension	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-718.215	Clerk pension	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-719.000	Health insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-483-719.172	Manager health insurance	$ 2,105	$ 2,147	$ 2,190	$ 2,234	$ 2,279	$ 2,324	$ 2,371	$ 2,418	$ 2,467	$ 2,516	$ 2,566	$ 2,618	$ 2,670
591-483-719.215	Clerk health insurance	$ 1,213	$ 1,237	$ 1,262	$ 1,287	$ 1,313	$ 1,339	$ 1,366	$ 1,393	$ 1,421	$ 1,450	$ 1,479	$ 1,508	$ 1,538
591-483-999.010	General fund salary transfer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 550														
591-550-703.000	Salaries-clerical	$ 14,628	$ 14,920	$ 15,219	$ 15,523	$ 15,834	$ 16,150	$ 16,473	$ 16,803	$ 17,139	$ 17,482	$ 17,831	$ 18,188	$ 18,552
591-550-703.010	Overtime pay	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-703.020	Holiday pay	$ 500	$ 510	$ 520	$ 530	$ 541	$ 552	$ 563	$ 574	$ 586	$ 597	$ 609	$ 621	$ 634
591-550-703.030	Vacation pay	$ 1,275	$ 1,301	$ 1,327	$ 1,353	$ 1,380	$ 1,408	$ 1,436	$ 1,465	$ 1,494	$ 1,524	$ 1,554	$ 1,585	$ 1,617
591-550-703.040	Sick/personal	$ 731	$ 746	$ 761	$ 776	$ 792	$ 808	$ 824	$ 840	$ 857	$ 874	$ 892	$ 909	$ 928
591-550-703.060	Bonus	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-715.000	FICA/Medicare	$ 1,219	$ 1,243	$ 1,268	$ 1,294	$ 1,319	$ 1,346	$ 1,373	$ 1,400	$ 1,428	$ 1,457	$ 1,486	$ 1,516	$ 1,546
591-550-716.000	Unemployment compensation	$ 12	$ 12	$ 13	$ 13	$ 13	$ 13	$ 14	$ 14	$ 14	$ 15	$ 15	$ 15	$ 15
591-550-717.000	Workman's comp	$ 80	$ 82	$ 84	$ 85	$ 87	$ 89	$ 91	$ 92	$ 94	$ 96	$ 98	$ 100	$ 102
591-550-718.000	Pension	$ 975	$ 995	$ 1,015	$ 1,035	$ 1,056	$ 1,077	$ 1,098	$ 1,120	$ 1,143	$ 1,165	$ 1,189	$ 1,213	$ 1,237
591-550-719.000	Health insurance	$ 6,640	$ 6,773	$ 6,908	$ 7,046	$ 7,187	$ 7,331	$ 7,478	$ 7,627	$ 7,780	$ 7,935	$ 8,094	$ 8,256	$ 8,421
591-550-720.000	Life insurance	$ 108	$ 111	$ 113	$ 115	$ 117	$ 120	$ 122	$ 125	$ 127	$ 130	$ 132	$ 135	$ 138
591-550-722.000	Vision reimbursement	$ 152	$ 155	$ 159	$ 162	$ 165	$ 168	$ 172	$ 175	$ 179	$ 182	$ 186	$ 189	$ 193
591-550-728.000	Office supplies	$ 792	$ 808	$ 824	$ 841	$ 858	$ 875	$ 892	$ 910	$ 928	$ 947	$ 966	$ 985	$ 1,005
591-550-730.000	Postage	$ 2,438	$ 2,487	$ 2,536	$ 2,587	$ 2,639	$ 2,692	$ 2,746	$ 2,800	$ 2,856	$ 2,914	$ 2,972	$ 3,031	$ 3,092
591-550-801.000	Consultant fees	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-807.000	Audit	$ 987	$ 1,007	$ 1,027	$ 1,048	$ 1,069	$ 1,090	$ 1,112	$ 1,134	$ 1,157	$ 1,180	$ 1,204	$ 1,228	$ 1,252
591-550-853.000	Telephone	$ 609	$ 622	$ 634	$ 647	$ 660	$ 673	$ 686	$ 700	$ 714	$ 728	$ 743	$ 758	$ 773
591-550-853.020	Cell phone	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-853.040	Internet service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-864.000	Conferences/Workshops	$ 366	$ 373	$ 380	$ 388	$ 396	$ 404	$ 412	$ 420	$ 428	$ 437	$ 446	$ 455	$ 464
591-550-901.000	Printing	$ 366	$ 373	$ 380	$ 388	$ 396	$ 404	$ 412	$ 420	$ 428	$ 437	$ 446	$ 455	$ 464
591-550-921.000	Electric	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-923.000	Heat	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-925.000	Water & sewer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-931.000	Maint-services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-934.000	Service contracts	$ 488	$ 497	$ 507	$ 517	$ 528	$ 538	$ 549	$ 560	$ 571	$ 583	$ 594	$ 606	$ 618
591-550-936.000	Tech services	$ 975	$ 995	$ 1,015	$ 1,035	$ 1,056	$ 1,077	$ 1,098	$ 1,120	$ 1,143	$ 1,165	$ 1,189	$ 1,213	$ 1,237
591-550-958.000	Dues/Memberships	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-959.000	Miscellaneous	$ 183	$ 187	$ 190	$ 194	$ 198	$ 202	$ 206	$ 210	$ 214	$ 219	$ 223	$ 227	$ 232
591-550-960.000	Bonds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-963.000	Liability insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-964.000	NSF check charges	$ 61	$ 62	$ 63	$ 65	$ 66	$ 67	$ 69	$ 70	$ 71	$ 73	$ 74	$ 76	$ 77
591-550-965.000	Equipment purchase	$ 914	$ 933	$ 951	$ 970	$ 990	$ 1,009	$ 1,030	$ 1,050	$ 1,071	$ 1,093	$ 1,114	$ 1,137	$ 1,159
591-550-968.000	Depreciation [1]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-981.000	Capital outlay	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-990.000	Bond payment-principal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.010	General fund salary transfer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.020	Transfer to Major	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-550-999.300	Transfer to Water Bond Redem.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 551														
591-551-870.000	Power pumping-gas & oil	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-551-921.000	Power pumping-electric	$ 11,580	$ 11,812	$ 12,048	$ 12,289	$ 12,535	$ 12,786	$ 13,041	$ 13,302	$ 13,568	$ 13,840	$ 14,117	$ 14,399	$ 14,687
591-551-923.000	Heat	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-551-957.000	Gas and oil-non transportation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 552														
591-552-703.000	Salaries-distribution	$ 60,365	$ 61,572	$ 62,803	$ 64,059	$ 65,341	$ 66,647	$ 67,980	$ 69,340	$ 70,727	$ 72,141	$ 73,584	$ 75,056	$ 76,557
591-552-703.010	Overtime pay	$ 2,158	$ 2,201	$ 2,245	$ 2,290	$ 2,335	$ 2,382	$ 2,430	$ 2,478	$ 2,528	$ 2,579	$ 2,630	$ 2,683	$ 2,736
591-552-703.020	Holiday pay	$ 4,376	$ 4,464	$ 4,553	$ 4,644	$ 4,737	$ 4,832	$ 4,928	$ 5,027	$ 5,127	$ 5,230	$ 5,335	$ 5,441	$ 5,550
591-552-703.030	Vacation pay	$ 4,271	$ 4,357	$ 4,444	$ 4,533	$ 4,623	$ 4,716	$ 4,810	$ 4,906	$ 5,005	$ 5,105	$ 5,207	$ 5,311	$ 5,417
591-552-703.040	Sick/personal pay	$ 5,443	$ 5,552	$ 5,663	$ 5,776	$ 5,891	$ 6,009	$ 6,129	$ 6,252	$ 6,377	$ 6,505	$ 6,635	$ 6,767	$ 6,903
591-552-715.000	FICA/Medicare	$ 4,605	$ 4,697	$ 4,791	$ 4,887	$ 4,985	$ 5,085	$ 5,186	$ 5,290	$ 5,396	$ 5,504	$ 5,614	$ 5,726	$ 5,841

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Village of Decatur (Michigan) Water Fund

Projected Operating Expenses

		2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
Fund 591 - Water														
591-552-716.000	Unemployment insurance	$ 61	$ 62	$ 63	$ 65	$ 66	$ 67	$ 69	$ 70	$ 71	$ 73	$ 74	$ 76	$ 77
591-552-717.000	Workman's comp	$ 3,006	$ 3,066	$ 3,127	$ 3,190	$ 3,254	$ 3,319	$ 3,385	$ 3,453	$ 3,522	$ 3,592	$ 3,664	$ 3,738	$ 3,812
591-552-718.000	Pension	$ 6,409	$ 6,538	$ 6,668	$ 6,802	$ 6,938	$ 7,077	$ 7,218	$ 7,362	$ 7,510	$ 7,660	$ 7,813	$ 7,969	$ 8,129
591-552-719.000	Health insurance	$ 24,051	$ 24,532	$ 25,022	$ 25,523	$ 26,033	$ 26,554	$ 27,085	$ 27,627	$ 28,179	$ 28,743	$ 29,318	$ 29,904	$ 30,502
591-552-720.000	Life insurance	$ 607	$ 619	$ 632	$ 644	$ 657	$ 670	$ 684	$ 697	$ 711	$ 725	$ 740	$ 755	$ 770
591-552-722.000	Vision reimbursement	$ 914	$ 933	$ 951	$ 970	$ 990	$ 1,009	$ 1,030	$ 1,050	$ 1,071	$ 1,093	$ 1,114	$ 1,137	$ 1,159
591-552-756.000	Operating supplies	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-768.000	Uniforms/Boots/Etc.	$ 792	$ 808	$ 824	$ 841	$ 858	$ 875	$ 892	$ 910	$ 928	$ 947	$ 966	$ 985	$ 1,005
591-552-776.000	Supplies & maintenance	$ 6,095	$ 6,217	$ 6,341	$ 6,468	$ 6,597	$ 6,729	$ 6,864	$ 7,001	$ 7,141	$ 7,284	$ 7,430	$ 7,578	$ 7,730
591-552-807.000	Audit	$ 1,481	$ 1,511	$ 1,541	$ 1,572	$ 1,603	$ 1,635	$ 1,668	$ 1,701	$ 1,735	$ 1,770	$ 1,805	$ 1,842	$ 1,878
591-552-812.000	Engineering	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-820.000	MISS DIG	$ 636	$ 649	$ 662	$ 675	$ 689	$ 703	$ 717	$ 731	$ 746	$ 760	$ 776	$ 791	$ 807
591-552-821.000	Water testing	$ 4,571	$ 4,663	$ 4,756	$ 4,851	$ 4,948	$ 5,047	$ 5,148	$ 5,251	$ 5,356	$ 5,463	$ 5,572	$ 5,684	$ 5,797
591-552-822.000	Contractual Services	$ 14,530	$ 14,821	$ 15,117	$ 15,420	$ 15,728	$ 16,043	$ 16,364	$ 16,691	$ 17,025	$ 17,365	$ 17,712	$ 18,067	$ 18,428
591-552-853.000	Phone expense transfer to GF	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-853.020	Cell phone	$ 731	$ 746	$ 761	$ 776	$ 792	$ 808	$ 824	$ 840	$ 857	$ 874	$ 892	$ 909	$ 928
591-552-864.000	Conf/Workshops	$ 1,828	$ 1,865	$ 1,902	$ 1,940	$ 1,979	$ 2,019	$ 2,059	$ 2,100	$ 2,142	$ 2,185	$ 2,229	$ 2,273	$ 2,319
591-552-870.000	Gas & oil	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-943.000	Equipment rental-water fund	$ 12,799	$ 13,055	$ 13,317	$ 13,583	$ 13,855	$ 14,132	$ 14,414	$ 14,703	$ 14,997	$ 15,297	$ 15,602	$ 15,914	$ 16,233
591-552-958.000	Dues/Memberships	$ 731	$ 746	$ 761	$ 776	$ 792	$ 808	$ 824	$ 840	$ 857	$ 874	$ 892	$ 909	$ 928
591-552-959.000	Miscellaneous	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-963.000	Liability insurance	$ 3,127	$ 3,189	$ 3,253	$ 3,318	$ 3,384	$ 3,452	$ 3,521	$ 3,592	$ 3,663	$ 3,737	$ 3,811	$ 3,888	$ 3,965
591-552-965.000	Equipment purchase	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-968.000	Depreciation [1]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-970.000	Distribution equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-981.000	Capital outlay	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-552-985.000	Capital projects	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Department 553														
591-553-703.000	Salaries-wells & tower	$ 731	$ 746	$ 761	$ 776	$ 792	$ 808	$ 824	$ 840	$ 857	$ 874	$ 892	$ 909	$ 928
591-553-703.010	Overtime pay	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-715.000	FICA/Medicare	$ 49	$ 50	$ 51	$ 52	$ 53	$ 54	$ 55	$ 56	$ 57	$ 58	$ 59	$ 61	$ 62
591-553-931.000	Maint.-water services	$ 2,682	$ 2,735	$ 2,790	$ 2,846	$ 2,903	$ 2,961	$ 3,020	$ 3,081	$ 3,142	$ 3,205	$ 3,269	$ 3,334	$ 3,401
591-553-934.000	Repair wells	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-959.000	Miscellaneous	$ 183	$ 187	$ 190	$ 194	$ 198	$ 202	$ 206	$ 210	$ 214	$ 219	$ 223	$ 227	$ 232
591-553-963.000	Liability insurance	$ 3,779	$ 3,854	$ 3,932	$ 4,010	$ 4,090	$ 4,172	$ 4,256	$ 4,341	$ 4,428	$ 4,516	$ 4,606	$ 4,699	$ 4,793
591-553-968.000	Depreciation [1]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
591-553-981.000	Capital outlay	$ 31,084	$ 31,706	$ 32,340	$ 32,987	$ 33,647	$ 34,320	$ 35,006	$ 35,706	$ 36,420	$ 37,149	$ 37,892	$ 38,649	$ 39,422
Department 990														
591-990-999.010	Transfer to General Fund	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Totals for dept 537-Operation & Maintenance		**$ 273,501**	**$ 278,971**	**$ 284,550**	**$ 290,241**	**$ 296,046**	**$ 301,967**	**$ 308,006**	**$ 314,167**	**$ 320,450**	**$ 326,859**	**$ 333,396**	**$ 340,064**	**$ 346,865**

[1] Depreciation expense is removed from this report as this study is performec

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Village of Decatur (Michigan) Water Fund

Capital Improvement Projects

Year	Project	Total	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2018	SCADA System	$ 80,000	$ 80,000											
2018	Water Tapping Machine	$ 5,000	$ 5,000											
2018	Well 4 Rehabilitation	$ 19,000	$ 19,000											
2019	Cedar Street - Pine to Phelps	$ 175,000		$ 178,500										
2019	Update General Plan	$ 7,000		$ 7,140										
2020	Pine Street Water Main	$ 207,000			$ 215,363									
2020	Well 2 Pump Maintenance - 2020	$ 19,000			$ 19,768									
2021	Austin Boulevard and Pine Street Water Main	$ 210,000				$ 222,854								
2021	Well 3 Pump Maintenance - 2021	$ 13,000				$ 13,796								
2022	Lee Avenue and Memory Lane Water Main	$ 185,000					$ 200,250							
2023	Kinney Street and Douglas Drive Water Main	$ 192,000						$ 211,984						
2024	Hand Held Meter Reader	$ 9,000							$ 10,135					
2024	Well 4 Pump Maintenance - 2024	$ 19,000							$ 21,397					
2024	White Oak Street Water Main	$ 135,000							$ 152,032					
2025	Miscellaneous Hydrant Replacements	$ 44,000								$ 50,542				
2025	Rosewood Avenue Water Main	$ 70,000								$ 80,408				
2025	Well 3 Rehabilitation	$ 25,000								$ 28,717				
2025	Well 4 VFD Replacement	$ 7,000								$ 8,041				
2026	Beers Street Water Main - 2026	$ 144,000									$ 168,719			
2027	Beers Street Water Main - 2027	$ 130,000										$ 155,362		
2028	Beers Street Water Main - 2028	$ 108,000											$ 131,651	
2028	Recoat the Elevated Storage Tank - Exterior	$ 69,000											$ 84,111	
2028	Well 2 Pump Maintenance - 2028	$ 19,000											$ 23,161	
2029	Well 3 Pump Maintenance - 2029	$ 19,000												$ 23,624
2029	Williams Street Water Main	$ 116,000												$ 144,231
2030	Replace Well 3 and 4 Standby Generator	$ 65,000												
2030	Water Meter Replacement - 2030	$ 100,000												
2032	George Street Water Main	$ 242,000												
2032	Well 4 Pump Maintenance - 2032	$ 19,000												
2033	Replace Well 2 and Well 3 Control Panels	$ 11,000												
2033	Water Meter Replacement - 2033	$ 100,000												
2033	Well 4 Maintenance	$ 4,000												
2034	Well 2 Building Maintenance	$ 4,000												
2034	Well 3 Maintenance	$ 4,000												
2035	Replace Portable Generator for Well 2	$ 32,000												
2035	Replace Well 4 Control Panel	$ 6,000												
2036	Edgar Bergen Boulevard and N. East Street Water Main	$ 410,000												
2036	Well 2 Pump Maintenance - 2036	$ 19,000												
2037	Recoat the Elevated Storage Tank - Interior	$ 88,000												
2037	Well 3 Pump Maintenance - 2037	$ 19,000												
2037	Well 3 VFD Replacement	$ 7,000												
2038	John Street Water Main	$ 216,000												
	Subtotal of Non-Inflated Costs =		$ 104,000	$ 182,000	$ 226,000	$ 223,000	$ 185,000	$ 192,000	$ 163,000	$ 146,000	$ 144,000	$ 130,000	$ 196,000	$ 135,000
	Inflation Adjusted Subtotal =		$ 104,000	$ 185,640	$ 235,130	$ 236,649	$ 200,250	$ 211,984	$ 183,564	$ 167,708	$ 168,719	$ 155,362	$ 238,923	$ 167,856
	Total CIP =		**$ 104,000**	**$ 186,000**	**$ 236,000**	**$ 237,000**	**$ 201,000**	**$ 212,000**	**$ 184,000**	**$ 168,000**	**$ 169,000**	**$ 156,000**	**$ 239,000**	**$ 168,000**

