Wastewater Collection System
Asset Management Plan
Wolfeboro, New Hampshire

December 2017

2156.02

Prepared by:

UNDERWOOD engineers

Table of Contents

1. Executive Summary 5
   1.1. System Overview and Summary of Assets Owned 5
   1.2. Financial Overview 5
   1.3. Financial Impact 6
   1.4. Criticality 6
   1.5. Implementation of Asset Management Program 7
2. Introduction 9
   2.1. What is Asset Management? 10
   2.2. Benefits 10
   2.3. Core Components 10
   2.4. Goals 11
   2.5. Related Asset Management Work 12
3. Asset Inventory 13
   3.1. Utility Overview 13
   3.2. Pumping Stations 14
   3.3. Piping Inventory 15
   3.4. Sanitary Sewer Structures 19
   3.5. Other Assets 19
   3.6. AM Inventory Maps and Worksheets 19
      3.6.1. Organization 19
      3.6.2. Condition 20
      3.6.3. Remaining Useful Life 20
4. Level of Service 22
   4.1. Introduction 22
   4.2. Level of Service Statement 22
   4.3. Level of Service Performance 23
5. Critical Assets and Priority Projects 24
   5.1. Procedure for Ranking/Criteria 24
   5.2. Probability of Failure 25
   5.3. Consequence of Failure 26
   5.4. Identification of Critical Assets – Pumping Stations 27
   5.5. Evaluation of Gravity Collection Mains and Force Mains 30

5.6. Gravity Collection System Piping – Age and Material 30
5.7. Additional Pipe Criticality Factors 31
5.8. Sanitary Sewer Structures 32
5.9. Criticality of Collection System Piping and Manholes 33
6. Life Cycle Costing 34
6.1. Life Cycle Costs 34
6.2. Life Cycle Planning 36
6.3. Optimizing Pipe Renewals 37
7. Funding Plan 38
7.1. Funding Overview 38
7.2. Short-term Funding Needs 38
7.3. Long Term Funding Strategy 39
8. Asset Management Program Implementation 41
8.1. Maps and GIS Data 41
8.2. Replacement Scheduling and Financial Planning Spreadsheet 41
8.3. Next Steps 42
8.4. Training for Staff 43
8.5. Customer Outreach 43
8.6. Suggested Communication Plan 44
9. Conclusions and Recommendations 45
9.1. Summary of Assets Owned 45
9.2. Ten Year Capital Improvement Plan 45
9.3. Long Term Funding Needs 46
9.4. Implementation of AM Plan 47
9.5. Communication 48
10. References 49

Tables

Table ES-1. Summary of Sewer System Assets 5
Table ES-2. Estimated Funding Need Next Ten Years 5
Table ES-3. Estimated Funding Needs Next 100 Years 6
Table ES-4. Collection System Replacement Costs by Criticality 7
Table 5. Pumping Station Summary 14
Table 6. Wastewater Piping by Ownership and Type 16
Table 7. Wastewater Piping by Diameter 17
Table 8. Wastewater Piping by Material 17
Table 9. Wastewater Piping Length by Year Installed 18
Table 10. Condition Scoring of Assets 20
Table 11. Estimated Useful Lives of Assets 21
Table 12. Level of Service Statement 22
Table 13. Level of Service Performance 23
Table 14. Probability of Failure Scoring 26
Table 15. Ranking Based on Remaining Useful Life 26
Table 16. Consequence of Failure Scoring 27
Table 17. Pumping Station Risk Scores 29
Table 18. Critical Pipe Analysis Criteria 30
Table 19. Pipe by Criticality 33
Table 20. Structures by Criticality 33
Table 21. Wastewater System Replacement Projections 34
Table 22. Funding Needs Next Ten Years 38
Table 23. Funding Needs Next 100 Years 39
Table 24. Communication Plan 44
Table 25. Summary of Sewer System Assets 45
Table 26. Ten-Year CIP Projects and Estimated Costs 46
Table 27. Collection System Replacement Costs by Criticality 47

Figures

Figure 1. Flow Chart for the Core Steps of Asset Management 11
Figure 2. General Criticality Matrix 24
Figure 3. Pumping Station Criticality Matrix 29
Figure 4. Major Asset Replacement Costs 35
Figure 5. Lifecycle Costs for Major Wastewater System Assets 36
Figure 6. Overview of Asset Management Program 42

Appendices

A. Maps

A-1. Collection System Overview
A-2. Overview of Pipe by Diameter
A-3. Overview of Pipe by Material
A-4. Overview of Pipe by Year Installed
A-5. Overview of Completed Inspections
A-6. Overview of Criticality
A-7 Collection System Detail – Mill Street
A-8 Collection System Detail – Lehner Street
A-9. Collection System Detail – Sewall Road
A-10. Collection System Detail – Clark Road Area
A-11. Collection System Detail – Elm Street Area
A-12. Collection System Detail – Brewster Academy

B. Attribute Table Spreadsheets

B-1. Pipe Inventory Attribute Table
B-2. Pipe Summary Tables
B-3. Manhole Inventory Attribute Table
B-4. Manhole Summary Tables
B-5. Sewer Facility Inspections

C. Pumping Station Spreadsheets

C-1. Pumping Station Data Sheet
C-2. Summary Tables

D. Financial Schedules and Graphs

E. Sewer Pipe and Sewer Manhole AMP Rating

F. Asset Management Brochure

1. Executive Summary

1.1. System Overview and Summary of Assets Owned

Wolfeboro's major collection system components are summarized in **Table ES-1** below.

Table ES-1. Summary of Sewer System Assets

Asset	Description
Collection Mains	Approximately 59,000 lf of gravity collection mains. An estimated $300,000 worth of replacements is needed in the next ten years.
Force Mains and Low Pressure	Nearly 24,000 lf of force mains, including low pressure mains. No replacements anticipated until after 2046.
Sanitary Sewer Structures	There are 342 structures in the Town's collection system. The majority, 325, are manholes. The remaining 17 are force main clean-outs or air release valves.
Pumping Stations	Nine town-owned pumping stations. Slightly over $2 million worth of replacements and upgrades will be required in the next ten years.

1.2. Financial Overview

The Town is currently paying down debt for past wastewater system improvement projects. Debt service payments for past I&I work on the sanitary sewer collection system are approximately $180,000 per year. An additional $600,000 per year is required for improvements to the wastewater effluent disposal system. As those debt service payments decline, more cash will be available to place into reserves for future wastewater system needs. Estimated funding needs for the next ten years and one-hundred years are provided in **Table ES-2** and **Table ES-3**.