Assumptions:

1) Inflation Factor:	2.0%	1.00000	1.02000	1.04040	1.06121	1.08243	1.10408	1.12616	1.14869	1.17166	1.19509	1.21899	1.24337
2) Current Year:	2018												
3) Water Treatment Plant Design:				$ 190,000									
4) Water Treatment Plant Construction:					$ 3,720,000								
5) Additional Costs for Loan:													
a) Bond Council (1.5%)					$ 55,800								
b) Financial Advisor (1%)					$ 37,200								
c) Local Attorney (0.5%)					$ 18,600								
d) Engineering Report and Application to Secure Financing:					$ 50,000								
6) Total Amount of Loan:					$ 3,890,000								

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Village of Decatur (Michigan) Water Fund

Capital Improvement Projects

Year	Project	Total	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Totals
2018	SCADA System	$ 80,000											$ 80,000
2018	Water Tapping Machine	$ 5,000											$ 5,000
2018	Well 4 Rehabilitation	$ 19,000											$ 19,000
2019	Cedar Street - Pine to Phelps	$ 175,000											$ 178,500
2019	Update General Plan	$ 7,000											$ 7,140
2020	Pine Street Water Main	$ 207,000											$ 215,363
2020	Well 2 Pump Maintenance - 2020	$ 19,000											$ 19,768
2021	Austin Boulevard and Pine Street Water Main	$ 210,000											$ 222,854
2021	Well 3 Pump Maintenance - 2021	$ 13,000											$ 13,796
2022	Lee Avenue and Memory Lane Water Main	$ 185,000											$ 200,250
2023	Kinney Street and Douglas Drive Water Main	$ 192,000											$ 211,984
2024	Hand Held Meter Reader	$ 9,000											$ 10,135
2024	Well 4 Pump Maintenance - 2024	$ 19,000											$ 21,397
2024	White Oak Street Water Main	$ 135,000											$ 152,032
2025	Miscellaneous Hydrant Replacements	$ 44,000											$ 50,542
2025	Rosewood Avenue Water Main	$ 70,000											$ 80,408
2025	Well 3 Rehabilitation	$ 25,000											$ 28,717
2025	Well 4 VFD Replacement	$ 7,000											$ 8,041
2026	Beers Street Water Main - 2026	$ 144,000											$ 168,719
2027	Beers Street Water Main - 2027	$ 130,000											$ 155,362
2028	Beers Street Water Main - 2028	$ 108,000											$ 131,651
2028	Recoat the Elevated Storage Tank - Exterior	$ 69,000											$ 84,111
2028	Well 2 Pump Maintenance - 2028	$ 19,000											$ 23,161
2029	Well 3 Pump Maintenance - 2029	$ 19,000											$ 23,624
2029	Williams Street Water Main	$ 116,000											$ 144,231
2030	Replace Well 3 and 4 Standby Generator	$ 65,000	$ 82,436										$ 82,436
2030	Water Meter Replacement - 2030	$ 100,000	$ 126,824										$ 126,824
2032	George Street Water Main	$ 242,000			$ 319,314								$ 319,314
2032	Well 4 Pump Maintenance - 2032	$ 19,000			$ 25,070								$ 25,070
2033	Replace Well 2 and Well 3 Control Panels	$ 11,000				$ 14,805							$ 14,805
2033	Water Meter Replacement - 2033	$ 100,000				$ 134,587							$ 134,587
2033	Well 4 Maintenance	$ 4,000				$ 5,383							$ 5,383
2034	Well 2 Building Maintenance	$ 4,000					$ 5,491						$ 5,491
2034	Well 3 Maintenance	$ 4,000					$ 5,491						$ 5,491
2035	Replace Portable Generator for Well 2	$ 32,000						$ 44,808					$ 44,808
2035	Replace Well 4 Control Panel	$ 6,000						$ 8,401					$ 8,401
2036	Edgar Bergen Boulevard and N. East Street Water Main	$ 410,000							$ 585,581				$ 585,581
2036	Well 2 Pump Maintenance - 2036	$ 19,000							$ 27,137				$ 27,137
2037	Recoat the Elevated Storage Tank - Interior	$ 88,000								$ 128,199			$ 128,199
2037	Well 3 Pump Maintenance - 2037	$ 19,000								$ 27,679			$ 27,679
2037	Well 3 VFD Replacement	$ 7,000								$ 10,198			$ 10,198
2038	John Street Water Main	$ 216,000									$ 320,965		$ 320,965
	Subtotal of Non-Inflated Costs =		$ 165,000	$ -	$ 261,000	$ 115,000	$ 8,000	$ 38,000	$ 429,000	$ 114,000	$ 216,000	$ -	$ 3,372,000
	Inflation Adjusted Subtotal =		$ 209,260	$ -	$ 344,384	$ 154,775	$ 10,982	$ 53,209	$ 612,718	$ 166,076	$ 320,965	$ -	$ 4,128,154
	Total CIP =		**$ 210,000**	**$ -**	**$ 345,000**	**$ 155,000**	**$ 11,000**	**$ 54,000**	**$ 613,000**	**$ 167,000**	**$ 321,000**	**$ -**	**$ 4,136,000**

Assumptions:

1) Inflation Factor: 2.0% 1.26824 1.29361 1.31948 1.34587 1.37279 1.40024 1.42825 1.45681 1.48595 1.51567
2) Current Year: 2018
3) Water Treatment Plant Design:
4) Water Treatment Plant Construction:
5) Additional Costs for Loan:
   a) Bond Council (1.5%)
   b) Financial Advisor (1%)
   c) Local Attorney (0.5%)
   d) Engineering Report and Application to Secure Financing:
6) Total Amount of Loan:

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Existing Rates

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
Rates and Assumptions												
Anticipated Annual Growth Rate: 0.40%												
Water Ready-To-Serve Charges (per month)												
Inside Village Customers												
Single Units	735	738	741	744	747	750	753	756	759	762	765	768
Ready-To-Serve Charge (per month)	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00
Rate Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Multiple Units (after first unit)	193	194	195	195	196	197	198	198	199	200	201	202
Ready-To-Serve Charge (per month)	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60
Rate Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outside Village Customers												
Single Units	33	33	33	33	34	34	34	34	34	34	34	34
Ready-To-Serve Charge (per month)	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00
Rate Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	6	6	6
Ready-To-Serve Charge (per month)	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20
Rate Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commodity Charges (per 1,000 gallons)												
Inside Village Customers - 1,000 gallons used annually	50,104	50,305	50,506	50,708	50,911	51,115	51,319	51,524	51,730	51,937	52,145	52,354
Commodity Charge	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37
Commodity Charge Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outside Village Customers	1,392	1,398	1,404	1,410	1,416	1,422	1,428	1,434	1,440	1,446	1,452	1,458
Commodity Charge	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37
Commodity Charge Increase	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenues												
Usage Charges												
Inside Village Customers - Ready-To-Serve Charges	$ 163,354	$ 164,045	$ 164,736	$ 165,312	$ 166,003	$ 166,694	$ 167,386	$ 167,962	$ 168,653	$ 169,344	$ 170,035	$ 170,726
Inside Village Customers - Commodity Charges	$ 68,643	$ 68,918	$ 69,193	$ 69,470	$ 69,748	$ 70,028	$ 70,307	$ 70,588	$ 70,870	$ 71,154	$ 71,439	$ 71,725
Outside Village Customers - Ready-To-Serve Charges	$ 11,858	$ 11,858	$ 11,858	$ 11,858	$ 12,182	$ 12,182	$ 12,182	$ 12,182	$ 12,182	$ 12,182	$ 12,182	$ 12,182
Outside Village Customers - Commodity Charges	$ 1,907	$ 1,915	$ 1,923	$ 1,932	$ 1,940	$ 1,948	$ 1,956	$ 1,965	$ 1,973	$ 1,981	$ 1,989	$ 1,997
Total Usage Charge Revenue	*$ 245,762*	*$ 246,736*	*$ 247,711*	*$ 248,572*	*$ 249,874*	*$ 250,852*	*$ 251,831*	*$ 252,696*	*$ 253,678*	*$ 254,661*	*$ 255,645*	*$ 256,631*
Other Water Revenue Sources												
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 252,312***	***$ 253,286***	***$ 254,261***	***$ 255,122***	***$ 256,424***	***$ 257,402***	***$ 258,381***	***$ 259,246***	***$ 260,228***	***$ 261,211***	***$ 262,195***	***$ 263,181***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*
Expenditures												
Operation & Maintenance	$ 193,566	$ 228,853	$ 233,430	$ 238,099	$ 242,861	$ 247,718	$ 252,673	$ 257,726	$ 262,881	$ 268,138	$ 273,501	$ 278,971
Cash Funded Capital Improvements	$ -	$ 104,000	$ 186,000	$ 236,000	$ 237,000	$ 201,000	$ 212,000	$ 184,000	$ 168,000	$ 169,000	$ 156,000	$ 239,000
Debt Service Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 193,566***	***$ 332,853***	***$ 419,430***	***$ 474,099***	***$ 479,861***	***$ 448,718***	***$ 464,673***	***$ 441,726***	***$ 430,881***	***$ 437,138***	***$ 429,501***	***$ 517,971***
Net Operating Revenue	**$ 58,746**	**$ (79,567)**	**$ (165,169)**	**$ (218,977)**	**$ (223,437)**	**$ (191,316)**	**$ (206,291)**	**$ (182,480)**	**$ (170,652)**	**$ (175,927)**	**$ (167,305)**	**$ (254,790)**
Cash & Investments Balance (beginning of year)	**$ 419,843**	**$ 478,589**	**$ 399,022**	**$ 233,853**	**$ 14,876**	**$ (208,561)**	**$ (399,877)**	**$ (606,168)**	**$ (788,648)**	**$ (959,300)**	**$ (1,135,227)**	**$ (1,302,533)**
Cash & Investments Balance (end of year)	***$ 478,589***	***$ 399,022***	***$ 233,853***	***$ 14,876***	***$ (208,561)***	***$ (399,877)***	***$ (606,168)***	***$ (788,648)***	***$ (959,300)***	***$ (1,135,227)***	***$ (1,302,533)***	***$ (1,557,322)***

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Existing Rates (cont.)

	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
Rates and Assumptions											
Anticipated Annual Growth Rate: 0.40%											
Water Ready-To-Serve Charges (per month)											
Inside Village Customers											
Single Units	771	774	777	780	783	787	790	793	796	799	802
Ready-To-Serve Charge (per month)	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00
Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Multiple Units (after first unit)	202	203	204	205	206	207	207	208	209	210	211
Ready-To-Serve Charge (per month)	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60	$ 9.60
Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outside Village Customers											
Single Units	35	35	35	35	35	35	35	36	36	36	36
Ready-To-Serve Charge (per month)	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00	$ 27.00
Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	7	7
Ready-To-Serve Charge (per month)	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20	$ 16.20
Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commodity Charges (per 1,000 gallons)											
Inside Village Customers - 1,000 gallons used annually	52,563	52,773	52,984	53,196	53,409	53,623	53,837	54,052	54,268	54,485	54,703
Commodity Charge	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37
Commodity Charge Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Outside Village Customers	1,464	1,470	1,476	1,482	1,488	1,494	1,500	1,506	1,512	1,518	1,524
Commodity Charge	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37	$ 1.37
Commodity Charge Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenues											
Usage Charges											
Inside Village Customers - Ready-To-Serve Charges	$ 171,302	$ 171,994	$ 172,685	$ 173,376	$ 174,067	$ 174,950	$ 175,526	$ 176,218	$ 176,909	$ 177,600	$ 178,291
Inside Village Customers - Commodity Charges	$ 72,011	$ 72,299	$ 72,588	$ 72,879	$ 73,170	$ 73,464	$ 73,757	$ 74,051	$ 74,347	$ 74,644	$ 74,943
Outside Village Customers - Ready-To-Serve Charges	$ 12,506	$ 12,506	$ 12,506	$ 12,506	$ 12,506	$ 12,506	$ 12,506	$ 12,830	$ 12,830	$ 13,025	$ 13,025
Outside Village Customers - Commodity Charges	$ 2,006	$ 2,014	$ 2,022	$ 2,030	$ 2,039	$ 2,047	$ 2,055	$ 2,063	$ 2,071	$ 2,080	$ 2,088
Total Usage Charge Revenue	*$ 257,826*	*$ 258,813*	*$ 259,801*	*$ 260,791*	*$ 261,782*	*$ 262,967*	*$ 263,844*	*$ 265,162*	*$ 266,158*	*$ 267,349*	*$ 268,347*
Other Water Revenue Sources											
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 264,376***	***$ 265,363***	***$ 266,351***	***$ 267,341***	***$ 268,332***	***$ 269,517***	***$ 270,394***	***$ 271,712***	***$ 272,708***	***$ 273,899***	***$ 274,897***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*	*$ 24.22*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*	*$ 35.22*
Expenditures											
Operation & Maintenance	$ 284,550	$ 290,241	$ 296,046	$ 301,967	$ 308,006	$ 314,167	$ 320,450	$ 326,859	$ 333,396	$ 340,064	$ 346,865
Cash Funded Capital Improvements	$ 168,000	$ 210,000	$ -	$ 345,000	$ 155,000	$ 11,000	$ 54,000	$ 613,000	$ 167,000	$ 321,000	$ -
Debt Service Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 452,550***	***$ 500,241***	***$ 296,046***	***$ 646,967***	***$ 463,006***	***$ 325,167***	***$ 374,450***	***$ 939,859***	***$ 500,396***	***$ 661,064***	***$ 346,865***
Net Operating Revenue	**$ (188,175)**	**$ (234,878)**	**$ (29,695)**	**$ (379,626)**	**$ (194,674)**	**$ (55,649)**	**$ (104,055)**	**$ (668,146)**	**$ (227,688)**	**$ (387,165)**	**$ (71,968)**
Cash & Investments Balance (beginning of year)	**$ (1,557,322)**	**$ (1,745,497)**	**$ (1,980,375)**	**$ (2,010,070)**	**$ (2,389,696)**	**$ (2,584,370)**	**$ (2,640,019)**	**$ (2,744,075)**	**$ (3,412,221)**	**$ (3,639,909)**	**$ (4,027,075)**
Cash & Investments Balance (end of year)	***$ (1,745,497)***	***$ (1,980,375)***	***$ (2,010,070)***	***$ (2,389,696)***	***$ (2,584,370)***	***$ (2,640,019)***	***$ (2,744,075)***	***$ (3,412,221)***	***$ (3,639,909)***	***$ (4,027,075)***	***$ (4,099,043)***

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Including Proposed Rate Increases