Table ES-2. Estimated Funding Need Next Ten Years

Year	Pumping Stations	Sewer Pipes	Structures	Total
2017	$855,000	$0	$130,000	**$985,000**
2018	$100,000	$0	$0	**$100,000**
2019	$10,000	$0	$0	**$10,000**
2020	$350,000	$0	$0	**$350,000**
2021	$215,000	$0	$0	**$215,000**
2022	$235,000	$0	$0	**$235,000**
2023	$0	$0	$0	**$0**
2024	$150,000	$0	$0	**$150,000**
2025	$70,000	$298,563	$0	**$368,563**
2026	$20,000	$0	$0	**$20,000**
TOTAL	**$2,005,000**	**$298,563**	**$130,000**	**$2,433,563**

Table ES-3. Estimated Funding Needs Next 100 Years

Decade	Pumping Stations	Sewer Pipes	Manholes	Total
2017-2026	$2,005,000	$298,563	$130,000	**$2,433,563**
2027-2036	$1,070,000	$388,807	$140,000	**$1,598,807**
2037-2046	$660,000	$477,342	$20,000	**$1,157,342**
2047-2056	$1,690,000	$1,703,703	$1,420,000	**$4,813,703**
2057-2066	$1,215,000	$209,616	$670,000	**$2,094,616**
2067-2076	$870,000	$6,860,052	$330,000	**$8,060,052**
2077-2086	$1,550,000	$4,565,906	$290,000	**$6,405,906**
2087-2096	$1,595,000	$7,498,570	$130,000	**$9,223,570**
2097-2106	$595,000	$3,300,421	$140,000	**$4,035,421**
2107-2116	$1,455,000	$601,820	$0	**$2,056,820**
Unknown	$0	$3,472,721	$420,000	**$3,892,721**
TOTAL	**$12,705,000**	**$29,377,522**	**$3,690,000**	**$45,772,522**

These estimates are based on full replacement cost. However, rather than full replacement, it is possible that assets can be rehabilitated instead. For instance, rather than replacing pipe, it may be possible to prolong its useful life by lining it. These determinations will need to be made on an ongoing basis.

1.3. Financial Impact

The Town is currently paying down debt for past wastewater system improvement projects. Debt service payments for past I&I work on the sanitary sewer collection system are approximately $180,000 per year. Debt service payments of $600,000 per year are required for improvements to the wastewater effluent disposal system. As those debt service payments decline, more cash will be available to place into reserves for future wastewater system needs.

Ideally, the Town will be able to keep rates stable and affordable while at the same time setting aside reserves sufficient to cover needed replacements and upgrades.

1.4. Criticality

Often there are not enough financial and physical resources to address the needs of the entire infrastructure system at the same time. Some assets are very important to system operation while others are not. The purpose of defining critical assets is to determine where limited resources should be allocated. By determining a "probability of failure" and an "impact of failure", the Town can determine where best to direct its resources. Long term costs are organized by criticality in **Table ES-4**.

Table ES-4. Collection System Replacement Costs by Criticality

Decade of Scheduled Replacement	Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
2017-2026	$1,518,563	$335,000	$340,000	$240,000	$2,433,563
2027-2036	$453,865	$134,942	$560,000	$450,000	$1,598,807
2037-2046	$120,000	$487,342	$200,000	$350,000	$1,157,342
2047-2056	$555,000	$230,000	$2,480,901	$1,547,801	$4,813,703
2057-2066	$10,000	$110,000	$870,000	$1,104,616	$2,094,616
2067-2076	$50,000	$105,000	$4,107,644	$3,797,409	$8,060,052
2077-2086	$455,000	$240,000	$3,408,611	$2,302,296	$6,405,906
2087-2096	$700,000	$40,000	$2,508,375	$5,975,196	$9,223,570
2097-2106	$90,000	$60,000	$948,963	$2,936,458	$4,035,421
2107-2116	$455,000	$280,000	$1,068,308	$253,512	$2,056,820
Unknown	$183,351	$3,688,853	$20,517	$0	$3,892,721
Grand Total	**$4,590,779**	**$5,711,137**	**$16,513,318**	**$18,957,287**	**$45,772,522**

Ideally, replacement costs will be spread out as evenly as possible, meaning that the town will require nearly $460,000 per year over the next 100 years unless grants become available or rehabilitation strategies less costly than full replacement are feasible.

1.5. Implementation of Asset Management Program

In order to plan for long-term needs in the most cost-efficient way, the Town will need to continue to pursue its Asset Management Program. The following steps should be taken going forward.

- Continue to collect and update asset data and condition assessment and add to Asset Inventory system. Update on an ongoing basis.
    - Record service and failure history for assets to refine the estimated useful life.
    - Evaluate remaining useful life based on available condition information.
    - It is recommended that one person assume responsibility for updating the Asset Inventory system and keeping track of asset failures. However, an additional employee should be trained as a back-up.
- Update distribution map when pipes are installed.
- Monitor performance data and complaints.
- Update critical assets as renewals are made and information is collected.
    - As assets are replaced and refurbished, update the "probability of failure" ranking to identify which assets are most critical.

- Update life cycle costs and budgeting as needed.
- Evaluate options for ongoing asset management system software or other tools.
- Continue to refine and improve asset management information, tools and capabilities.

2. Introduction

The Town of Wolfeboro is continuing its commitment to provide safe and reliable wastewater collection, transmission and treatment within its service area. The Town understands that this is critical to public health, economic prosperity, and quality of life within the community it serves. Significant investments have been made to build, expand and improve wastewater infrastructure, but an ongoing, well-coordinated effort will be required in order to effectively manage these aging systems. The implementation of an Asset Management Program (AMP) will meet this need.

Asset Management (AM) is an approach to mitigating the challenge of aging infrastructure and making informed repair and replacement decisions. The Town has already developed an AM program to manage its potable water facilities and its wastewater treatment facility. This program will focus on the wastewater collection system.

It is important to understand that this report is just a snapshot in time. The intent is that the electronic maps and spreadsheets, with imbedded tables and figures, will be continuously updated by the Town and, for the latest information, the AMP files must be viewed. Quarterly updates at a minimum should be performed. Further, it should be understood that the report, maps, and spreadsheets constitute a framework for an AM Program, but should not be considered all encompassing. We encourage the Town to add additional assets and recurring expenses to the program as appropriate.

The Town of Wolfeboro's sanitary sewer collection system is currently mapped in a GIS-based format. However, this map appears to have been derived from an older AutoCAD map, which required updating and which also lacked complete information about the age, material and condition of the assets. This information has been included as part of this asset management effort. Periodic review and updates will be required to ensure that the information is as accurate as possible.

In addition, the following information should continue to be assembled into the asset management program.

- Pictures of every asset
- Manhole inspection logs
- Pipe TV inspection logs
- Pumping station inspection reports
- Asset inspection and repair records
- Routine maintenance requirements

AM is a way of doing business to provide the required level of service in the most cost effective way.

2.1. What is Asset Management?

Asset Management is a way of doing business intended to ensure the long-term sustainability of a system. The goal of AM is to maintain a desired level of service at a feasible and practical life cycle cost (EPA, 2008).

Successful Asset Management programming brings together the key elements to managing a wastewater system sustainably:

- Stakeholders - from staff to customers
- Budgeting and Funding
- Sustainable Practices
- Information and Data Control

2.2. Benefits

Benefits that Wolfeboro intends to achieve by implementing an AM Plan include:

- Improving system knowledge and data.
- Meeting service expectations and regulatory requirements.
- More efficient allocation of capital funds to critical assets.
- Prolonging asset life and aiding in rehabilitation/repair/replacement decisions through efficient and focused maintenance and replacements.
- Establishing defendable budgets for sustainability.

2.3. Core Components

The framework of this AM plan is the five core steps of Asset Management (EPA, 2008).

- **Asset Inventory -** What does the system own and what is its condition?
- **Level of Service -** What level is needed and how does the system actually perform?
- **Critical Assets -** What are the most important risks to manage?
- **Life Cycle Costing -** What will it cost and when?
- **Long-Term Funding Strategy -** How does the system pay the costs?

The development of the plan is followed by Implementation, an ongoing process of action, evaluation, and revision (**Figure 1**).

Figure 1. Flow Chart for the Core Steps of Asset Management

2.4. Goals

This Asset Management Plan is intended to establish an initial AM Program for Wolfeboro to make more informed decisions for sustainable operation. Goals for the AM Plan as outlined in the scope of work include:

- Update the inventory of major wastewater system assets.
- Identify criteria for the level of service to be maintained.
- Identify critical assets and priority projects for replacement/rehabilitation.
- Evaluate life cycle costs for major assets.
- Identify long term planning and funding strategies for improvements, in phases, that are in line with the fiscal capacity of the Town.
- Identify a communication plan to inform customers of the asset management plan
- Identify a training plan for Town staff.

Keys to Successful AM

- *Keep it simple*
- *Form a living document*
- *Bring everyone on board*

2.5. Related Asset Management Work

This Asset Management plan complements and builds on other previously completed or ongoing work. The Town made a significant effort to verify and document the condition of its sanitary sewer assets. In particular, the Town has inspected most gravity collection mains and manholes within its service area. In addition, the Town has completed an asset management program for its potable water treatment and distribution system; and its wastewater treatment facility.

As a result of this ongoing effort the following information is available.

- Documents pertaining to the pumping stations.
    - Pumping Station O&M Manuals.
    - Pumping station inspections and evaluations.
    - Maintenance forms completed by Town staff.
- Documents pertaining to I&I inspections and repairs.
    - Manhole inspection forms.
    - CCTV inspection logs for gravity mains.
    - Results of flow isolation testing.
    - Record drawings related to repair work.

3. Asset Inventory

The Asset Inventory and Assessment is the necessary first step of AM. The inventory collects and organizes data in a useful way to make better management decisions. Information includes:

- List of assets
- Location
- Condition
- Age
- Remaining useful life
- Service history
- Replacement cost
- Noteworthy issues

Underwood Engineers used the following sources of information to develop an inventory of Wolfeboro's assets:

- Data and record drawings provided by Wolfeboro including sewer main size, length and location
- Pumping station service history information from Wolfeboro
- Discussions with Wolfeboro Staff
- Previous engineering reports by UE and others
- Site visits

3.1. Utility Overview

The Wolfeboro area is served by a municipal wastewater system owned and operated by the Town of Wolfeboro. The system consists of nine (9) different sub-basins each with their own pumping station, providing wastewater service to approximately 1,000 customers. The system generates about 300,000 gallons per day and is received at the Wolfeboro Wastewater Treatment Facility. The facility is permitted for 600,000 gallons per day.

Nearly all of the wastewater collected within the service area is transmitted to the Mill Street Pumping Station, which receives wastewater from the Town-owned pumping stations located in the other eight (8) sub-basins.

Wolfeboro's treatment facility is owned by the Town, but managed by the contract operations firm Woodard & Curran. As mentioned, the facility receives the collected waste from the sewer system, but also accepts septage from licensed haulers on a reservation basis. After treatment, the effluent is pumped to an Effluent Storage Pond (ESP) before it is pumped to spray irrigation fields adjacent to the ESP or 2.5 miles to Rapid Infiltration Basins (RIBs). All wastewater is treated and disposed of in accordance with the NHDES permit.

3.2. Pumping Stations

Detailed information sheets for each pumping station is provided in **Appendix C-1,** and the pumping station locations are mapped in **Appendix A**. A summary table (**Table 5**) including the general characteristics of each pumping station is provided below.

Table 5. Pumping Station Summary

Asset	Notes
Mill Street Pumping Station	• Originally built in 1938. Some structures, such as the original wet well are still in use. Wet well condition is poor. • A wet well addition was built in 1972, and additional upgrades such as pump and motor replacements have been completed over the years. • Nearly all wastewater collected throughout the system is routed through this pumping station. • System-wide flow measurement data is collected at this pumping station. • A back-up generator and automatic transfer switch are available and operating.
Lehner Street Pumping Station	• Originally built in 1938. Some structures such as the original wet well are still in use. • Wet well access and condition are pressing issues, as are space limitations within the pump building. • Upgrades and replacements have been completed periodically. • All wastewater collected within the southeast section of the service area is routed through this pumping station. • A back-up generator and automatic transfer switch are available and operating.
Clark Road Pumping Station	• Originally built in 1985. • Wet well and fiberglass enclosure are in good condition. • Wastewater collected from within the Fairway View/Eagle Trace area and the Greenleaf/Romney areas are routed through this pumping station, and on to the Lehner Street Pumping Station. • Pumps and motors have been recently upgraded. • A back-up generator and automatic transfer switch are available and operating.
Fairway View Pumping Station	• Originally built in 1988. • Collects wastewater from within a small subdivision and routes it to the Clark Road Pumping station. • The wet well consists of a steel casing which meets a concrete wet well. I&I has been observed entering the structure where the casing meets the wet well.