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
Rates and Assumptions												
Anticipated Annual Growth Rate: 0.40%												
Water Ready-To-Serve Charges (per month)												
Inside Village Customers												
Single Units	735	738	741	744	747	750	753	756	759	762	765	768
Ready-To-Serve Charge (per month)	$ 16.00	$ 22.40	$ 22.85	$ 23.31	$ 23.78	$ 26.16	$ 26.68	$ 27.21	$ 27.75	$ 28.31	$ 28.88	$ 29.46
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	193	194	195	195	196	197	198	198	199	200	201	202
Ready-To-Serve Charge (per month)	$ 9.60	$ 13.44	$ 13.71	$ 13.98	$ 14.26	$ 15.69	$ 16.00	$ 16.32	$ 16.65	$ 16.98	$ 17.32	$ 17.67
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers												
Single Units	33	33	33	33	34	34	34	34	34	34	34	34
Ready-To-Serve Charge (per month)	$ 27.00	$ 37.80	$ 38.56	$ 39.33	$ 40.12	$ 44.13	$ 45.01	$ 45.91	$ 46.83	$ 47.77	$ 48.73	$ 49.70
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	6	6	6
Ready-To-Serve Charge (per month)	$ 16.20	$ 22.68	$ 23.13	$ 23.59	$ 24.06	$ 26.47	$ 27.00	$ 27.54	$ 28.09	$ 28.65	$ 29.22	$ 29.80
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Commodity Charges (per 1,000 gallons)												
Inside Village Customers - 1,000 gallons used annually	50,104	50,305	50,506	50,708	50,911	51,115	51,319	51,524	51,730	51,937	52,145	52,354
Commodity Charge	$ 1.37	$ 1.92	$ 1.96	$ 2.00	$ 2.04	$ 2.24	$ 2.28	$ 2.33	$ 2.38	$ 2.43	$ 2.48	$ 2.53
Commodity Charge Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers	1,392	1,398	1,404	1,410	1,416	1,422	1,428	1,434	1,440	1,446	1,452	1,458
Commodity Charge	$ 1.37	$ 1.92	$ 1.96	$ 2.00	$ 2.04	$ 2.24	$ 2.28	$ 2.33	$ 2.38	$ 2.43	$ 2.48	$ 2.53
Commodity Charge Increase	N/A	40.00%	2.00%	2.00%	2.00%	10.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Revenues												
Usage Charges												
Inside Village Customers - Ready-To-Serve Charges	$ 163,354	$ 229,663	$ 235,264	$ 240,825	$ 246,703	$ 272,531	$ 279,096	$ 285,625	$ 292,507	$ 299,619	$ 306,894	$ 314,335
Inside Village Customers - Commodity Charges	$ 68,643	$ 96,586	$ 98,992	$ 101,416	$ 103,858	$ 114,498	$ 117,007	$ 120,051	$ 123,117	$ 126,207	$ 129,320	$ 132,456
Outside Village Customers - Ready-To-Serve Charges	$ 11,858	$ 16,602	$ 16,935	$ 17,273	$ 18,101	$ 19,911	$ 20,308	$ 20,714	$ 21,129	$ 21,553	$ 21,986	$ 22,423
Outside Village Customers - Commodity Charges	$ 1,907	$ 2,684	$ 2,752	$ 2,820	$ 2,889	$ 3,185	$ 3,256	$ 3,341	$ 3,427	$ 3,514	$ 3,601	$ 3,689
Total Usage Charge Revenue	*$ 245,762*	*$ 345,534*	*$ 353,942*	*$ 362,334*	*$ 371,552*	*$ 410,125*	*$ 419,668*	*$ 429,732*	*$ 440,181*	*$ 450,892*	*$ 461,800*	*$ 472,903*
Other Water Revenue Sources												
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 252,312***	***$ 352,084***	***$ 360,492***	***$ 368,884***	***$ 378,102***	***$ 416,675***	***$ 426,218***	***$ 436,282***	***$ 446,731***	***$ 457,442***	***$ 468,350***	***$ 479,453***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 24.22*	*$ 33.92*	*$ 34.61*	*$ 35.31*	*$ 36.02*	*$ 39.60*	*$ 40.36*	*$ 41.19*	*$ 42.03*	*$ 42.89*	*$ 43.76*	*$ 44.64*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 35.22*	*$ 49.32*	*$ 50.32*	*$ 51.33*	*$ 52.36*	*$ 57.57*	*$ 58.69*	*$ 59.89*	*$ 61.11*	*$ 62.35*	*$ 63.61*	*$ 64.88*
Expenditures												
Operation & Maintenance	$ 193,566	$ 228,853	$ 233,430	$ 238,099	$ 242,861	$ 247,718	$ 252,673	$ 257,726	$ 262,881	$ 268,138	$ 273,501	$ 278,971
Cash Funded Capital Improvements	$ -	$ 104,000	$ 186,000	$ 236,000	$ 237,000	$ 201,000	$ 212,000	$ 184,000	$ 168,000	$ 169,000	$ 156,000	$ 239,000
Debt Service Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 193,566***	***$ 332,853***	***$ 419,430***	***$ 474,099***	***$ 479,861***	***$ 448,718***	***$ 464,673***	***$ 441,726***	***$ 430,881***	***$ 437,138***	***$ 429,501***	***$ 517,971***
Net Operating Revenue	**$ 58,746**	**$ 19,231**	**$ (58,938)**	**$ (105,215)**	**$ (101,759)**	**$ (32,043)**	**$ (38,455)**	**$ (5,444)**	**$ 15,850**	**$ 20,304**	**$ 38,850**	**$ (38,518)**
Cash & Investments Balance (beginning of year)	**$ 419,843**	**$ 478,589**	**$ 497,820**	**$ 438,882**	**$ 333,667**	**$ 231,908**	**$ 199,865**	**$ 161,410**	**$ 155,966**	**$ 171,816**	**$ 192,120**	**$ 230,970**
Cash & Investments Balance (end of year)	***$ 478,589***	***$ 497,820***	***$ 438,882***	***$ 333,667***	***$ 231,908***	***$ 199,865***	***$ 161,410***	***$ 155,966***	***$ 171,816***	***$ 192,120***	***$ 230,970***	***$ 192,452***

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Including Proposed Rate Increases (cont.)

	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
Rates and Assumptions											
Anticipated Annual Growth Rate: 0.40%											
Water Ready-To-Serve Charges (per month)											
Inside Village Customers											
Single Units	771	774	777	780	783	787	790	793	796	799	802
Ready-To-Serve Charge (per month)	$ 30.05	$ 30.65	$ 31.26	$ 31.89	$ 32.53	$ 33.18	$ 33.84	$ 34.52	$ 35.21	$ 35.91	$ 36.63
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	202	203	204	205	206	207	207	208	209	210	211
Ready-To-Serve Charge (per month)	$ 18.02	$ 18.38	$ 18.75	$ 19.13	$ 19.51	$ 19.90	$ 20.30	$ 20.71	$ 21.12	$ 21.54	$ 21.97
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers											
Single Units	35	35	35	35	35	35	35	36	36	36	36
Ready-To-Serve Charge (per month)	$ 50.69	$ 51.70	$ 52.73	$ 53.78	$ 54.86	$ 55.96	$ 57.08	$ 58.22	$ 59.38	$ 60.57	$ 61.78
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	7	7
Ready-To-Serve Charge (per month)	$ 30.40	$ 31.01	$ 31.63	$ 32.26	$ 32.91	$ 33.57	$ 34.24	$ 34.92	$ 35.62	$ 36.33	$ 37.06
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Commodity Charges (per 1,000 gallons)											
Inside Village Customers - 1,000 gallons used annually	52,563	52,773	52,984	53,196	53,409	53,623	53,837	54,052	54,268	54,485	54,703
Commodity Charge	$ 2.58	$ 2.63	$ 2.68	$ 2.73	$ 2.78	$ 2.84	$ 2.90	$ 2.96	$ 3.02	$ 3.08	$ 3.14
Commodity Charge Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers	1,464	1,470	1,476	1,482	1,488	1,494	1,500	1,506	1,512	1,518	1,524
Commodity Charge	$ 2.58	$ 2.63	$ 2.68	$ 2.73	$ 2.78	$ 2.84	$ 2.90	$ 2.96	$ 3.02	$ 3.08	$ 3.14
Commodity Charge Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Revenues											
Usage Charges											
Inside Village Customers - Ready-To-Serve Charges	$ 321,703	$ 329,451	$ 337,368	$ 345,550	$ 353,881	$ 362,784	$ 371,228	$ 380,184	$ 389,295	$ 398,586	$ 408,155
Inside Village Customers - Commodity Charges	$ 135,613	$ 138,793	$ 141,997	$ 145,225	$ 148,477	$ 152,289	$ 156,127	$ 159,994	$ 163,889	$ 167,814	$ 171,767
Outside Village Customers - Ready-To-Serve Charges	$ 23,479	$ 23,947	$ 24,424	$ 24,910	$ 25,411	$ 25,920	$ 26,439	$ 27,665	$ 28,217	$ 29,218	$ 29,802
Outside Village Customers - Commodity Charges	$ 3,777	$ 3,866	$ 3,956	$ 4,046	$ 4,137	$ 4,243	$ 4,350	$ 4,458	$ 4,566	$ 4,675	$ 4,785
Total Usage Charge Revenue	*$ 484,571*	*$ 496,057*	*$ 507,745*	*$ 519,731*	*$ 531,905*	*$ 545,236*	*$ 558,145*	*$ 572,301*	*$ 585,967*	*$ 600,293*	*$ 614,510*
Other Water Revenue Sources											
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 491,121***	***$ 502,607***	***$ 514,295***	***$ 526,281***	***$ 538,455***	***$ 551,786***	***$ 564,695***	***$ 578,851***	***$ 592,517***	***$ 606,843***	***$ 621,060***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 45.53*	*$ 46.43*	*$ 47.34*	*$ 48.27*	*$ 49.21*	*$ 50.22*	*$ 51.24*	*$ 52.28*	*$ 53.33*	*$ 54.39*	*$ 55.47*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 66.17*	*$ 67.48*	*$ 68.81*	*$ 70.16*	*$ 71.54*	*$ 73.00*	*$ 74.48*	*$ 75.98*	*$ 77.50*	*$ 79.05*	*$ 80.62*
Expenditures											
Operation & Maintenance	$ 284,550	$ 290,241	$ 296,046	$ 301,967	$ 308,006	$ 314,167	$ 320,450	$ 326,859	$ 333,396	$ 340,064	$ 346,865
Cash Funded Capital Improvements	$ 168,000	$ 210,000	$ -	$ 345,000	$ 155,000	$ 11,000	$ 54,000	$ 613,000	$ 167,000	$ 321,000	$ -
Debt Service Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 452,550***	***$ 500,241***	***$ 296,046***	***$ 646,967***	***$ 463,006***	***$ 325,167***	***$ 374,450***	***$ 939,859***	***$ 500,396***	***$ 661,064***	***$ 346,865***
Net Operating Revenue	**$ 38,571**	**$ 2,365**	**$ 218,249**	**$ (120,686)**	**$ 75,449**	**$ 226,619**	**$ 190,245**	**$ (361,007)**	**$ 92,121**	**$ (54,221)**	**$ 274,195**
Cash & Investments Balance (beginning of year)	**$ 192,452**	**$ 231,023**	**$ 233,388**	**$ 451,637**	**$ 330,951**	**$ 406,400**	**$ 633,019**	**$ 823,264**	**$ 462,257**	**$ 554,378**	**$ 500,157**
Cash & Investments Balance (end of year)	***$ 231,023***	***$ 233,388***	***$ 451,637***	***$ 330,951***	***$ 406,400***	***$ 633,019***	***$ 823,264***	***$ 462,257***	***$ 554,378***	***$ 500,157***	***$ 774,352***

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Including Costs to Finance a Water Treatment Plant

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
Rates and Assumptions												
Anticipated Annual Growth Rate: 0.40%												
Water Ready-To-Serve Charges (per month)												
Inside Village Customers												
Single Units	735	738	741	744	747	750	753	756	759	762	765	768
Ready-To-Serve Charge (per month)	$ 16.00	$ 22.40	$ 22.85	$ 23.31	$ 23.78	$ 35.67	$ 37.45	$ 38.20	$ 38.96	$ 39.74	$ 40.53	$ 41.34
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	193	194	195	195	196	197	198	198	199	200	201	202
Ready-To-Serve Charge (per month)	$ 9.60	$ 13.44	$ 13.71	$ 13.98	$ 14.26	$ 21.39	$ 22.46	$ 22.91	$ 23.37	$ 23.84	$ 24.32	$ 24.81
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers												
Single Units	33	33	33	33	34	34	34	34	34	34	34	34
Ready-To-Serve Charge (per month)	$ 27.00	$ 37.80	$ 38.56	$ 39.33	$ 40.12	$ 60.18	$ 63.19	$ 64.45	$ 65.74	$ 67.05	$ 68.39	$ 69.76
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	6	6	6
Ready-To-Serve Charge (per month)	$ 16.20	$ 22.68	$ 23.13	$ 23.59	$ 24.06	$ 36.09	$ 37.89	$ 38.65	$ 39.42	$ 40.21	$ 41.01	$ 41.83
Rate Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Commodity Charges (per 1,000 gallons)												
Inside Village Customers - 1,000 gallons used annually	50,104	50,305	50,506	50,708	50,911	51,115	51,319	51,524	51,730	51,937	52,145	52,354
Commodity Charge	$ 1.37	$ 1.92	$ 1.96	$ 2.00	$ 2.04	$ 3.06	$ 3.21	$ 3.27	$ 3.34	$ 3.41	$ 3.48	$ 3.55
Commodity Charge Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers	1,392	1,398	1,404	1,410	1,416	1,422	1,428	1,434	1,440	1,446	1,452	1,458
Commodity Charge	$ 1.37	$ 1.92	$ 1.96	$ 2.00	$ 2.04	$ 3.06	$ 3.21	$ 3.27	$ 3.34	$ 3.41	$ 3.48	$ 3.55
Commodity Charge Increase	N/A	40.00%	2.00%	2.00%	2.00%	50.00%	5.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Revenues												
Usage Charges												
Inside Village Customers - Ready-To-Serve Charges	$ 163,354	$ 229,663	$ 235,264	$ 240,825	$ 246,703	$ 371,596	$ 391,763	$ 400,985	$ 410,655	$ 420,599	$ 430,725	$ 441,129
Inside Village Customers - Commodity Charges	$ 68,643	$ 96,586	$ 98,992	$ 101,416	$ 103,858	$ 156,412	$ 164,734	$ 168,483	$ 172,778	$ 177,105	$ 181,465	$ 185,857
Outside Village Customers - Ready-To-Serve Charges	$ 11,858	$ 16,602	$ 16,935	$ 17,273	$ 18,101	$ 27,152	$ 28,510	$ 29,078	$ 29,660	$ 30,252	$ 30,856	$ 31,474
Outside Village Customers - Commodity Charges	$ 1,907	$ 2,684	$ 2,752	$ 2,820	$ 2,889	$ 4,351	$ 4,584	$ 4,689	$ 4,810	$ 4,931	$ 5,053	$ 5,176
Total Usage Charge Revenue	*$ 245,762*	*$ 345,534*	*$ 353,942*	*$ 362,334*	*$ 371,552*	*$ 559,511*	*$ 589,591*	*$ 603,236*	*$ 617,903*	*$ 632,886*	*$ 648,099*	*$ 663,635*
Other Water Revenue Sources												
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 252,312***	***$ 352,084***	***$ 360,492***	***$ 368,884***	***$ 378,102***	***$ 566,061***	***$ 596,141***	***$ 609,786***	***$ 624,453***	***$ 639,436***	***$ 654,649***	***$ 670,185***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 24.22*	*$ 33.92*	*$ 34.61*	*$ 35.31*	*$ 36.02*	*$ 54.03*	*$ 56.71*	*$ 57.82*	*$ 59.00*	*$ 60.20*	*$ 61.41*	*$ 62.64*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 35.22*	*$ 49.32*	*$ 50.32*	*$ 51.33*	*$ 52.36*	*$ 78.54*	*$ 82.45*	*$ 84.07*	*$ 85.78*	*$ 87.51*	*$ 89.27*	*$ 91.06*
Expenditures												
Operation & Maintenance	$ 193,566	$ 228,853	$ 233,430	$ 238,099	$ 242,861	$ 247,718	$ 252,673	$ 257,726	$ 262,881	$ 268,138	$ 273,501	$ 278,971
Cash Funded Capital Improvements	$ -	$ 104,000	$ 186,000	$ 236,000	$ 237,000	$ 201,000	$ 212,000	$ 184,000	$ 168,000	$ 169,000	$ 156,000	$ 239,000
Debt Service Payments	$ -	$ -	$ -	$ -	$ -	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 193,566***	***$ 332,853***	***$ 419,430***	***$ 474,099***	***$ 479,861***	***$ 616,364***	***$ 632,319***	***$ 609,372***	***$ 598,526***	***$ 604,784***	***$ 597,147***	***$ 685,617***
Net Operating Revenue	**$ 58,746**	**$ 19,231**	**$ (58,938)**	**$ (105,215)**	**$ (101,759)**	**$ (50,303)**	**$ (36,178)**	**$ 414**	**$ 25,927**	**$ 34,652**	**$ 57,502**	**$ (15,432)**
Cash & Investments Balance (beginning of year)	**$ 419,843**	**$ 478,589**	**$ 497,820**	**$ 438,882**	**$ 333,667**	**$ 231,908**	**$ 181,605**	**$ 145,427**	**$ 145,841**	**$ 171,768**	**$ 206,420**	**$ 263,922**
Cash & Investments Balance (end of year)	***$ 478,589***	***$ 497,820***	***$ 438,882***	***$ 333,667***	***$ 231,908***	***$ 181,605***	***$ 145,427***	***$ 145,841***	***$ 171,768***	***$ 206,420***	***$ 263,922***	***$ 248,490***

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Village of Decatur (Michigan) Water Fund

Cash Flow Analysis - Including Costs to Finance a Water Treatment Plant (cont.)