Greenleaf Pumping Station	• Originally built in 1985. • Collects wastewater from a small residential area and routes it to the Clark Road Pumping station.
Elm Street Pumping Station	• Originally built in 1991. • Collects wastewater from the northeast area of the collection system and routes it to Mill Street Pumping station.
Willow Street Pumping Station	• Originally built in 2005. • Collects wastewater from a small multifamily development and transmits it to the Elm Street Pumping station. • Condition is good overall, with no immediate attention required.
Crescent Point Pumping Station	• Originally built in 2005. • The pumping station components themselves are in good condition with no immediate attention required. • The generator and automatic transfer switch are in poor condition.
Sewall Road Pumping Station	• Originally built in 1988 and upgraded in 2004. Only structure from original pumping station is the wet well. • Most components are in good condition, with the exception of the odor control unit, which is non-functional.

3.3. Piping Inventory

Wolfeboro owns and operates slightly over eleven (11) miles of sewer collection system pipe of various materials, age, and sizes. Due to the Town's ongoing effort to identify and eliminate sources of I&I, nearly all of the system has been inspected or tested. Therefore, a great deal of information is available about the condition of the system components. A major challenge going forward is to roll that condition information into the asset management program in order to make repair or replace decisions in a systematic way that makes the wisest possible use of available resources. A Sewer Pipe and Sewer Manhole AMP Rating document has been prepared to facilitate the assignment of condition scores to each system component. That document is included in **Appendix E**. A map of system repairs has been provided in **Appendix A-5.**

An additional issue related to I&I is the potential contribution from private collection systems that feed into the Town's system. Those systems were mapped as part of the asset management effort. Brewster Academy's system is particularly extensive. Therefore, a detailed map of that system has been provided in **Appendix A-12**.

UE has updated and consolidated the Town's collection system data into a GIS-based map which includes the most accurate information currently available on pipe location, lengths, size, and type. Paper versions of the updated Sewer Collection Maps can be found in **Appendix A**, and associated attribute tables can be found in **Appendix B**. The electronic versions will be provided to the Town staff for their use.

Tables 6 through 9 below summarize the collection system pipe data by material, size, and age. Although material and age often correlate poorly with failure, this information may help to locate older more critical pipes in the future as pipe condition and performance data is reviewed, verified and scored.

Table 6. Wastewater Piping by Ownership and Type

SEWER MAINS BY OWNERSHIP AND TYPE					
Owner	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
15 Pine Hill Road				147	147
Avery Cottages				1,363	1,363
Brewster Academy	2,152			3,026	5,178
Clipper Home - Nursing Home	784				784
Coves End				1,093	1,093
Edgewood Drive				429	429
Fawn Haven	468				468
Golf Course				934	934
Gov Wentworth Regional School District	1,254			1,206	2,459
Harriman Hill				2,429	2,429
Romney Complex				1,365	1,365
Sky Ridge Farm Condo				500	500
Taylor Home	2,302		517		2,820
Town	59,039	1,098	11,595	12,473	84,205
Wesley Lane	576				576
Grand Totals	**66,575**	**1,098**	**12,113**	**24,965**	**104,750**

Table 7. Wastewater Piping by Diameter

TOWN-OWNED SEWER MAINS BY DIAMETER AND TYPE					
Diameter	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
2				377	377
2.5				4,662	4,662
3				1,888	1,888
4	86		1,928	1,062	3,075
6	3,034	785	5,422		9,240
8	44,564	313			44,878
10	10,883		533		11,416
12	85		2,817		2,902
Unknown	388		895	4,484	5,767
GrandTotal	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

Table 8. Wastewater Piping by Material

TOWN-OWNED SEWER MAINS BY MATERIAL AND TYPE					
Material	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
AC	24,331	44			24,375
CI	1,547	785	3,351		5,682
CLDI			1,840		1,840
DI	875		1,047		1,922
PVC	27,705		4,463	7,988	40,156
VC	4,222	269			4,491
Unknown	360		895	4,484	5,739
GrandTotal	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

Table 9. Wastewater Piping Length by Year Installed

TOWN-OWNED SEWER MAINS BY YEAR INSTALLED AND TYPE					
Year Installed	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
Unknown	4,489		895	4,538	9,922
1930	853				853
1938	2,184		1,047		3,231
1940	1,098				1,098
1956	2,744	269			3,013
1971	599	785	2,817		4,201
1977	25,482	44			25,527
1980	235				235
1985	2,311		1,439		3,750
1988	4,692		1,515		6,206
1989	1,752		676	7,935	10,362
1991	938		1,840		2,778
1992	1,069		533		1,602
1993	2,681				2,681
1998	1,848				1,848
2003	1,407				1,407
2005	3,201		833		4,034
2010	1,374				1,374
2011	81				81
Grand Total	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

3.4. Sanitary Sewer Structures

In addition to piping the Town owns and maintains 342 sanitary sewer structures. The majority, 325, are manholes. The remaining seventeen are force main clean-outs and air release valves.

3.5. Other Assets

This plan focuses on major process related assets (collection, pumping, transmission). Other assets that support the Wolfeboro system are assumed to be managed under Wolfeboro's current maintenance programs and the annual operating budget. These assets include:

- Administration and maintenance buildings
- Vehicles
- SCADA/telemetry systems (other than what has been noted)
- Equipment and tools
- Spare parts and materials

3.6. AM Inventory Maps and Worksheets

The assets initially managed under this plan are summarized in sewer collection system maps and associated attribute tables (**Appendices A and B**); and in the Financial Planning and Replacement spreadsheet (**Appendix C**). Data collection and revision should continue as part of Wolfeboro's operating routine, and the Town should continue to build GIS data collection and management capabilities among utility staff.

3.6.1. Organization

The initial asset inventory for Wolfeboro was imported from an AutoCAD map into ArcMap. The file was updated to include repairs and new installations. Additional data about the facilities was gathered from record drawings, studies and reports. That data includes material, age, and diameter.

The facilities are segregated into three major functional categories:

- Pumping stations
- Wastewater Piping
- Sanitary Sewer Structures

The wastewater system was broken down into nine sub-basins in accordance with the areas served by each pumping station.

- Mill Street Sub-basin: Includes the congested commercial area on the northern tip of Lake Winnipesaukee and the west shore of Front Bay; all four siphons; and the transmission main to the wastewater treatment facility. It also serves Brewster Academy, a major institutional customer.
- Lehner Street Sub-basin: Includes the congested commercial area on the eastern shore of Front Bay. It also serves two major institutional customers – Huggins Hospital and the School District.
- Clark Road Sub-basin: Serves primarily residential customers, but also includes Clipper Nursing Home.
- Greenleaf Drive Sub-basin: Small basin feeding into Clark Road Sub-basin; serves residential customers.
- Fairway View Sub-basin: Small basin feeding into Clark Road Sub-basin; serves residential customers.
- Elm Street Sub-basin: Serves large residential area and directs flow to the siphon crossing from Bay Street to the Mill Street area.
- Crescent Point Sub-basin: Serves a small residential area along Crescent lake. Feeds into Elm Street Pumping station.
- Willow Street Sub-basin: Serves a very small residential area. Feeds into Elm Street Pumping station.

The inventory can be expanded in the future with other asset categories and/or further breakdown. Assets need only be included if they are cost effective to actively manage.

3.6.2. Condition

As an asset's condition deteriorates it is more likely to fail. Much of the Town's collection system has been inspected in an effort to locate and correct I&I issues. There is a voluminous amount of data available regarding the condition of the system. Compiling and making use of that data will be a next step in the ongoing asset management program.

A rating system has been devised and is included in **Appendix E** and is summarized below in **Table 10**.

Table 10. Condition Scoring of Assets

Rating	Description
1 - Excellent	Like new, in full working order
2 - Good	Fully functional, minor maintenance needed only
3 - Fair	Minor defects, should be reassessed within five years
4 - Poor	Significant defects, should be addressed within one year
5 - Very Poor	Major defects, immediate attention required

3.6.3. Remaining Useful Life

Remaining useful life for each asset was initially determined by subtracting its age from the typical range of life assuming routine maintenance (**Table 11**). If appropriate, the remaining useful life was adjusted to account for recent refurbishments or repairs. The estimated lifetimes should be refined as Wolfeboro builds experience and collects data.

Table 11. Estimated Useful Lives of Assets

Collection System Facilities	
Gravity Mains	95-115
Manholes	75
Pumping station Components	15-100
Force Mains	100-115

References: AWWA Buried No Longer, New Mexico Environmental Finance Center

4. Level of Service

4.1. Introduction

The Level of Service (LOS) Statement defines the way in which the utility managers and operators want the system to perform over the long term (NMEFC, 2006). The LOS must include standards for regulatory compliance and may include additional components such as quality, quantity, and reliability. Specific service items should provide criteria for measuring performance. Standards included in the LOS should also be relevant, achievable, and in line with customers' expectations. These standards can grow as Asset Management continues to be implemented.

Important functions of the Level of Service include:

- Determining critical assets
- Assessing utility performance
- Linking costs and services
- Communicating the system's operation to customers

4.2. Level of Service Statement

To build the initial LOS Statement, key areas of service are suggested in **Table 12**. This is a product of discussions with Wolfeboro staff and a meeting on September 12, 2017.

Table 12. Level of Service Statement

Area of Service	Service Performance	Target Performance Level
Compliance	Continue to monitor the system for significant sources of inflow and infiltration (I&I) and repair as quickly as possible.	Inspection and repair at scheduled intervals
	Avoid system backups.	100%
Capacity	Ensure that wastewater facilities have the capacity to meet planned growth.	100%
Reliability	Notification of 48 hours prior to planned shutdowns.	100%
	Repair unplanned shutdowns or breaks within 36 hours.	95% for commercial and institutional customers. 85% for low density residential.

4.3. Level of Service Performance

Currently, Wolfeboro appears to provide a high level of service, with minimal reports of customer complaints, sewer main backups/overflows and equipment failures. The Town makes an effort to handle maintenance, service and performance issues proactively. Current general performance is summarized in **Table 13**. Collecting and tracking additional data for performance metrics over time will help to verify the actual Level of Service the Town is providing.

Table 13. Level of Service Performance

Area of Performance	Performance Achieved
Compliance	• In compliance with permit requirements.
Capacity	• Capacity is adequate in accordance with the latest growth projections.
Reliability	• Wolfeboro is currently meeting reliability requirements.

5. Critical Assets and Priority Projects

Often there are not enough financial and physical resources to address the needs of the entire infrastructure system at the same time. Some assets are very important to system operation while others are not. The purpose of defining critical assets is to determine where limited resources should be allocated to meet the required LOS. Wolfeboro recognizes that its critical wastewater infrastructure includes the gravity sewer interceptor, the multiple pumping stations, the force mains and siphons. The assets among these with the highest criticality or risk should be prioritized for improvements.

5.1. Procedure for Ranking/Criteria

A common approach to determining risk is by the combination of probability of failure and consequence of failure (NMEFC, 2006). These measures are defined in the sections that follow. Risk scoring provides a defensible prioritization for replacement, rehabilitation, or maintenance and is graphically represented in **Figure 2**. "Risk" is short for "Business Risk Exposure".