	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
Rates and Assumptions											
Anticipated Annual Growth Rate: 0.40%											
Water Ready-To-Serve Charges (per month)											
Inside Village Customers											
Single Units	771	774	777	780	783	787	790	793	796	799	802
Ready-To-Serve Charge (per month)	$ 42.17	$ 43.01	$ 43.87	$ 44.75	$ 45.65	$ 46.56	$ 47.49	$ 48.44	$ 49.41	$ 50.40	$ 51.41
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	202	203	204	205	206	207	207	208	209	210	211
Ready-To-Serve Charge (per month)	$ 25.31	$ 25.82	$ 26.34	$ 26.87	$ 27.41	$ 27.96	$ 28.52	$ 29.09	$ 29.67	$ 30.26	$ 30.87
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers											
Single Units	35	35	35	35	35	35	35	36	36	36	36
Ready-To-Serve Charge (per month)	$ 71.16	$ 72.58	$ 74.03	$ 75.51	$ 77.02	$ 78.56	$ 80.13	$ 81.73	$ 83.36	$ 85.03	$ 86.73
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Multiple Units (after first unit)	6	6	6	6	6	6	6	6	6	7	7
Ready-To-Serve Charge (per month)	$ 42.67	$ 43.52	$ 44.39	$ 45.28	$ 46.19	$ 47.11	$ 48.05	$ 49.01	$ 49.99	$ 50.99	$ 52.01
Rate Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Commodity Charges (per 1,000 gallons)											
Inside Village Customers - 1,000 gallons used annually	52,563	52,773	52,984	53,196	53,409	53,623	53,837	54,052	54,268	54,485	54,703
Commodity Charge	$ 3.62	$ 3.69	$ 3.76	$ 3.84	$ 3.92	$ 4.00	$ 4.08	$ 4.16	$ 4.24	$ 4.32	$ 4.41
Commodity Charge Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Outside Village Customers	1,464	1,470	1,476	1,482	1,488	1,494	1,500	1,506	1,512	1,518	1,524
Commodity Charge	$ 3.62	$ 3.69	$ 3.76	$ 3.84	$ 3.92	$ 4.00	$ 4.08	$ 4.16	$ 4.24	$ 4.32	$ 4.41
Commodity Charge Increase	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Revenues											
Usage Charges											
Inside Village Customers - Ready-To-Serve Charges	$ 451,508	$ 462,374	$ 473,524	$ 484,960	$ 496,685	$ 509,165	$ 521,049	$ 533,564	$ 546,377	$ 559,490	$ 572,933
Inside Village Customers - Commodity Charges	$ 190,278	$ 194,732	$ 199,220	$ 204,273	$ 209,363	$ 214,492	$ 219,655	$ 224,856	$ 230,096	$ 235,375	$ 241,240
Outside Village Customers - Ready-To-Serve Charges	$ 32,959	$ 33,617	$ 34,289	$ 34,974	$ 35,674	$ 36,387	$ 37,114	$ 38,836	$ 39,611	$ 41,016	$ 41,836
Outside Village Customers - Commodity Charges	$ 5,300	$ 5,424	$ 5,550	$ 5,691	$ 5,833	$ 5,976	$ 6,120	$ 6,265	$ 6,411	$ 6,558	$ 6,721
Total Usage Charge Revenue	*$ 680,045*	*$ 696,148*	*$ 712,582*	*$ 729,898*	*$ 747,555*	*$ 766,020*	*$ 783,938*	*$ 803,521*	*$ 822,495*	*$ 842,439*	*$ 862,730*
Other Water Revenue Sources											
Water Connection Fees	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600	$ 600
Sales - Penalties	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800	$ 4,800
Water Turn On Fees	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850	$ 850
Miscellaneous	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300	$ 300
Total Other Revenue	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*	*$ 6,550*
Total Revenues	***$ 686,595***	***$ 702,698***	***$ 719,132***	***$ 736,448***	***$ 754,105***	***$ 772,570***	***$ 790,488***	***$ 810,071***	***$ 829,045***	***$ 848,989***	***$ 869,280***
Typical inside Village residential bill (using 6,000 gallons per month)	*$ 63.89*	*$ 65.15*	*$ 66.43*	*$ 67.79*	*$ 69.17*	*$ 70.56*	*$ 71.97*	*$ 73.40*	*$ 74.85*	*$ 76.32*	*$ 77.87*
Typical outside Village residential bill (using 6,000 gallons per month)	*$ 92.88*	*$ 94.72*	*$ 96.59*	*$ 98.55*	*$ 100.54*	*$ 102.56*	*$ 104.61*	*$ 106.69*	*$ 108.80*	*$ 110.95*	*$ 113.19*
Expenditures											
Operation & Maintenance	$ 284,550	$ 290,241	$ 296,046	$ 301,967	$ 308,006	$ 314,167	$ 320,450	$ 326,859	$ 333,396	$ 340,064	$ 346,865
Cash Funded Capital Improvements	$ 168,000	$ 210,000	$ -	$ 345,000	$ 155,000	$ 11,000	$ 54,000	$ 613,000	$ 167,000	$ 321,000	$ -
Debt Service Payments	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646	$ 167,646
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenditures	***$ 620,196***	***$ 667,887***	***$ 463,692***	***$ 814,613***	***$ 630,652***	***$ 492,813***	***$ 542,096***	***$ 1,107,505***	***$ 668,042***	***$ 828,710***	***$ 514,511***
Net Operating Revenue	**$ 66,399**	**$ 34,811**	**$ 255,440**	**$ (78,165)**	**$ 123,453**	**$ 279,758**	**$ 248,392**	**$ (297,434)**	**$ 161,003**	**$ 20,280**	**$ 354,769**
Cash & Investments Balance (beginning of year)	**$ 248,490**	**$ 314,889**	**$ 349,700**	**$ 605,140**	**$ 526,975**	**$ 650,428**	**$ 930,186**	**$ 1,178,578**	**$ 881,144**	**$ 1,042,147**	**$ 1,062,427**
Cash & Investments Balance (end of year)	***$ 314,889***	***$ 349,700***	***$ 605,140***	***$ 526,975***	***$ 650,428***	***$ 930,186***	***$ 1,178,578***	***$ 881,144***	***$ 1,042,147***	***$ 1,062,427***	***$ 1,417,195***

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Village of Decatur (Michigan) Water Fund

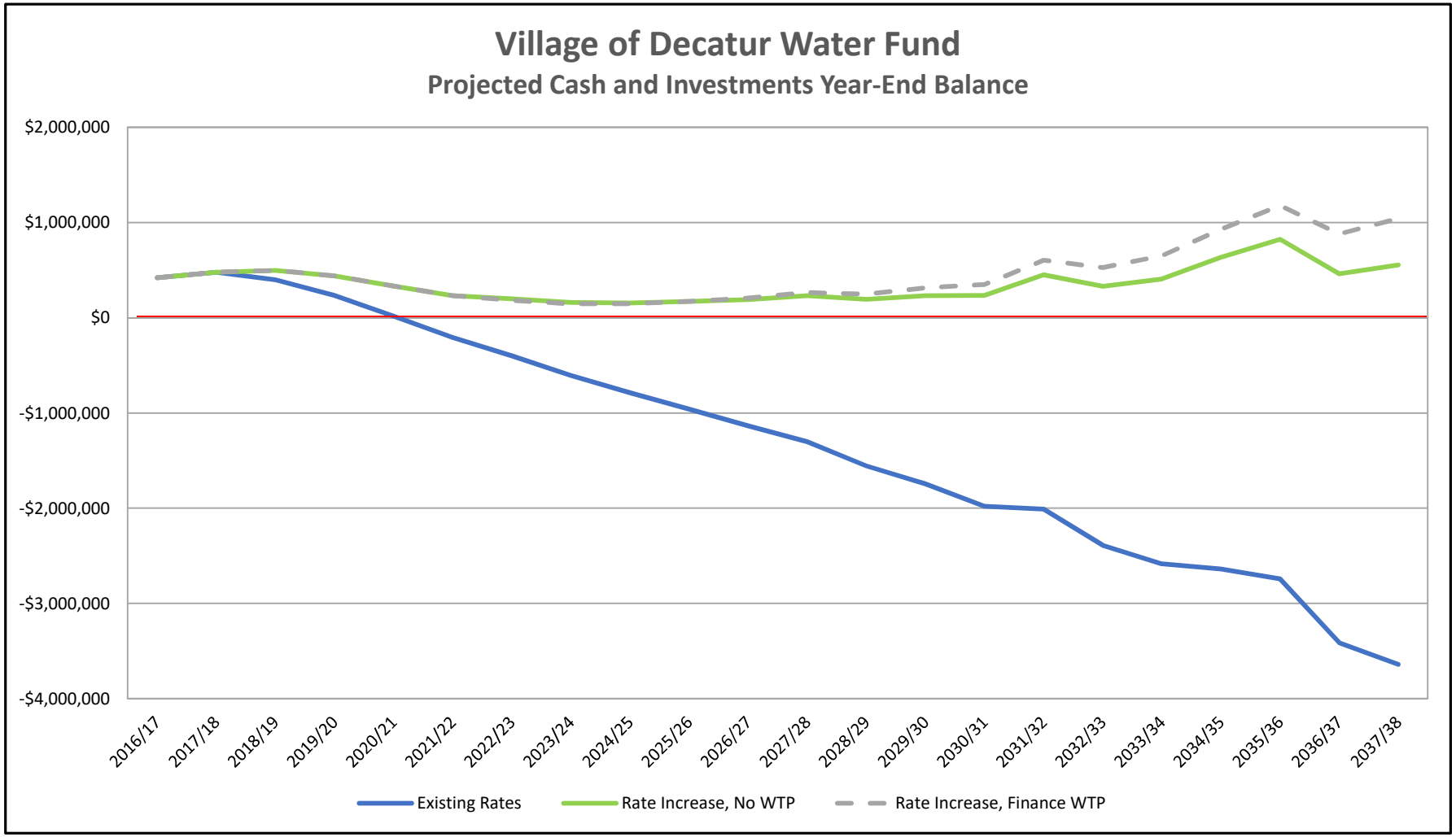
Schedule of Amortization for $3,890,000 Principal Amount of 40-Year Capital Improvement Bond for WTP, Series 2021 (3% Interest)

Payment Date	Principal Balance	Debt Service			Ending Balance	Fiscal Year Total
		Principal	Interest	Total		
6/1/2022	$ 3,890,000	$ 25,473	$ 58,350	$ 83,823	$ 3,864,527	
12/1/2022	$ 3,864,527	$ 25,855	$ 57,968	$ 83,823	$ 3,838,672	$ 167,646
6/1/2023	$ 3,838,672	$ 26,243	$ 57,580	$ 83,823	$ 3,812,429	
12/1/2023	$ 3,812,429	$ 26,637	$ 57,186	$ 83,823	$ 3,785,793	$ 167,646
6/1/2024	$ 3,785,793	$ 27,036	$ 56,787	$ 83,823	$ 3,758,756	
12/1/2024	$ 3,758,756	$ 27,442	$ 56,381	$ 83,823	$ 3,731,315	$ 167,646
6/1/2025	$ 3,731,315	$ 27,853	$ 55,969	$ 83,823	$ 3,703,462	
12/1/2025	$ 3,703,462	$ 28,271	$ 55,552	$ 83,823	$ 3,675,190	$ 167,646
6/1/2026	$ 3,675,190	$ 28,695	$ 55,128	$ 83,823	$ 3,646,495	
12/1/2026	$ 3,646,495	$ 29,126	$ 54,697	$ 83,823	$ 3,617,370	$ 167,646
6/1/2027	$ 3,617,370	$ 29,562	$ 54,261	$ 83,823	$ 3,587,807	
12/1/2027	$ 3,587,807	$ 30,006	$ 53,817	$ 83,823	$ 3,557,802	$ 167,646
6/1/2028	$ 3,557,802	$ 30,456	$ 53,367	$ 83,823	$ 3,527,346	
12/1/2028	$ 3,527,346	$ 30,913	$ 52,910	$ 83,823	$ 3,496,433	$ 167,646
6/1/2029	$ 3,496,433	$ 31,376	$ 52,446	$ 83,823	$ 3,465,056	
12/1/2029	$ 3,465,056	$ 31,847	$ 51,976	$ 83,823	$ 3,433,209	$ 167,646
6/1/2030	$ 3,433,209	$ 32,325	$ 51,498	$ 83,823	$ 3,400,884	
12/1/2030	$ 3,400,884	$ 32,810	$ 51,013	$ 83,823	$ 3,368,075	$ 167,646
6/1/2031	$ 3,368,075	$ 33,302	$ 50,521	$ 83,823	$ 3,334,773	
12/1/2031	$ 3,334,773	$ 33,801	$ 50,022	$ 83,823	$ 3,300,971	$ 167,646
6/1/2032	$ 3,300,971	$ 34,308	$ 49,515	$ 83,823	$ 3,266,663	
12/1/2032	$ 3,266,663	$ 34,823	$ 49,000	$ 83,823	$ 3,231,840	$ 167,646
6/1/2033	$ 3,231,840	$ 35,345	$ 48,478	$ 83,823	$ 3,196,494	
12/1/2033	$ 3,196,494	$ 35,876	$ 47,947	$ 83,823	$ 3,160,619	$ 167,646
6/1/2034	$ 3,160,619	$ 36,414	$ 47,409	$ 83,823	$ 3,124,205	
12/1/2034	$ 3,124,205	$ 36,960	$ 46,863	$ 83,823	$ 3,087,245	$ 167,646
6/1/2035	$ 3,087,245	$ 37,514	$ 46,309	$ 83,823	$ 3,049,731	
12/1/2035	$ 3,049,731	$ 38,077	$ 45,746	$ 83,823	$ 3,011,654	$ 167,646
6/1/2036	$ 3,011,654	$ 38,648	$ 45,175	$ 83,823	$ 2,973,006	
12/1/2036	$ 2,973,006	$ 39,228	$ 44,595	$ 83,823	$ 2,933,778	$ 167,646
6/1/2037	$ 2,933,778	$ 39,816	$ 44,007	$ 83,823	$ 2,893,962	
12/1/2037	$ 2,893,962	$ 40,414	$ 43,409	$ 83,823	$ 2,853,548	$ 167,646
6/1/2038	$ 2,853,548	$ 41,020	$ 42,803	$ 83,823	$ 2,812,528	
12/1/2038	$ 2,812,528	$ 41,635	$ 42,188	$ 83,823	$ 2,770,893	$ 167,646
6/1/2039	$ 2,770,893	$ 42,260	$ 41,563	$ 83,823	$ 2,728,634	
12/1/2039	$ 2,728,634	$ 42,893	$ 40,930	$ 83,823	$ 2,685,740	$ 167,646
6/1/2040	$ 2,685,740	$ 43,537	$ 40,286	$ 83,823	$ 2,642,203	
12/1/2040	$ 2,642,203	$ 44,190	$ 39,633	$ 83,823	$ 2,598,013	$ 167,646
6/1/2041	$ 2,598,013	$ 44,853	$ 38,970	$ 83,823	$ 2,553,161	
12/1/2041	$ 2,553,161	$ 45,526	$ 38,297	$ 83,823	$ 2,507,635	$ 167,646
6/1/2042	$ 2,507,635	$ 46,208	$ 37,615	$ 83,823	$ 2,461,427	
12/1/2042	$ 2,461,427	$ 46,902	$ 36,921	$ 83,823	$ 2,414,525	$ 167,646
6/1/2043	$ 2,414,525	$ 47,605	$ 36,218	$ 83,823	$ 2,366,920	
12/1/2043	$ 2,366,920	$ 48,319	$ 35,504	$ 83,823	$ 2,318,601	$ 167,646
6/1/2044	$ 2,318,601	$ 49,044	$ 34,779	$ 83,823	$ 2,269,557	
12/1/2044	$ 2,269,557	$ 49,780	$ 34,043	$ 83,823	$ 2,219,777	$ 167,646
6/1/2045	$ 2,219,777	$ 50,526	$ 33,297	$ 83,823	$ 2,169,251	
12/1/2045	$ 2,169,251	$ 51,284	$ 32,539	$ 83,823	$ 2,117,967	$ 167,646
6/1/2046	$ 2,117,967	$ 52,053	$ 31,770	$ 83,823	$ 2,065,913	
12/1/2046	$ 2,065,913	$ 52,834	$ 30,989	$ 83,823	$ 2,013,079	$ 167,646
6/1/2047	$ 2,013,079	$ 53,627	$ 30,196	$ 83,823	$ 1,959,452	
12/1/2047	$ 1,959,452	$ 54,431	$ 29,392	$ 83,823	$ 1,905,021	$ 167,646
6/1/2048	$ 1,905,021	$ 55,248	$ 28,575	$ 83,823	$ 1,849,773	
12/1/2048	$ 1,849,773	$ 56,076	$ 27,747	$ 83,823	$ 1,793,697	$ 167,646
6/1/2049	$ 1,793,697	$ 56,918	$ 26,905	$ 83,823	$ 1,736,779	
12/1/2049	$ 1,736,779	$ 57,771	$ 26,052	$ 83,823	$ 1,679,008	$ 167,646
6/1/2050	$ 1,679,008	$ 58,638	$ 25,185	$ 83,823	$ 1,620,370	
12/1/2050	$ 1,620,370	$ 59,517	$ 24,306	$ 83,823	$ 1,560,853	$ 167,646

Village of Decatur (Michigan) Water Fund

Schedule of Amortization for $3,890,000 Principal Amount of 40-Year Capital Improvement Bond for WTP, Series 2021 (3% Interest)

Payment Date	Principal Balance	Debt Service			Ending Balance	Fiscal Year Total
		Principal	Interest	Total		
6/1/2051	$ 1,560,853	$ 60,410	$ 23,413	$ 83,823	$ 1,500,442	
12/1/2051	$ 1,500,442	$ 61,316	$ 22,507	$ 83,823	$ 1,439,126	$ 167,646
6/1/2052	$ 1,439,126	$ 62,236	$ 21,587	$ 83,823	$ 1,376,890	
12/1/2052	$ 1,376,890	$ 63,170	$ 20,653	$ 83,823	$ 1,313,720	$ 167,646
6/1/2053	$ 1,313,720	$ 64,117	$ 19,706	$ 83,823	$ 1,249,603	
12/1/2053	$ 1,249,603	$ 65,079	$ 18,744	$ 83,823	$ 1,184,524	$ 167,646
6/1/2054	$ 1,184,524	$ 66,055	$ 17,768	$ 83,823	$ 1,118,469	
12/1/2054	$ 1,118,469	$ 67,046	$ 16,777	$ 83,823	$ 1,051,423	$ 167,646
6/1/2055	$ 1,051,423	$ 68,052	$ 15,771	$ 83,823	$ 983,372	
12/1/2055	$ 983,372	$ 69,072	$ 14,751	$ 83,823	$ 914,299	$ 167,646
6/1/2056	$ 914,299	$ 70,108	$ 13,714	$ 83,823	$ 844,191	
12/1/2056	$ 844,191	$ 71,160	$ 12,663	$ 83,823	$ 773,031	$ 167,646
6/1/2057	$ 773,031	$ 72,228	$ 11,595	$ 83,823	$ 700,803	
12/1/2057	$ 700,803	$ 73,311	$ 10,512	$ 83,823	$ 627,492	$ 167,646
6/1/2058	$ 627,492	$ 74,411	$ 9,412	$ 83,823	$ 553,082	
12/1/2058	$ 553,082	$ 75,527	$ 8,296	$ 83,823	$ 477,555	$ 167,646
6/1/2059	$ 477,555	$ 76,660	$ 7,163	$ 83,823	$ 400,895	
12/1/2059	$ 400,895	$ 77,810	$ 6,013	$ 83,823	$ 323,086	$ 167,646
6/1/2060	$ 323,086	$ 78,977	$ 4,846	$ 83,823	$ 244,109	
12/1/2060	$ 244,109	$ 80,161	$ 3,662	$ 83,823	$ 163,948	$ 167,646
6/1/2061	$ 163,948	$ 81,364	$ 2,459	$ 83,823	$ 82,584	
12/1/2061	$ 82,584	$ 82,584	$ 1,239	$ 83,823	$ 0	$ 167,646



(269) 673-8465 1670 Lincoln Road, **Allegan, MI**
(269) 927-0100 2303 Pipestone Road, **Benton Harbor, MI**
(269) 327-3532 9835 Portage Road, **Portage, MI**
WWW.WIGHTMAN-ASSOC.COM

Appendix F

Elevated Storage Tank Reports

DIXON
ENGINEERING AND
INSPECTION SERVICES
FOR THE COATING INDUSTRY

1104 Third Avenue
Lake Odessa, MI 48849
Telephone 1-616-374/3221
Fax 1-616-374/7116

August 19, 2015

Village of Decatur
114 N. Phelps
Decatur, MI 49045

Attn: James Krizan, Manager

Re: 200,000 Gallon Spheroid Water Storage Tank Warranty inspection

Dear James,

On July 30, 2015 Dixon Engineering, Inc., (DIXON), performed a warranty inspection on the 200,000 gallon water storage tank located on the corner of Eli St. and School St. and owned by the Village of Decatur, Michigan. The inspection was performed by Kyle Lay, Staff Technician. The inspector was assisted by Chris Kreiner, Larry Houck and Tim Oger, Staff Technicians.

The wet interior inspection was completed with a remotely operated vehicle ROV. Video of the inspection and still photos are attached, no cleaning was performed.

The tank was erected in 1979 by Universal Tank, and was repainted by L.C. United from mid-July to early August of 2014.

As part of the project, the dry interior access tube, bowl and spots throughout were coated with an epoxy system applied over a SSPC-SP6 commercial blast cleaned surface. Three coats were applied to the access tube and bowl and a spot two coat system on the rest of the dry interior.

The wet interior was coated with a three coat epoxy system applied over a SSPC-SP10 near white metal blast cleaned surface.

The fill pipe insulation had an aluminum cover installed and the gasket on the wet interior hatch was replaced as part of the project.

DIXON

1104 Third Avenue
Lake Odessa, MI 48849
Telephone 1-616-374/3221
Fax 1-616-374/7116

Dixon Engineering performed inspections during the paint and repair work.

The exterior was not coated as part of this project but some touch-ups were needed from rigging and grounding for welding equipment. Money was held back for this work at project completion last year.

On the exterior, one anchor bolt and the rigging couplings installed on the roof had an epoxy coat applied but the topcoat was never applied.

The dry interior coating is in good condition. There are some areas of rust staining from behind a bracket in the access tube and there is some steel grit that has rusted on the surface on the top of the platforms.

The roof lap seams have some minor rust staining despite being caulked. The coating below the high water line is completely intact.

Dixon Engineering recommends that the contractor return and apply topcoat on the exterior spots noted. While on site the steel grit that has fallen onto the top of dry interior platforms should be cleaned up. The staining on the dry interior and wet interior is minor, and do not require repair.

The exterior coating should be repaired by scarifying the surface with sand paper and apply one coat of Tnemec series 700 to match the existing system. The roof color is Canary Yellow and the anchor bolt chair color is Black Forest.

If you have any questions regarding this report, please contact project manager, Ira Gabin at 616-374-3221 ext. 303.

FOR DIXON ENGINEERING, INC.,

Trevor Felton (sic)

Trevor Felton
Staff Engineer

Cc: Ira Gabin

200,000 gallon spheroid water storage tank located in Decatur, Michigan.

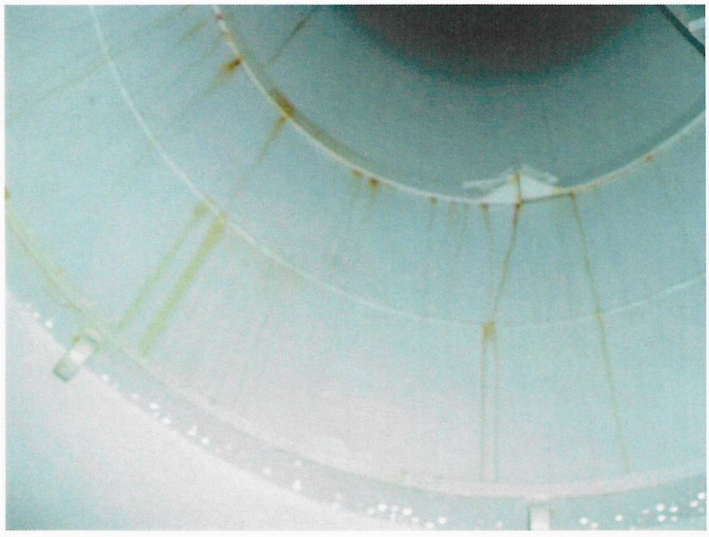
1) Ground attachment point not touched up with topcoat on anchor bolt chair.

2) Roof rigging coupling not touched up with topcoat.

3) Steel grit rusting on top of the platform.

4) Riser section with no coating failures.

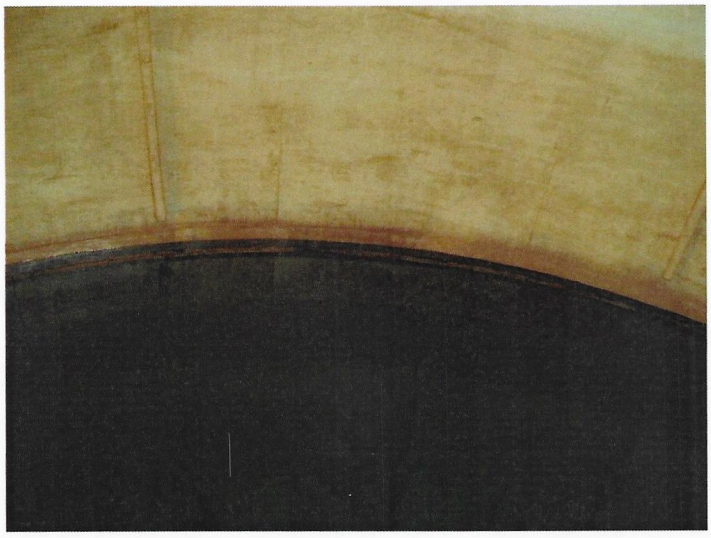
5) Typical fill pipe insulation cover is intact.



6) Rust staining from expansion bracket in the access tube.

7) Rust staining on the caulked roof lap seam.

8) Rust bleedthrough on a roof weld seam.



9) Typical sidewall section is in good condition.

10) Sidewall section with no coating failures.

11) Typical access tube section with no failures.

12) Bowl and cone section with no coating failures.

DECATUR, MICHIGAN

200,000 GALLON SPHERE

MAINTENANCE INSPECTION

INSPECTION PERFORMED 11/08/04
REPORT PREPARED 11/18/04
REVIEWED by WILLIAM J. DIXON, P.E., ESQ. 12/04/04

CONCLUSIONS:

1. The wet interior coating is a three coat epoxy system that is in good condition, with good adhesion. Above the high water line the coating is also in good condition. The roof beams and lap joints have minor rusting.

2. The dry interior coating is an alkyd system with a lead based primer. It is in good condition, 98% intact. Minor failure has occurred on the weld seams.

3. The exterior coating is an epoxy urethane system that is in good condition, but is extensively faded. Primary mode of failure is rock nicks. The primer has good adhesion. There are numerous areas of coating failures on the base cone. The lettering is also faded.

4. The wet interior ladder is in good condition, but does not contain a fall protection device.

5. The dry interior ladders are in good condition. They are located in the base cone, stem, and access tube. The dry interior stem ladder has a rail-type fall prevention device. The access tube ladder does not contain a fall protection device.

6. The tank has a 24 in., flip-top, round, rainproof roof access manway to the wet interior. The hatch was not locked.

7. The tank has a 6 in. diameter overflow pipe that extends down through the dry interior, exiting near the bottom. The discharge end of the pipe is not screened, and discharges over a splash pad. The pipe and splash pad are in good condition.

8. There are two - 3½ in. mud valves. The north valve does not work; the south valve was used to washout the wet interior.

9. The foundation is in good condition, with no signs of underground pipe leaks or differential settlement from freeze/thaw cycles. It is covered with dirt.

10. There is a glandular-type expansion joint at the top platform. It was not accessible for inspection.

11. The tank site is small and is not fenced. There is residential development in all directions. The area around the tank is small town residential and a Village garage.

RECOMMENDATIONS:

1. High pressure water clean (5,000 – 10,000 psi), spot power tool clean, and recoat the exterior with a polyurethane system. The estimated cost is $40,000.

2. Reinspect the wet interior in five years. Recoating is not yet warranted.

3. Abrasive blast clean the dry interior, and apply a two coat epoxy polyamide system. The estimated cost is $30,000. This includes lead control measures.

4. Install rail-type fall prevention devices on the base cone, access tube and wet interior ladders. The estimated cost is $4,000.

5. Install new screens on the overflow pipe and condensate drain line. Cost would be incidental to coating costs.

6. Remove accumulated dirt from the north quadrant of the foundation.

7. Replace the non-functioning mud valve. The estimated cost is $3,000.

8. Replace the condensate drain line with a 2 in. rubber hose and check valve into the overflow pipe. The estimated cost is $1,500.

The following recommendations concern safety for maintenance employees, antenna maintenance personnel, and emergency rescue personnel during operations for retrieval of injured workers:

1. Install a 30 in. roof manway in the wet interior and into the dry interior. Average rescue baskets will not pass through the existing 24 in. manhole. The estimated cost is $3,000 each. Install new 30 in. manways in the condensate platform and top platform. The estimated cost is $2,500 each. .

2. Install a painter's rail (4 ft. larger diameter than the hand rail) outside the railing so contractor rigging does not interfere with the railing's interior clear area. The estimated cost is $3,000.

INTRODUCTION:

On November 8, 2004, Dixon Engineering, Inc. (DIXON) performed a maintenance inspection on the 200,000 gallon sphere water storage tank owned by the Village of Decatur, MI. Purposes of the inspection were to evaluate the existing coatings' performance and life expectancy; assess the structural integrity of steel surfaces and appurtenances; review safety and health aspects; and make budgetary recommendations for continued maintenance of the tank. Inspectors for DIXON were Brian Kretovic, Staff Engineer; and Jay Sherman and Chris Kreiner, Staff Technicians. Scheduling and arrangements for the inspection were completed through Dale Avery. A fire truck and operator were provided by the Village.

The tank was built in 1979 by Universal Tank with a height-to-low water line of 110 ft. It is welded construction. The tank's dry interior was last painted in 1979 (original coating). The wet interior was last painted in 1991 by Pennington Brothers Painting; and the exterior was last painted in 1990 by L C United Painting Co.

The site is accessible from a municipal street, and the tank is located approximately 10 ft. from the paved access road. The well maintained site is not fenced, and is adjacent to residential development on all sides. Immediately adjacent is a Village garage. There is a small size staging area for contractors' equipment. The municipality has equipment stored adjacent to the tank. The drive is gravel up to the foundation.

WET INTERIOR CONDITIONS:

The interior coating is an epoxy system applied by Pennington Brothers in 1991. It is in good condition overall. On the roof the coating is 99% intact, with the primary areas of deterioration along the roof lap seams and roof beams. The tank's domed roof contains lap seams that have started to rust stain, typical for a tank of this construction where the lap seams are exposed and not seal welded or caulked. Staining in the lap seams is not a concern, but should be monitored during future inspections for corrosion growth.

The coating on the sidewalls and access tube is 99% intact, with no significant damage at the high water line, which would be the area most affected by ice pressures and ice movement. Adhesion of the sidewall coating appeared good without large areas of separation to the primer or substrate. The sidewalls are covered with mineral staining, which does not affect the integrity of the coating system. The lower bowl coating is in good condition, 99% intact.

Overall adhesion of the coating is good. Adhesion was tested by use of low pressure washing. This is a crude form of testing, yet the least destructive. With poor adhesion to the existing coating it would be possible to notice the coating fluctuate and layers of coating would be removed. With very poor adhesion, the existing coating might be removed. The existing coating was not tested for x-cut adhesion because all adhesion tests are destructive in nature. The test area then would be more susceptible to corrosion because it would have been scratched to bare steel.

The steel structure is in good condition below and above the high water line.

The bowl area was covered with approximately 6 in. – 8 in. of mud sediment that was flushed from the interior. Sediment was evenly spread. Accumulated sediment in the mud settling zone was above the wet interior hatch. One of the mud valves was used to flush sediment down the overflow pipe and out the tank.

WET INTERIOR RECOMMENDATIONS:

Take no action at this time. Reinspect in five years. Budget $40,000 for interior repainting. Biannually operate the mud valve. Replace the non-functioning mud valve. The estimated cost is $3,000.

DRY INTERIOR CONDITIONS:

The dry interior area on this structure is defined as the non-water contact surfaces consisting of the access tube, stem, and base cone. The dry interior coating is an alkyd system with a lead primer. It is in good condition, 97% intact. Primary causes of deterioration are due to age, and erosion with pinhole rusting.

Coating on the platforms is in good condition. Primary causes of deterioration are from age, build-up of dirt and debris, and abrasion.

DRY INTERIOR RECOMMENDATIONS:

Included for information required by Dale Avery

Abrasive blast clean and repaint the entire dry interior. The existing coating system contains lead and special considerations will be required. The estimated cost to abrasive blast clean and repaint is $25,000. Additional cost for management of OSHA and environmental considerations and waste is included in the cost for exterior repainting ($5,000). It should be noted that when a contractor abrasive blast cleans the dry interior, he may damage the fill pipe insulation. The contractor should be notified that it is his responsibility to protect the insulation. If the condition of the insulation is marginal, we recommend removal of the insulation and replacement with new, and abrasive blast cleaning and painting the pipe under the insulation. This would be done so that 100% of the lead is removed from the tank and there are no hidden locations where lead would still exist.

EXTERIOR CONDITIONS:

The exterior coating is an epoxy urethane system applied in 1990 by L C United Painting Co. The coating is in good condition, with minor coating breaks and small amounts of surface rust and rust staining. The base cone coating has been repainted where it was damaged from thrown stones. The base cone area has vandal rock damage that is actively rusting.

The bowl coating is in good condition, but is beginning to chalk and fade, and there is a loss of gloss. The roof coating is in good condition with 99%+ of the topcoat intact, and nearly 99% of the primer intact. The existing coating is an average of 9 – 13 mils thick. The coating system is still performing as specified, protecting exterior steel surfaces and offering a fair aesthetic appearance.

Lettering on the tank consists of "DECATUR" in two locations.

EXTERIOR RECOMMENDATIONS:

Take no immediate action on the exterior. Budget for exterior overcoating (depending on results of an additional five year inspection) in 2009, or when aesthetics dictate. Current adhesion showed the existing coating would support an additional recoat. The estimated cost is $40,000. The expected life of the system is ten-to-fifteen years before a similar painting process would need to be repeated. We estimate project length at sixty days. The tank would be removed from service to reduce moisture condensation on the surface. The estimated cost to recoat with an epoxy urethane system is $40,000.