Risk = Probability of Failure X Consequence of Failure

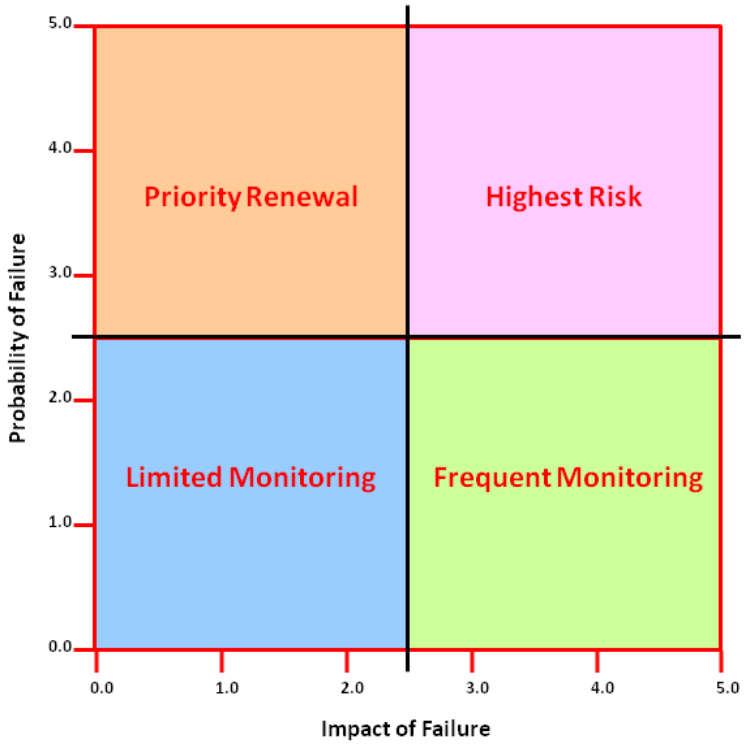


Figure 2. General Criticality Matrix

The most critical assets, with the highest risk score, are those that are more likely to fail and have major consequences for failure. Replacing these assets over others may provide the greatest benefit (reduction in risk).

Management of each asset depends on how its risk is rated (**Figure 2**):

- Low probability of failure and low consequence of failure: Only limited monitoring is needed and "run to failure" may be appropriate.
- High probability of failure and low consequence of failure: Capital improvements should be prioritized.
- Low probability of failure and high consequence of failure: More frequent or direct assessment should be done.
- High probability of failure and high consequence of failure: Immediate attention is needed to prevent a catastrophic failure.

5.2. Probability of Failure

The Probability of Failure for each asset was ranked from 1 to 5 with 5 being the highest potential for failure (**Table 14**). The assets were scored based primarily on remaining useful life. However, the Town has performed inspections on 313 out of its 325 sanitary sewer manholes and approximately 27,000 feet (45%) of its gravity collection mains. A map of detailing completed inspection work is provided in **Appendix A-5** and list of completed inspections is provided in **Appendix B-5**. The available inspection reports have been converted into .pdf documents and provided to the Town in electronic format. The GIS version of the map has been built so that each asset may be linked to its corresponding inspection report.

Evaluating the condition of the assets based on the inspections is ongoing. Assembling and standardizing those results will be part of the asset management effort going forward. A sewer pipe and structure rating system has been included in **Appendix E**.

The following factors will be taken into account when assigning a condition factor:

- Ability to provide required Level of Service
- Nature and extent of observed defects
- Operating history and past failures
- Consideration of how failure could occur

Table 14. Probability of Failure Scoring

Consequence	Description	Rank assigned
Very Low	Asset is extremely reliable	**1**
Low	Sporadic failures possible	**2**
Moderate	Possibility of failure	**3**
High	Asset sometimes does not meet current LOS	**4**
Very High	Asset is likely to fail or has failed to meet LOS	**5**

In cases where installation date and material for the assets were unknown, the following assumptions were made.

- Where appropriate, the oldest installation date of adjacent pipe was assigned if the installation date was unknown.
- An estimated useful life of 100 years was assigned where pipe material was unknown.

A score ranking probability of failure by remaining useful life is provided in **Table 15**.

Table 15. Ranking Based on Remaining Useful Life

Remaining Useful Life	Rank assigned
Fifty or more years of remaining useful life	**1**
Thirty to fifty more years of remaining useful life	**2**
Ten to thirty more years of remaining useful life	**3**
Less than then years of remaining useful life	**4**
Currently exceeds remaining useful life	**5**

5.3. Consequence of Failure

Each asset was assigned a score for Consequences of Failure from 1 to 5, with 5 being the highest impact (**Table 16**). Consideration was given to how each asset could fail and what would happen if it did. Consequences of failure may include:

- Regulatory noncompliance
- Reduced Level of Service
- Social cost/inconvenience to customer
- Cost of repair
    - Collateral damage
    - Legal costs
    - Environmental costs
    - Safety concerns

Table 16. Consequence of Failure Scoring

Consequence	Description	Rank assigned
Very Low	Minimal impact or has full redundancy	**1**
Low	Limited loss of service, minor cost	**2**
Moderate	Minor loss of service, low cost	**3**
High	Significant loss of service or cost	**4**
Very High	Major loss of service or cost, limited or no redundancy	**5**

5.4. Identification of Critical Assets – Pumping Stations

Critical assets were identified based on an overall review of the system and the role of each component within that system. Components with system-wide impact were considered critical. The age, useful life and condition of each component was also taken into consideration. Results for assets with system-wide impact are illustrated in the Critically Matrix Chart (**Figure 3**).

Mill Street Pumping Station: This asset was originally installed in the late 1930's but has been expanded and upgraded over the years. A separate wet well structure was added in the 1970's, and the pumps and motors have all been replaced between 2009 and 2016. However, because of the age and configuration of some components, this facility does require additional upgrades.

Nearly all wastewater collected within the service area is relayed to the Mill Street Pumping Station, which then pumps it on to the wastewater treatment facility. The only notable exception is the privately-owned system serving the Taylor Home subdivision, which is pumped directly to the treatment facility.

In addition to being the primary routing point for all wastewater collected by the Town, the pumping station is located in close proximity to local docks and businesses which generate a significant amount of foot traffic.

Lehner Street Pumping Station: This asset was also installed in the late 1930's and has been upgraded over the years. New pumps and motors were installed in 2010, and the roof was replaced in 2016. Like Mill Street, Lehner Street suffers from deterioration of some components as well as code compliance issues due to its age and configuration.

All wastewater collected within the southeastern section of the service area is relayed to the Mill Street Pumping Station via the Lehner Street Pumping Station. The Lehner Street Pumping Station receives flow from the Clark Road Pumping Station which in turn, receives flow from subordinate pumping stations. Also like Mill Street, Lehner Street is located in a congested commercial area near a water body. In other words, a failure at the Lehner Street Pumping Station would affect a large number of customers.

Clark Road Pumping Station: This asset was installed in 1985. New pumps and motors were installed between 2009 and 2013. Overall the pumping station is in good condition and the likelihood of failure is considered low.

Wastewater collected at the Fairway View Pumping Station and the Greenleaf Drive Pumping Station is transmitted to the Clark Road Pumping Station. From there it is transmitted to the Lehner Street Pumping Station.