Reinspect in five years.

STRUCTURAL:

Foundation:

■ The foundation is in good condition and showed no deterioration, undermining, cracking, spalling, or differential settlement.

□ Remove dirt and debris build-up from the north one-half of the foundation.

SAFETY:

Ladders:

■ There is a ladder in the wet interior from the roof manway down to the bowl along the access tube. It is in good condition.

■ The dry interior and access tube ladders are in good condition.

■ The ladders throughout the base cone and access tube do not contain cages.

■ The wet interior ladder does not contain a safety fall protection device.

□ Install rail-type fall protection devices on the base cone, access tube and wet interior ladders to bring them into compliance with current MiOSHA rules regarding fixed ladders. The estimated cost is $4,000.

Access Ways:

■ There is a 16 in. x 20 in. elliptical manway at the top platform in the tank's bowl. The manway is gasketed and showed no signs of leaking.

■ There is a 24 in. diameter roof access hatch into the access tube, with a rainproof cover consisting of a 4 in. curb and a 2 in. lip on the cover.

■ There is a 24 in. diameter, hinged, rainproof access hatch into the wet interior that is in good condition. The roof and wet interior hatches are hinged and functioned properly during the inspection. They were not locked.

■ The tank has a painter's hatch at the top of the stem that is in good condition. The manway is at platform level between the painter's rings.

■ The roof manholes are encircled by a hand rail at the roof. There is no painters' rigging rail outside the hand rail.

■ The access door in the base cone is locked to limit entry to owner personnel only. The door is a 5 ft. x 3 ft. ship door with a step-over threshold with a protected padlock. The doors are secure against the usual vandalism, but could be breached.

HEALTH and SECURITY:

Roof Vents/Screens:

■ There is an 18 in. diameter vent pipe with a removable cover that can be used for ventilation during maintenance.

Overflow Pipe:

■ The overflow pipe is not screened. The pipe discharges to a splash pad with the required air gap.

■ The tank has a 6 in. diameter overflow pipe that enters the access tube at the high water level, extends down through the access tube and stem, exiting near the bottom of the base cone, and discharging over a concrete splash pad. The discharge end of the pipe is in good condition, but is not screened.

□ Replace the screen on the overflow pipe.

EXPANSION JOINT:

■ The tank has a glandular-type expansion joint at the top platform that is in good condition.

FILL PIPE:

■ The fill pipe is covered with Styrofoam insulation with taped seams. The insulation is in good condition.

CONDENSATE LINE:

■ The condensate drain line is not screened.

□ Replace the condensate drain line with a 2 in. rubber hose and check valve into the overflow pipe. The estimated cost is $1,500.

AVIATION LIGHTS/ELECTRICAL:

■ The aviation light is located on the roof. It has a photoelectric cell on the support arm for the light. The cell was covered during the inspection and the light was functional.

A DISCUSSION ON RESCUE/RETRIEVAL OPERATIONS FROM ELEVATED SPHERE STORAGE TANKS

A series of accidents in 2003 and 2004 involving falls from or in water tanks has highlighted inadequacies in tank design and a potentially greater problem. Contractors and engineers are responsible for their own employees. Even with safety training and proper equipment, accidents will occur. Most rescue squads are local or neighboring fire departments, some with more practice than others. The rescue may be more dangerous than the original accident, with potential for more loss of life or injury. Elevated tanks were designed to store water, not for rescue or retrieval convenience. The following items would make working on tanks and retrieval from tanks safer. This discussion is offered as a starting point. We recommend that you meet with your rescue personnel and draft a rescue plan. A copy of the plan should be kept at the tank and with the rescue crew.

OSHA now requires 30 in. manways and hatches, with fall prevention on all ladders. We have always objected to replacement of ladders every other year as regulations change, especially on the retrofit of existing tanks. We recommend the changes for the convenience and safety of your employees and rescue personnel. As far as we know, none of these conversion items to be discussed are required or mandated by any government organization for retrofits.

<u>Retrieval from Interior:</u>

Access:

All ladders are up the dry interior base cone, stem, and access tube. These ladders do not meet OSHA standards. The stem ladder contains a rail-type fall prevention device; the rest of the ladders do not have fall prevention devices. There is a 16 in. x 20 in. elliptical manway in the bowl for access into the bottom of the tank. The roof has a 24 in. diameter hatch for the dry interior, and a 24 in. diameter hatch for the wet interior. There is a roof hand rail, but no painter's rail. The area within the railing is large enough for temporary basket storage.

There is a full platform under the bowl, and a condensate ceiling at the top of base cone in the dry interior. Ladder openings in platforms are 30 in. openings.

Procedure:

It is not practical to install a 30 in. manway in the bottom of the tank. Retrieval must be up to the roof by use of a winch and tripod. Rescue personnel enter the tank through the roof hatch or the bottom manway. The basket is raised to the roof using a tripod and a winch. Place the basket on the roof while the tripod is moved over the access tube hatch. Lower the basket down the access tube to the top platform, or establish a helicopter rescue. From the top platform, lower the basket to ground level through the platform hatches with a pulley or winch connected to an attachment lug welded to the tank's bowl.

From the roof, it is possible to lower the basket over the side to ground level, but that would require a very large winch and increased loading on the attachment point. On a rainy, windy, or snowy day, the objective would be to get rescue personnel off the roof as soon as possible, so lowering through the dry interior is preferred.

Structural Modifications Necessary:

1. *Install a painter's rail on the roof. The painter's rail is now needed by painters because their rigging point at the center of the tank is no longer available (\$3,000).*

2. *Install a 30 in. roof hatch into the wet interior, and a 30 in. hatch into the dry interior (\$2,500 each).*

3. *Install a 30 in. hatch in the top platform, and a bottom 30 in. hatch in the condensate ceiling (\$2,500 each).*

4. *Weld an attachment lug to the tank's bowl(cost incidental).*

Equipment:

Winch or pulley system
Tag line rope
Basket

(1) 200,000 gallon water storage tank located in Decatur, MI.

(2) Exterior of sphere - minor mildew growth on bowl.

(3) Same

(4) Exterior stem coating is in fair condition.

(5) Exterior base cone coating has numerous rock nicks with surface rust and undercutting.

(6) Exterior base cone - anchor chairs with minor build-up of dirt.

(7) Exterior base cone anchor chair - prior coating repairs evident.

(8) Exterior base cone anchor chair - prior coating repairs evident.

(9) Same

(10) Same

(11) Same

(12) Exterior base cone - rock nicks with surface rust and undercutting.

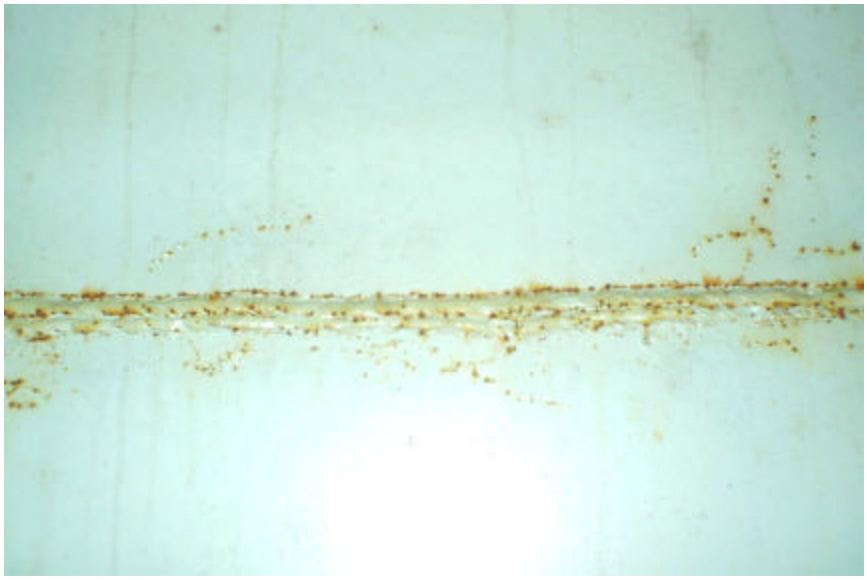
(13) Same

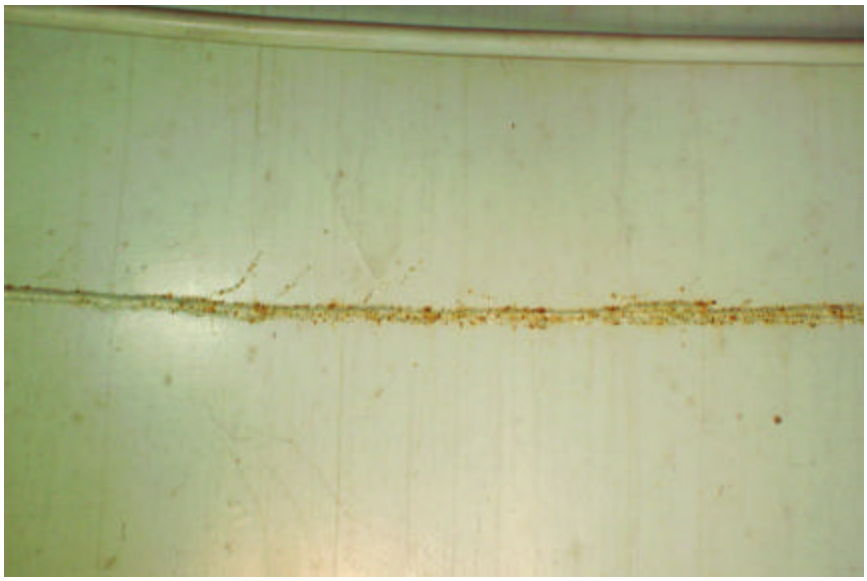
(14) Exterior base cone - rock nicks with surface rust and undercutting.

(15) Exterior overflow pipe - screen is not functional.

(16) Exterior condensate drain line - screen is not functional. Line is probably plugged.

(17) Dry interior base cone - pinhole corrosion along weld seams.





(18) Same

(19) Dry interior base cone - areas of pinhole rusting.

(20) Dry interior fill pipe. Insulated with rigid foam taped in-place.

(21) Dry interior base cone ladder is in good condition.

(22) Dry interior base cone coating is in good condition.

(23) Exterior foundation covered with dirt.

(24) Dry interior condensate platform, bottom side. Minor pinhole rusting along weld seams.

(25) Dry interior - bottom side of condensate platform. Antenna penetration no longer in-use.

(26) Dry interior condensate platform. Accumulation of dirt and debris, and miscellaneous paraphernalia for antenna installation.

(27) Same

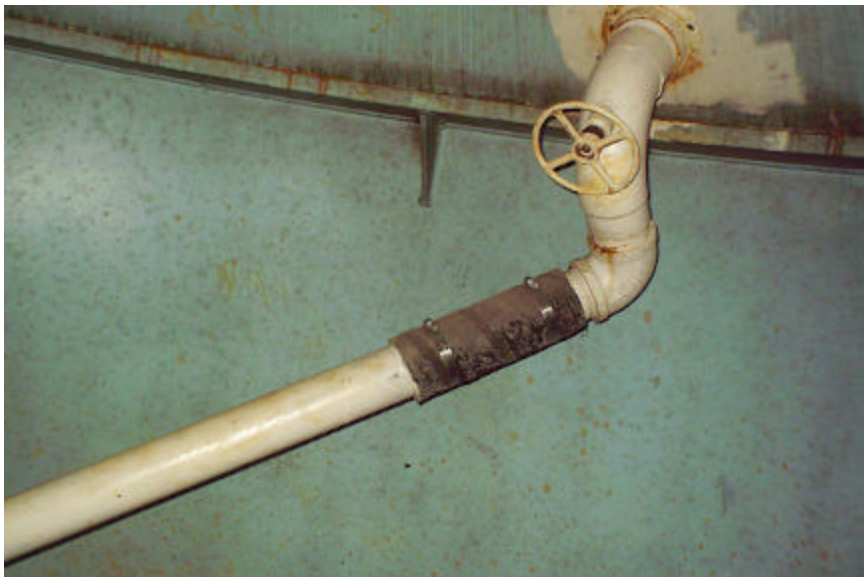
(28) Same

(29) Dry interior riser ladder with rail-type fall prevention device. Dry interior stem wall's have mud streaks.

(30) Same

(31) Dry interior top platform. Build-up of mud, and mineral staining.

(32) Dry interior top platform. 2 mud valves. Mud valve located on north side does not function properly. Mud valve on south side was operated during inspection to wash sediment from wet interior.



(33) Same

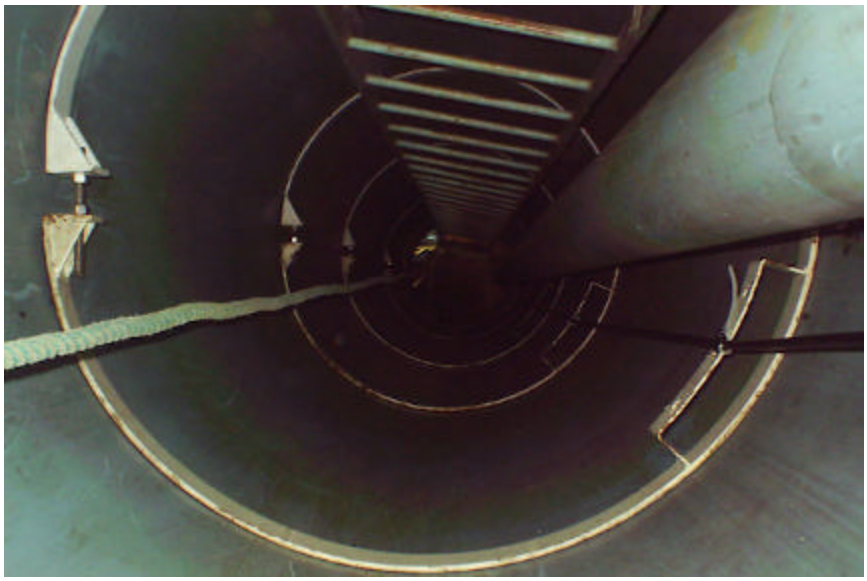
(34) Dry interior top platform. Wet interior access hatch - minor suface corrosion present.

(35) Dry interior top platform - fill pipe expansion joint.

(36) Dry interior top platform - fill pipe penetration into wet interior.

(37) Dry interior access tube - minor pinhole corrosion.

(38) Dry interior access tube hatch secured with "S" hook and wire.



(39) Dry interior acces tube - overall view.

(40) Exterior roof wet interior hatch.

(41) Exterior roof hand rail.

(42) Exterior roof vent is screened.

(43) Exterior roof vent screen.

(44) Exterior roof coating is fully intact and in good condition.

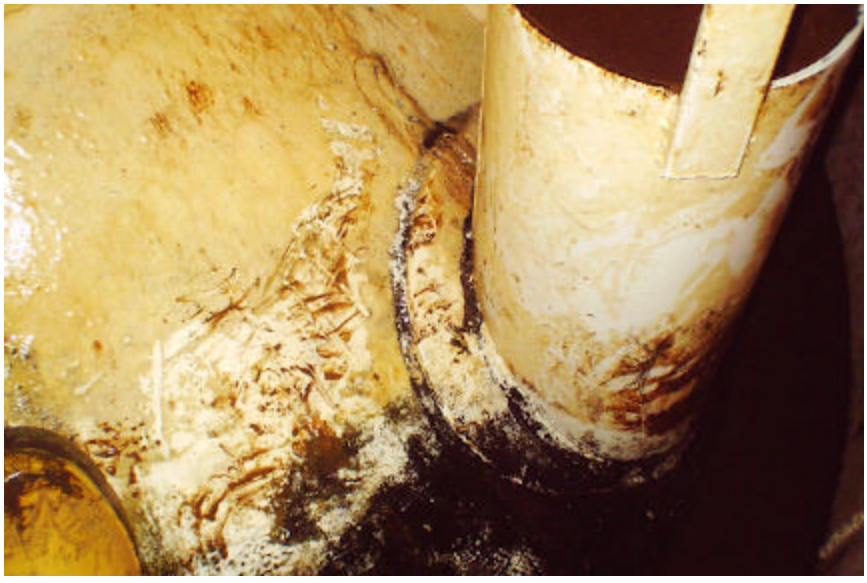
(45) Same

(46) Wet interior coating. Minor edge corrosion on lap seams and beams. Mineral staining below high water line.

(47) Wet interior ceiling. Exterior welding burnt the coating - repairs to coating not protecting the metal.

(48) Wet interior ceiling and access tube junction.

(49) Wet interior floor and fill pipe with silt stop and deflector plate. Coating is intact and in good condition.



(50) Wet interior access tube ladder does not have a fall prevention device.

(51) Wet interior lower sidewall coating is in good condition, with mineral staining.

(52) Wet interior floor - inside of access manway 3/4 covered with sediment prior to washout.

(53) Wet interior sidewall.

(54) Wet interior lower sidewall coating is in good condition, with mineral staining.