Greenleaf Drive Pumping Station: This asset was also installed in 1985, but has seen significant upgrades since then. A wet well addition was completed in 2008 and the submersible pumps were replaced in 2015. The station is on the periphery of the system and serves comparatively few customers.

Fairway View Pumping Station: This asset was installed in 1988. The pumps were replaced in 2004 and 2005. There are some significant issues with the condition of the pumping station. The wet well is comprised of a steel casing which sits atop a concrete wet well. I&I has been observed where the two wet well components meet. In addition, the ventilation fan is inadequate.

Elm Street Pumping Station: This asset was first installed in 1991. Pumps and motors were replaced between 2011 and 2013.

Wastewater collected at the Crescent Point Pumping Station and the Willow Street Pumping Station is transmitted to the Elm Street Pumping Station. From there it is transmitted to the Mill Street Pumping Station.

Crescent Point Pumping Station: This asset was first installed in 2005. The pumps and motors were upgraded between 2013 and 2016. This pumping station does not have an operable back-up generator.

Willow Street Pumping Station: This asset was first installed in 2005. No major replacements or upgrades have been completed since. However, the pumping station is thought to be in good condition.

Sewall Road Pumping Station: This asset was first installed in 1988, but was thoroughly rehabilitated in 2004. It serves a large residential area in the southwestern portion of the service area; and transmits sewage to the Mill Street Pumping Station.

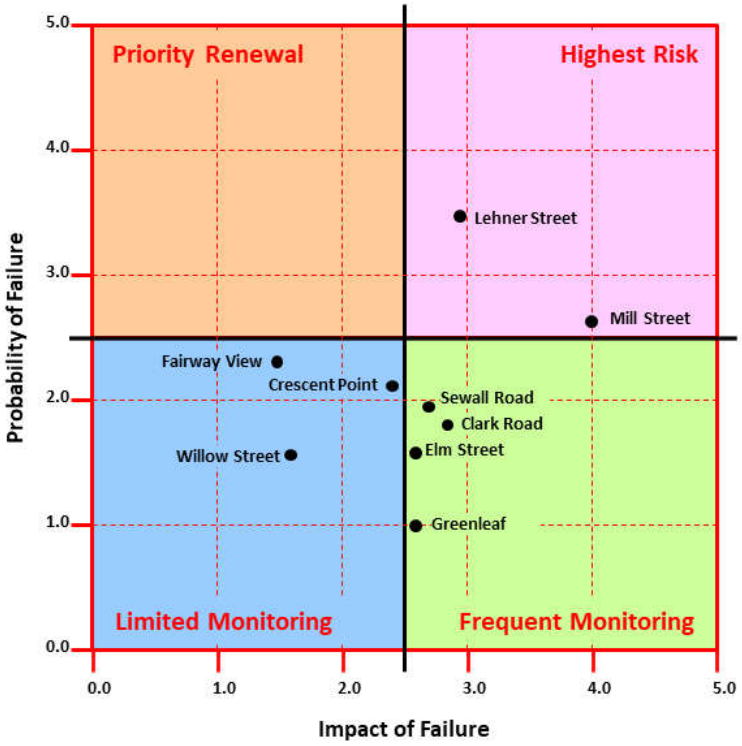
The average Probability of Failure and Impact of Failure scores, along with the risk score are provided in **Table 17** below. The pumping stations are ranked from highest to lowest risk score. The detailed scores associated with each of the pumping station sub-components are provided in **Appendix C-1**.

Table 17. Pumping Station Risk Scores

PUMPING STATIONS BY AVERAGE RISK SCORE			
Pumping Station	**Average Impact of Failure**	**Average Probability of Failure**	**Average Risk Score**
Mill Street Pumping Station	4.0	2.6	10.4
Lehner Street Pumping Station	3.4	2.8	9.8
Clark Road Pumping Station	2.7	1.7	5.0
Sewall Road Pumping Station	2.6	1.9	4.8
Elm Street Pumping Station	2.6	1.6	4.5
Crescent Point Pumping Station	1.9	2.1	4.1
Fairview Pumping Station	1.5	2.3	3.8
Willow Street Pumping Station	1.6	1.6	2.6
Greenleaf Drive Pumping Station	2.1	1.0	2.1
Grand Total	**2.8**	**2.1**	**6.3**

These scores are also used to gauge criticality, which is shown for each pumping station in **Figure 3**.

Figure 3. Pumping Station Criticality Matrix



5.5. Evaluation of Gravity Collection Mains and Force Mains

The original wastewater system was installed in the late 1930's and served what is now the congested commercial district. Since then, the system has been expanded to serve outlying residential areas. In addition, system repairs and improvements have been completed over the years to address an ongoing I&I issue. Criteria to evaluate the criticality of pipe is provided in **Table 18**.

Table 18. Critical Pipe Analysis Criteria

Probability of Pipe Failure	Consequences of Pipe Failure
• Pipe material • Pipe age • Hydraulic capacity • Breakage history	• Proximity to critical customers • Importance of street • Number of customers affected • Proximity to natural resource

5.6. Gravity Collection System Piping – Age and Material

The reliability of information regarding the age and material of gravity collection mains and force mains within the Town's wastewater system varies. For a few areas, no information is available at all. For some, the information provided in the record drawings is incomplete and/or ambiguous. For others, information is very recent and reliable.

Huggins Hospital Record Drawings, 2010: Gravity main material is not identified on the drawings. However, original AutoCAD file indicates PVC.

Infiltration and Inflow Project Record Drawings, 2009: Details repairs to manholes and collection mains in order to address I&I.

Sewall Road Pumping Station Record Drawings, 2008: Pumping station rehabilitation project.

Infiltration and Inflow Study Map, 2003: A comprehensive map of the sanitary sewer collection area, which includes the diameter, material and year of installation.

King Street Improvements, 2003: Water and sewer improvements in the King Street area. Existing sewer replaced with 8-inch PVC.

Inflow and Infiltration Removal Project, 1997: Replacement or rehabilitation of collection facilities in the South Main Street/Crescent Lake/Goodrich Road/East Main Street area.

Gravity Sewer Reconstruction, 1992: Gravity main replacement on South Main Street/Bay Street/Green Street/Clark Road.

Construction of Gravity Sewer, Sewage Force Main and Water Main Elm Street and Bay Street, 1991: 8-inch PVC gravity main and new manholes.