FIELD INSPECTION REPORT

PEDESTAL TANK

TANK OWNER: Decatur, MI
LOCATION: City Building
TYPE OF TANK: Sphere
MANUFACTURER: Universal
YEAR OF ERECTION: 1979
CAPACITY: 200,000 Gallons
LETTERING: DECATUR (2x)

PROJECT NUMBER: 22-80-01-01

DATE OF INSPECTION: 11/08/04
HEIGHT TO L.W.L.: 110 ft.
CONSTRUCTION METHOD: Weld
TYPE OF ROOF: Sphere
TYPE OF BOWL: Sphere
CONTRACT NO.: 6688-200

SITE CONDITIONS: No fence; small staging area.

NEIGHBORHOOD: Residential and City garage.

ACCESS: Gravel drive from City road to foundation.

POWER LINES: 49 ft. north (across road).

OTHER PROBLEMS: Road 10 ft. north – building within 40 ft.

GENERAL INFORMATION ABOUT PREVIOUS PAINTING (IF AVAILABLE):

	WET INT.	DRY INT.	EXTERIOR
DATE:	**1991**	**1979 (original)**	**1990**
CONTRACTOR:	**Pennington**		**LC United**
SURFACE PREP:	**SP10**		**SP6**
PAINT SYSTEM:	**Epoxy**	**Lead/alkyd**	**Urethane**
PAINT MANUF.:	**Tnemec**		**Tnemec**

PART 1 - FOUNDATION CONDITIONS:

1. Indications of differential foundation settlement: **No**
2. Indications of underground pipe leaks: **No**
3. Is soil eroded so foundation may be undermined: **No**
4. Are base plates, anchor bolts, or anchor bolt chairs deteriorated: **No**
5. Are shrubs, trees, etc. encroaching the foundation: **No**
6. Is grout deteriorated: **No**
7. Is concrete spalled, cracked, or deteriorated: **No**
   Build-up of soil on north foundation.

PART 2 - VALVE PIT CONDITIONS:

1. Is valve pit in good structural repair: **N/A**

2. Where are controls located: **Base cone**
3. Type of controls: **Generic**
4. Are controls heated: **No** Is tap heated: **No**
5. Does tank have cathodic protection: **No**
6. Does pit have an altitude valve: **N/A**
7. Is coating of piping and valves in good condition: **N/A**

PART 3 - EXTERIOR CONDITIONS:

1. Pedestal:
   Number of sections:
   a. General condition of topcoat: **Good**
      Estimated percent intact: **97%**
   b. Estimated percent primer intact: **98%**
   c. Discussion of coating: **Numerous spots of rock nick damage; spots have surface rust with undercutting.**

2. Bowl/Conical Section:
   a. General condition of topcoat: **Good** Mils: **9.5 - 13**
      Estimated percent intact: **99%**
   b. Estimated percent primer intact: **99%**
   c. Discussion of coating: **Faded and chalked; no coating breaks noted; minor mildew growth on surface.**

3. Equator/Sidewall Section:
   Number of sections:
   a. General condition of topcoat: **Good**
      Estimated percent intact: **99%**
   b. Estimated percent primer intact: **99%**
   c. Discussion of coating: **Faded and chalked; minor coating breaks on seams.**

4. Roof:
   a. General condition of topcoat: **Good**
      Estimated percent intact: **99%**
   b. Estimated percent primer intact: **99%**
   c. Discussion of coating: **Faded and chalked; no coating breaks noted.**

5. Additional information:
   a. Is there an aluminum coat under topcoat: **No**
   b. Results of adhesion tests, if recommended recoat: **3B; 6% - 15% loss of adhesion**
   c. Were any paint samples taken for lead: **No – system known lead free**

PART 4 - INTERIOR CONDITIONS:

DRY INTERIOR:

1. Base Cone:
   a. General condition of topcoat: **Good** Mils: **3.5 – 4.5**
      Percent intact: **98%**
   b. Percent primer intact: **99%**
   c. Discussion of coating: **Pinhole rusting on weld seams.**

2. Stem:
   a. General condition of topcoat: **Good**
      Percent intact: **99%**
   b. Percent primer intact: **99%**
   c. Discussion of coating: **Areas of pinhole rusting.**

3. Access Tube:
   a. General condition of topcoat: **Good**
      Percent intact: **99%**
   b. Percent primer intact: **99%**
   c. Discussion of coating: **Areas of pinhole rusting.**

4. Results of adhesion tests, if recommended recoat: **Not recommended**

Were any paint samples taken for lead: **No – system known to contain lead.**

WET INTERIOR:

1. Bowl/Conical Section:
   a. General condition of topcoat: **Good**
      Percent intact: **99%**
   b. Percent primer intact: **99%**
   c. Condition of steel: **Good**
      Starter pits: **0** Pits: **0**
   d. Estimate of pit welding: **0**
   e. Estimate of pit epoxy filling: **0**
   f. Number of lineal inches of seam welding: **0**
   g. Number of lineal inches of seam sealing: **0**
   h. Number of lineal inches of weld grinding: **0**
   i. Number of construction lugs: **0**
   j. Discussion of coating: **Fully intact; no coating breaks noted; mineral stained.**

2. Equator/Sidewall Section:
   a. General condition of topcoat: **Good**
      Percent intact: **99%**
   b. Percent of primer intact:
   c. Condition of steel: **Good**
      Starter pits: **0** Pits: **0**

d. Estimate of pit welding: **0**
e. Estimate of pit epoxy filling: **0**
f. Number of lineal inches of seam welding: **0**
g. Number of lineal inches of seam sealing: **0**
h. Number of lineal inches of weld grinding: **0**
i. Number of construction lugs: **0**
j. Discussion of coating: **Fully intact; no coating breaks noted; heavy mineral staining.**

3. Roof:
a. General condition of topcoat: **Good**
Percent intact: **99%**
b. Percent primer intact: **99%**
c. Condition of steel: **Good**
Starter pits: **0** Pits: **0**
d. Estimate of pit welding: **0**
e. Estimate of pit epoxy filling: **0**
f. Number of lineal inches of seam welding: **0**
g. Number of lineal inches of seam sealing: **0**
h. Number of lineal inches of weld grinding:
i. Number of construction lugs: **0**
j. Discussion of coating: **Fully intact; minor edge corrosion along lap seams and at burnt coating.**

Any peculiar problems: **No**

Recommendations: **Reinspect in 5 years.**

Results of adhesion tests, if recommended recoat: **N/A**

Were any paint samples taken for lead: **No – system known lead free.**

PART 5 - CONDITION OF ACCESSORIES:

1. a. Wet interior ladder: **Yes** Condition: **Good**
DIMENSIONS: 1. Toe clearance: **7 in.**
2. Width of rungs: **12 in.**
3. Thickness of rungs: **¾ in.**
4. Shape of rungs: **Round**
5. Length of longest unsupported section: **10 ft.**
6. Pitch: **90°**

b. Dry interior ladder: **Yes** Condition: **Good**
DIMENSIONS: 1. Toe clearance: **7 in.**
2. Width of rungs: **12 in.**

3. Thickness of rungs: **¾ in.**
4. Shape of rungs: **Round**
5. Length of longest unsupported section: **10 ft.**
6. Pitch: **90°**

c. Access tube ladder: **Yes** Condition: **Good**
DIMENSIONS: 1. Toe clearance: **7 in.**
2. Width of rungs: **12 in.**
3. Thickness of rungs: **¾ in.**
4. Shape of rungs: **Round**
5. Length of longest unsupported section: **10 ft.**
6. Pitch: **90°**

d. Any ladders caged: **No**

e. Any fall prevention devices: **Yes**
Where: **Wet and dry interiors** Design: **Rail**

2. Hatches:
Wet interior hatch size: **16 in. x 20 in.** Hinged: **No**
Gasket leaking: **No**
Roof hatch size: **24 in.** Hinged: **Yes**
Access tube hatch size: **24 in.** Hinged: **Yes**
Upper platform bird hatch size: **24 in.** Hinged: **Yes**

3. Does tank have cathodic caps: **No**

4. Condensate platform:
Structural condition: **Good**
Coating condition: **Fair; minor build-up of dirt and debris**

5. Condensate drain line:
Size: **1 in.** Material: **Metal** Condition: **Probably plugged**
Discharges to: **Splash area**

6. Upper platform: Dimensions: **Full**
Structural condition: **Good**
Coating condition: **Fair; minor build-up of dirt and debris.**

7. Exterior painter's rails:
Locations: **Top of stem** Shape: **Round** Condition: **Good**

8. Fill pipe: **10 in. diameter**
Is fill pipe insulated: **Yes** Type: **Rigid foam** Condition: **Fair**
Deflector plate/silt stop: **Both**

9. Is there a separate draw line: **No**

10. Does tank have a mud valve: **2** Size: **3 in.** Condition: **South works; north does not work**

11. Does tank have expansion joint: **Yes - glandular**
Can abrasive material deposited over joint enter packing material: **No**
Was it accessible for inspection: **No**

12. Roof vents:
Type: **Flow-through** Screened: **Yes** Condition: **Good**
Is there a vacuum vent: **No**
Is there an access tube vent: **No**
Is there a bolted painter's ventilation hatch: **No**

13. Is overflow pipe in good condition: **Yes** Size: **6 in.** Screened: **Yes – to be replaced by City**
Is there an air break: **Yes** Discharges to: **Splash area**

14. Aviation lights: **Yes** Operating: **Yes**
Other obstructions: **No**

15. Any previous repairs evident: **Base cone rock nick touch-ups.**

16. Priority repairs: **Replace overflow pipe screen.**

17. Miscellaneous repairs: **In-house repair of rock nicks on exterior base cone.**

18. Long-term maintenance and general comments: **Reinspect in 5 years for overcoat needs.**

ENGINEERS: **Brian Kretovic**
TECHNICIANS: **Jay Sherman and Chris Kreiner**
DATE: **11/08/04**

Field Inspection Report is prepared from the contractor's viewpoint. It contains most of the information the contractor needs to prepare his bid for any repairs or repainting. The Engineer uses it to prepare the engineering report. Cost estimates are more accurate if contractor problems can be anticipated. While prepared from the contractor's viewpoint, the only intended beneficiary is the owner. These reports are completed with diligence, but the accuracy is not guaranteed. The contractor is still advised to visit the site.

Appendix G

Well Inspection Reports

PEERLESS MIDWEST INC

January 30, 2017

Mr. Jim Ebling
Village of Decatur
DPW Director
114 N Phelps Street
Decatur, MI 49045

Re: Well #2 and #4 Updated Records

Dear Jim:

Enclosed, please find the updated records from the chemical rehabilitation of the #2 well and the overhaul of the #4 pump and motor that was completed last year. These are for insertion into your record book to keep it up to date. When we started the cleaning process, the well recorded a 16.7 specific capacity. At the end of the rehabilitation, the well recorded a 22.7 specific capacity. This is even better than the last time the well was cleaned in 2012, and recorded a 21.28 specific capacity.

We would once again like to thank you for giving Peerless-Midwest the opportunity to perform this service and trust that it was completed to your satisfaction. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Peerless-Midwest, Inc.

Frank Williams

Frank T. Williams

FTW:ftw
Enclosures

55860 Russell Industrial Pkwy., Mishawaka, IN 46545
574.254.9050 phone 574.254.9650 fax www.peerlessmidwest.com

VILLAGE OF DECATUR
DECATUR, MICHIGAN

HISTORY OF WELL #2

1930 Drilled new. Static 37', pumped 325 GPM at 94' pumping level for a specific capacity of 5.7.

1959 Layne tested well. 232 GPM @ 60#. 250 GPM @ 55#. 266 GPM @ 50#. 281GPM @ 45#. 300 GPM @ 40#. 310 GPM @ 35#. No cleaning necessary at this time.

1965 Layne cleaned well. Before cleaning, static 35', pumped 181 GPM @ 82' pumping level for a specific capacity of 3.8. After cleaning, pumped 350 GPM @ 77' pumping level for a specific capacity of 8.3.

1968 Layne cleaned well. Before cleaning, static 34', pumped 190 GPM @ 82' pumping level for a specific capacity of 3.9. After cleaning, pumped 340 GPM @ 47' pumping level for a specific capacity of 26.1.

1971 Layne cleaned well. Before cleaning, static 35', pumped 146 GPM @ 81' pumping level for a specific capacity of 3.1. After cleaning, pumped 244 GPM @ 46' pumping level for a specific capacity of 22.1.

2012 Peerless Midwest cleaned well. Before cleaning, static 32.5', pumped 250 GPM @ 51' pumping level for a specific capacity of 13.5. After cleaning, pumped 266 GPM @ 45' pumping level for a specific capacity of 21.28.

2016 Peerless Midwest cleaned well. Before cleaning, had a static of 28', pumped 250 GPM @ 43' pumping level for a specific capacity of 16.7. After cleaning, had a static water level of 28', pumped 250 GPM @ 39' pumping level for a specific capacity of 22.7.

PEERLESS MIDWEST INC

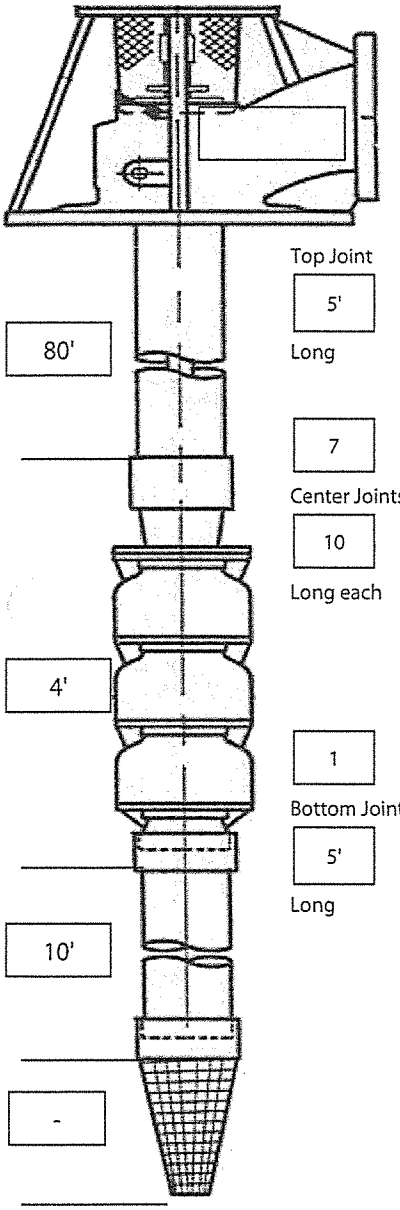
Mishawaka, IN / 574.254.9050
Westfield, IN / 317.896.2987
Ionia, MI / 616.527.0050
Grand Blanc, MI / 248.996.2721

VERTICAL TURBINE PUMP INSTALLATION REPORT

Sales Order No. 30110 Well No. 4 Pump # 79-10404 Date: 11-5-16

Owner City of Decatur City Decatur State MI

Location of Well N. 42.10728 / W. -085.95939



Total Setting 94'

MOTOR

Manufacturer	US
Horsepower	75
RPM	1775
Phase	3
Voltage	480
Full Load Amps	90
Svc Factor Amps	
Service Factor	
Serial No.	C0853214A1045
Type	RU
Frame	365TP
Shaft Dia.	1-1/2"
Shaft Length	100-1/2"
NRR	Yes
Key Size	3/8"
Bolt Circle	
CD	31 1/8"
Motor Overhauled?	Yes
Where	Enyart

GEAR DRIVE

Manufacturer	
Serial No.	
Gear Ratio	

SPECIAL/MISCELLANEOUS

Power Lines	OK
Need RO?	No

HEAD

Manufacturer	Floway
Type	16.5 x 8"
Disch Flg Size	8"
Base Plate	No
Head Shaft Dia.	1.5
Head Shaft Lgt.	100-1/2"
Coupled in Head	No

COLUMN

Water/Oil Lube	Water
Pipe Size	8"
Tubing Size/Type	-
Shaft Size	1 1/2"
Shaft Material	C.S.
Coupling Mtl.	C.S.

PUMPING DATA

Static Water Level	30'
System Pressure	77#
Test GPM	1019
Test PSI	77#
Pumping Level	52'
Test Duration	1
Spec Capacity	46.3
Volts	480
Amps	87-87-87

BLOWOFF

Size/Connection	6"

BOWL

Manufacturer	Floway
Model	LKM
Size	12"
No. Stages	4
Material	Cast
Clm Conn Size	8"
Shft Conn Size	1-1/2"
Impeller Trim	-

SUCTION

Threaded	X
Bell	
Size	
Special Paint	
Strainer	

WELL

Type	GWW
Casing Dia.	12"
Depth	192'
Top Hat Size	12"
Casing Vent	No

MONITOR SYSTEMS

Airline/Type	Copper
Airline Length	80'
Airline Fastened	Top 5'
Stilling Tube/Mtl	-
Tube Length	-

REMARKS Ran at 53hz - motor kicked out at 60hz

Installer(s) B. Armour / A. DeGeeter

VILLAGE OF DECATUR
DECATUR, MICHIGAN

HISTORY OF FLOWAY PUMP #79-107404 (WELL #4)

1979 Installed new, rated 500 GPM @ 210' TDH.

1985 Pump pulled and overhauled and had motor overhauled.

1987 Pump pulled and overhauled and had motor overhauled. Damage caused by vandalism.

1992 Pulled and overhauled pump and motor.

1999 Pump pulled and overhauled. Note: Pump upgraded, new motor and pump. 4-stage, 12 LKM, rated 1000 GPM @ 210' TDH.

2008 Pump and motor pulled and overhauled.

2016 Pump and motor pulled and overhauled.

PEERLESS MIDWEST INC

October 20, 2015

Mr. James Krizan
Village of Decatur
Village Manager
114 N Phelps Street
Decatur, MI 49045

Re: Annual Well and Pump Inspections

Dear James:

Enclosed with this letter please find the results of the well and pump inspections we recently performed on your water system. Also, a copy of our invoice is enclosed to perform this service. Please keep all of this information with your permanent records.

Well #2 has a current specific capacity of 16.1 gallons per foot of drawdown, as compared to 21.28 after the Well was cleaned in 2012. This well has declined significantly over the past year, but we would recommend monitoring the well's performance for another year before recommending a chemical rehabilitation. The pump was last overhauled in 2012 and is currently operating very close to its rated design conditions and shut off conditions. No further repairs are recommended at this time.

Well #3 has a current specific capacity of 37.0 gallons per foot of drawdown, as compared to 35.7 after the Well was cleaned in 2013. This well remains in good condition at this time with no repairs necessary. The pump was last overhauled in 2013, and is currently operating just below its rated design conditions, and above its shut off conditions. No further repairs are recommended at this time.

Well #4 has a current specific capacity of 56.6 gallons per foot of drawdown, as compared to 38.4 after the Well was cleaned in 1996. This well is in excellent condition. The pump in this well was last overhauled in 2008, and is operating above its rated design condition. No further work is recommended at this time.

To summarize, your system remains in excellent condition at this time with no work required

In closing, we would like to thank you for giving Peerless-Midwest the opportunity to perform this service and trust that it was completed to your satisfaction. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Peerless-Midwest, Inc.

Joel A. Annable
Project Manager

JAA:ftw
Enclosures

55860 Russell Industrial Pkwy., Mishawaka, IN 46545
574.254.9050 phone 574.254.9650 fax www.peerlessmidwest.com

PEERLESS MIDWEST INC.

55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location SE of Maintenance Building in Pump House N. 42.11107 / W. 085.97493

Well No. 2 Date Drilled 1930 Dia. 10" Depth 116' Type Well Tubular

Screen ID. 8" Screen Length 20' Depth to Top of Screen 96' Type Screen C&M Gauze

Dates of Cleaning 1965, 1968, 1971, 2012

Phone 269-423-7360 or 423-6114 Person to Contact James Krizan, Village Manager

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1930	37'	325	94'	-	5.7
AFTER LAST CLEANING	2012	32.5'	266	45'	-	21.28
AFTER LAST TEST	2014	29'	310	38'	60#	34.4
AT PUMP'S RATED FLOW	2015	27.5'	250	43'	60#	16.1
AT SYSTEM OPERATING PSI	2015	27.5'	224	41.5'	65#	16.0

Test Completed Through Meter ____ Flange or Thread Size 4" Confined Space Entry? No

Motor HP 20 Make U.S. Volts 220/440 RPM 1760 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required ____

Pump Mfg. Peerless/Floway Serial No. 90376 Airline Length 70'

Rated Capacity: 250 GPM 185' TDH Operating Pressure 57#

Total Setting 85' 4" Size of Packing 3/8" Date Installed 1965

Dates of Overhaul 1970, 1975, 1984, 1994, 1996, 2004, 2012

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease X Repack Pump X Grease Pump ____

Pump is Presently Developing 250 **GPM** 182' **TDH** **Projected Curve Capacity** 250 **GPM** 182' **TDH**

Shut Off Pressure 105 PSI Rated Shut Off Head 273 ft. Calculated Shut Off Head 270 ft.

Electrical Data (With Pump in Operation): 245/245/246 V 42 / 41 / 40 Amps 50 @ 220V Full Load Amps

Location of Power Lines Approx. 15' south of pump house Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 4" Materials Needed to Clean Well Drop out spool, two 90 degree elbows, two (2) hoses to tank, and 100' to waste.

Need a Smeal to Raise Pump? No Remarks Orifice Test.

Maintenance: Meter or 2" plug, 1-firehose to waste. Hand switch in pole building next to pump house.

Motor is screened.

Inspected By Doug Gentry Date Inspected October 14, 2015

PEERLESS MIDWEST INC

55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location 210' North of 86th St. 750' East of Harrison St. N. 42.10728 / W. 085.95939

Well No. 3 (South) Date Drilled 1977 Dia. 12" Depth 188' Type Well Tubular

Screen ID. 12" Screen Length 20' Depth to Top of Screen 168' Type Screen Johnson SSWW

Dates of Cleaning 1994, 2001, 2002, 2013

Phone 269-423-7360 or 423-6114 Person to Contact James Krizan, Village Manager

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1977	25'	1000	52'	-	37.0
AFTER LAST CLEANING	2013	31'	500	45'	55#	35.7
AFTER LAST TEST	2014	31'	480	44'	65#	36.9
AT PUMP'S RATED FLOW	2015	31'	500 orifice 480 meter	44.5'	65#	37.0
AT SYSTEM OPERATING PSI	2015	31'	468 orifice 450 meter	43.5'	70#	37.4

Test Completed Through Meter ___ Flange or Thread Size 6" Confined Space Entry? No

Motor HP 40 Make Newman Volts 208 RPM 1775 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required

Pump Mfg. Floway Serial No. 79-10405 Airline Length 50'

Rated Capacity: 500 GPM 210' TDH Operating Pressure 64#

Total Setting 64' Size of Packing 3/8" Date Installed 1979

Dates of Overhaul 1985, 1990, 1996, 1997(motor), 2003, 2013

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease X Repack Pump X Grease Pump

Pump is Presently Developing 500 **GPM** 195' **TDH** **Projected Curve Capacity** 500 **GPM** 195' **TDH**

Shut Off Pressure 103 PSI Rated Shut Off Head 264 ft. Calculated Shut Off Head 269 ft.

Electrical Data (With Pump in Operation): 500/498/500 V 43 / 45 / 44 Amps 48.8 @ 460v Full Load Amps

Location of Power Lines Approximately 40' away Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 16" Materials Needed to Clean Well Drop 6" spool and check elbow off head, (3) hoses to tank, and 75' to waste

Need a Smeal to Raise Pump? No Remarks Orifice Test.

Maintenance: Meter or 6" flang out wall 1 firehose to waste. Motor is screened.

Inspected By Doug Gentry Date Inspected October 14, 2015

PEERLESS MIDWEST INC
55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location 180' N of Well #3, 400' N of 86th St., 750' E of Harrison st. N. 42.10728 / W. 085.95939

Well No. 4 (North) Date Drilled 1979 Dia. 12" Depth 192' Type Well Tubular

Screen ID. 12" Screen Length 20' Depth to Top of Screen 172' Type Screen Johnson SSWW

Dates of Cleaning 1989, 1996

Phone 269-423-7360 or 423-6114 Person to Contact James Krizan, Village Manager

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1979	29'	1000	67' 6"	-	26.0
AFTER LAST CLEANING	1996	37'	500	40'	-	38.4
AFTER LAST TEST	2014	31'	960	46'	76#	64.0
AT PUMP'S RATED FLOW	2015	30'	962 orifice 920 meter	47'	107#	56.6
AT SYSTEM OPERATING PSI	2015	30'	854 orifice 840 meter	46'	86#	53.4

Test Completed Through Meter ___ Flange or Thread Size 6" Confined Space Entry? No

Motor HP 75 Make U.S. Volts 230/460 RPM 1775 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required

Pump Mfg. Floway Serial No. 79-10404 Airline Length 80'

Rated Capacity: 1000 GPM 210' TDH Operating Pressure 82#

Total Setting 94' Size of Packing 3/8" Date Installed 1979

Dates of Overhaul 1985, 1987, 1992, 1999, 2008

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease X Repack Pump X Grease Pump ___

Pump is Presently Developing *924 **GPM** *271' **TDH** **Projected Curve Capacity** 1000 **GPM** *257' **TDH**

Shut Off Pressure 140 PSI Rated Shut Off Head 320 ft. Calculated Shut Off Head *326 ft.

Electrical Data (With Pump in Operation): 495/495/493 V 98 / 97 / 95 Amps 90 @ 460V Full Load Amps

Location of Power Lines No Overhead Lines Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 18" Materials Needed to Clean Well Drop out 6" spool and check (3) hoses to tank, 75' to waste.

Need a Smeal to Raise Pump? No Remarks Orifice Test. *Test Ran at 1842 RPM, Projected Results at 1770 RPM. Second Step Ran at 55 Hz., 1686 RPM.

Maintenance: Meter or 6" flange out wall, 2 fire hoses to waste.

Inspected By Doug Gentry Date Inspected October 14, 2015

PEERLESS MIDWEST INC

November 12, 2014

Mr. Dale Avery
Village of Decatur
Water Department
114 N Phelps Street
Decatur, MI 49045

Re: Annual Well and Pump Inspections

Dear Dale:

Enclosed with this letter please find the results of the well and pump inspections we recently performed on your water system. Also, a copy of our invoice is enclosed to perform this service. Please keep all of this information with your permanent records.

Well #2 has a current specific capacity of 34.4 gallons per foot of drawdown, as compared to 21.28 after the Well was cleaned in 2012. This well remains in good condition at this time with no repairs necessary. The pump was last overhauled in 2012 and is currently operating very close to its rated design conditions and shut off conditions. No further repairs are recommended at this time.

Well #3 has a current specific capacity of 36.9 gallons per foot of drawdown, as compared to 35.7 after the Well was cleaned in 2013. This well remains in good condition at this time with no repairs necessary. The pump was last overhauled in 2013 and is currently operating very close to its rated design conditions and shut off conditions. No further repairs are recommended at this time.

Well #4 has a current specific capacity of 64.0 gallons per foot of drawdown, as compared to 38.4 after the Well was cleaned in 1996. This well is in good condition. The pump in this well was last overhauled in 2008 and is operating right at its rated design condition. No further work is recommended at this time.

To summarize, your system remains in excellent condition at this time with no work required.

In closing, we would like to thank you for giving Peerless-Midwest the opportunity to perform this service and trust that it was completed to your satisfaction. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Peerless-Midwest, Inc.

Joel A. Annable
Project Manager

JAA:ftw
Enclosures

55860 Russell Industrial Pkwy., Mishawaka, IN 46545
574.254.9050 phone 574.254.9650 fax www.peerlessmidwest.com

PEERLESS MIDWEST INC.
55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location SE of Maintenance Building in Pump House

Well No. 2 Date Drilled 1930 Dia. 10" Depth 116' Type Well Tubular

Screen ID. 8" Screen Length 20' Depth to Top of Screen 96' Type Screen C&M Gauze

Dates of Cleaning 1965, 1968, 1971, 2012

Phone 269-423-7360 or 423-6114 Person to Contact Dale Avery, Superintendent

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1930	37'	325	94'	-	5.7
AFTER LAST CLEANING	2012	32.5'	266	45'	-	21.28
AFTER LAST TEST	2013	29'	254	39'	58#	25.4
AT PUMP'S RATED FLOW	2014	29'	310	38'	60#	34.4
AT SYSTEM OPERATING PSI						

Test Completed Through Meter X Flange or Thread Size 4" Confined Space Entry? No

Motor HP 20 Make U.S. Volts 220/440 RPM 1760 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required

Pump Mfg. Peerless/Floway Serial No. 90376 Airline Length 70'

Rated Capacity: 250 GPM 185' TDH Operating Pressure 57#

Total Setting 85' 4" Size of Packing 3/8" Date Installed 1965

Dates of Overhaul 1970, 1975, 1984, 1994, 1996, 2004, 2012

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease Repack Pump X Grease Pump

Pump is Presently Developing 310 GPM 177' TDH **Projected Curve Capacity** 250 GPM 200' TDH

Shut Off Pressure 106 PSI Rated Shut Off Head 273 ft. Calculated Shut Off Head 274 ft.

Electrical Data (With Pump in Operation): 240 V 40 / 40 / 40 Amps 50 @ 220V Full Load Amps

Location of Power Lines Approx. 15' south of pump house Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 4" Materials Needed to Clean Well Drop out spool, two 90 degree elbows, two (2) hoses to tank, and 100' to waste.

Need a Smeal to Raise Pump? No Remarks

Maintenance: Meter or 2" plug, 1-firehose to waste. Hand switch in pole building next to pump house.

Motor is screened.

Inspected By Gary Wickizer Date Inspected October 29, 2014

PEERLESS MIDWEST INC

55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location 210' North of Prairie Ronde St. 750' East of Harrison St.

Well No. 3 (South) Date Drilled 1977 Dia. 12" Depth 188' Type Well Tubular

Screen ID. 12" Screen Length 20' Depth to Top of Screen 168' Type Screen Johnson SSWW

Dates of Cleaning 1994, 2001, 2002, 2013

Phone 269-423-7360 or 423-6114 Person to Contact Dale Avery, Superintendent

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1977	25'	1000	52'	-	37.0
AFTER LAST CLEANING	2013	31'	500	45'	55#	35.7
AFTER LAST TEST	2012	31.5'	400	48.5'	74#	23.5
AT PUMP'S RATED FLOW						
AT SYSTEM OPERATING PSI	2014	31'	480	44'	65#	36.9

Test Completed Through Meter X Flange or Thread Size 6" Confined Space Entry? No

Motor HP 40 Make Newman Volts 208 RPM 1775 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required

Pump Mfg. Floway Serial No. 79-10405 Airline Length 50'

Rated Capacity: 500 GPM 210' TDH Operating Pressure 64#

Total Setting 64' Size of Packing 3/8" Date Installed 1979

Dates of Overhaul 1985, 1990, 1996, 1997(motor), 2003, 2013

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease X Repack Pump X Grease Pump

Pump is Presently Developing 480 **GPM** 194' **TDH** **Projected Curve Capacity** 500 **GPM** 184' **TDH**

Shut Off Pressure 104 PSI Rated Shut Off Head 264 ft. Calculated Shut Off Head 271 ft.

Electrical Data (With Pump in Operation): 460 V 43 / 44 / 44 Amps 48.8 @ 460v Full Load Amps

Location of Power Lines Approximately 40' away Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 16" Materials Needed to Clean Well Drop 6" spool and check elbow off head, (3) hoses to tank, and 75' to waste

Need a Smeal to Raise Pump? No Remarks

Maintenance: Meter or 6" flang out wall 1 firehose to waste. Motor is screened.

Inspected By Gary Wickizer Date Inspected October 29, 2014

PEERLESS MIDWEST INC.
55860 Russell Industrial Parkway / Mishawaka, Indiana 46545 / 574.254.9050 / Fax 574.254.9650

WELL & PUMP SERVICE INSPECTION REPORT

Owner Village of Decatur City Decatur State MI

Location 180' N of Well #3, 400' N of Prairie Ronde St., 750' E of Harrison st.

Well No. 4 (North) Date Drilled 1979 Dia. 12" Depth 192' Type Well Tubular

Screen ID. 12" Screen Length 20' Depth to Top of Screen 172' Type Screen Johnson SSWW

Dates of Cleaning 1989, 1996

Phone 269-423-7360 or 423-6114 Person to Contact Dale Avery, Superintendent

	DATE	STATIC	G.P.M.	PUMPING LEVEL	PRESSURE	SPECIFIC CAPACITY
ORIGINAL	1979	29'	1000	67' 6"	-	26.0
AFTER LAST CLEANING	1996	37'	500	40'	-	38.4
AFTER LAST TEST	2013	31.5'	1010	50'	87#	54.6
AT PUMP'S RATED FLOW	2014	31'	960	46'	76#	64.0
AT SYSTEM OPERATING PSI						

Test Completed Through Meter X Flange or Thread Size 6" Confined Space Entry? No

Motor HP 75 Make U.S. Volts 230/460 RPM 1775 Phase 3

Gear Drive None HP - Ratio - RPM Meter Required

Pump Mfg. Floway Serial No. 79-10404 Airline Length 80'

Rated Capacity: 1000 GPM 210' TDH Operating Pressure 82#

Total Setting 94' Size of Packing 3/8" Date Installed 1979

Dates of Overhaul 1985, 1987, 1992, 1999, 2008

THE FOLLOWING IS TO BE PERFORMED DURING EACH INSPECTION

Is Check Valve Leaking? No Change Motor Oil & Grease X Repack Pump X Grease Pump

Pump is Presently Developing 960 GPM 222' TDH Projected Curve Capacity 1000 GPM 210' TDH

Shut Off Pressure 120 PSI Rated Shut Off Head 320 ft. Calculated Shut Off Head 308 ft.

Electrical Data (With Pump in Operation): 460 V 96 / 97 / 99 Amps 90 @ 460V Full Load Amps

Location of Power Lines No Overhead Lines Can Electrical Box be Locked Out? Yes

Distance From Top of Pump Pedestal to Grade 18" Materials Needed to Clean Well Drop out 6" spool and check (3) hoses to tank, 75' to waste.

Need a Smeal to Raise Pump? No Remarks On/Off Switch Does Not Disable VFD, Pull Disconnect When Running Service

Maintenance: Meter or 6" flange out wall, 2 fire hoses to waste.

Inspected By Gary Wickizer Date Inspected October 29, 2014