Wolfeboro Regional Vocational Center, 1982: Sanitary sewer improvements on school district parcel.

Sewer System Repair and Construction, 1977: Extensive repair, replacement and installation of sanitary sewer throughout the service area. Drawings do not clearly identify pipe material. However, subsequent studies and inspections indicate that it is asbestos cement.

Siphon Record Drawings, 1976: Two 6-inch cast iron inverted siphons crossing from Railroad Avenue to Mill Street area.

Water Pollution Abatement Facilities, 1971: New force main from wastewater treatment facility to Varney Road.

5.7. Additional Pipe Criticality Factors

There are four water body crossings within Wolfeboro's sanitary sewer collection system. The crossings are accomplished using siphons. Each of these siphons has a high consequence of failure as they could potentially empty raw sewage into water bodies which are interconnected with Lake Winnipesaukee. In addition, they would be difficult to repair and would compromise the transmission of significant amounts of sewage from the Lehner Street Pumping Station and the Elm Street Pumping Station to the Mill Street Pumping Station.

As mentioned above, the Mill Street Pumping Station transmits nearly all wastewater collected within the service area to the wastewater treatment facility. Therefore, the force main from the Mill Street Pumping Station to wastewater treatment facility would also have a very high consequence of failure. The force mains from the other pumping stations decline in importance based on the size of the area served and their place in the pumping station hierarchy.

For instance, the force main from the Willow Street Pumping Station would likely be considered the least important because it serves a very small collection area and receives no flow from any other pumping station. On the other hand, Elm Street Pumping Station serves a large collection area and receives flow from two pumping stations.

The consequence of failure for gravity mains was assigned based on where they are located within the collection system and the characteristics of the properties they serve. For instance, the gravity main along South Main Street and within the South Main Street easement serves the school district and the hospital and is very critical, while a gravity main on a dead-end street may only serve a few residential properties.

Detailed information about force mains and collection mains can be found in **Appendix A** and **Appendix B-1**.

5.8. Sanitary Sewer Structures

Inspection reports and record drawings provide construction details of the manholes within the Town's service area. An average useful life of 75 years was used for the purposes of this report. However, the Town's system contains structures of various types (i.e. precast and brick) and the useful lives may vary.

Several manholes have been lined or repaired which extends the useful life of individual manholes to varying degrees. Manhole inspections and evaluations have been conducted over the years in order to detect and repair I&I. These documents can provide additional insight into the condition of the individual manholes in the areas affected.

The criticality of a given manhole depends not only on its age and condition, but also on the potential impact of a failure. For example, a manhole failure on either end of a siphon would have a larger impact than would a manhole on a gravity collection main at the end of a dead-end residential street. Generally, sanitary sewer manholes were assigned the same impact factor as the pipe on which they are located.

Criticality and other information on each manhole is provided in **Appendix B-3**, Manhole Inventory.

5.9. Criticality of Collection System Piping and Manholes

An impact of failure score and a probability of failure score have been assigned to each pipe segment and manhole in the system. The impact score was based primarily on the number of customers served, the nature of customers served, and the potential for non-compliance in the event of a failure.

Table 19 summarizes the criticality of collection system pipes and **Table 20** summarizes the criticality of collection system manholes. It should be noted that criticality will be need to be continuously updated to take into account aging, deterioration, repairs, replacements or upgrades.

Table 19. Pipe by Criticality

TOWN-OWNED SEWER MAINS BY TYPE AND CRITICALITY					
Type	**Highest Risk**	**Priority Renewal**	**Frequent Monitoring**	**Limited Monitoring**	**Grand Total**
Gravity Main	2,245	5,513	22,194	29,087	59,039
Siphon			1,098		1,098
Force Main		895	8,773	1,928	11,595
Low Pressure		4,538		7,935	12,473
Grand Total	**2,245**	**10,946**	**32,064**	**38,949**	**84,205**

Table 20. Structures by Criticality

SANITARY SEWER STRUCTURES BY TYPE AND CRITICALITY					
Structure Type	**Highest Risk**	**Priority Renewal**	**Frequent Monitoring**	**Limited Monitoring**	**Grand Total**
Air Release Valve				2	2
FM Clean-out				13	13
FM Flushing Port				1	1
Force main clean-out or ARV	1				1
Manhole	24	46	101	154	325
Grand Total	**25**	**46**	**101**	**170**	**342**

6. Life Cycle Costing

The life cycle costing step evaluates long term capital needs for major refurbishment and replacement of assets. Life cycle costing is a defensible tool to help support necessary funding levels for sustainability of the system.

6.1. Life Cycle Costs

For the purposes of initial planning, the following assumptions were used to evaluate life cycle costs:

- Costs are conceptual (order of magnitude), including engineering and contingency.
- Costs are in today's dollars (2017).
- Assets are replaced per their estimated life expectancy determined in the Inventory and Assessment step.
- Assets are replaced with current industry standard materials/technology.
- Major recurring capital reinvestment costs such as major pump overhauls are included in life cycle costs.
- Minor maintenance and repairs are assumed to be in the annual operating budget and are not included.
- Assumptions.
    - All gravity mains will be replaced with SDR-35 PVC.
    - Cost to install gravity mains and manholes typically varies by depth. An average unit cost was used for all depths.
    - All CI and PVC force mains will be replaced with HDPE.
    - All HDPE force main will be replaced with HDPE.

Total sewer system replacement costs are summarized in **Table 21**. Replacement costs for facility assets were estimated for the next 100 years. See **Appendix D** for additional details. Beyond 20 years, the projections are more speculative but they allow planning for very long lived assets. The estimated replacement costs per decade for these assets are shown in **Figure 4**. Piping constitutes the largest portion of replacement cost, see **Figure 5**.

Table 21. Wastewater System Replacement Projections

	0 to 50 **2017-2066**	**50 to 100** **2067-2116**	**Unknown**	**Total** **2017-2116**
Pumping Stations	$6,640,000	$6,065,000	$0	$12,705,000
Sewer Pipes	$3,078,031	$22,826,770	$3,472,721	$29,377,522
Structures	$2,380,000	$890,000	$420,000	$3,690,000
Total	**$12,098,031**	**$29,781,770**	**$3,892,721**	**$45,772,522**
Average $/Year	**$241,961**	**$595,635**	**$38,927**	**$457,725**

Figure 4. Major Asset Replacement Costs

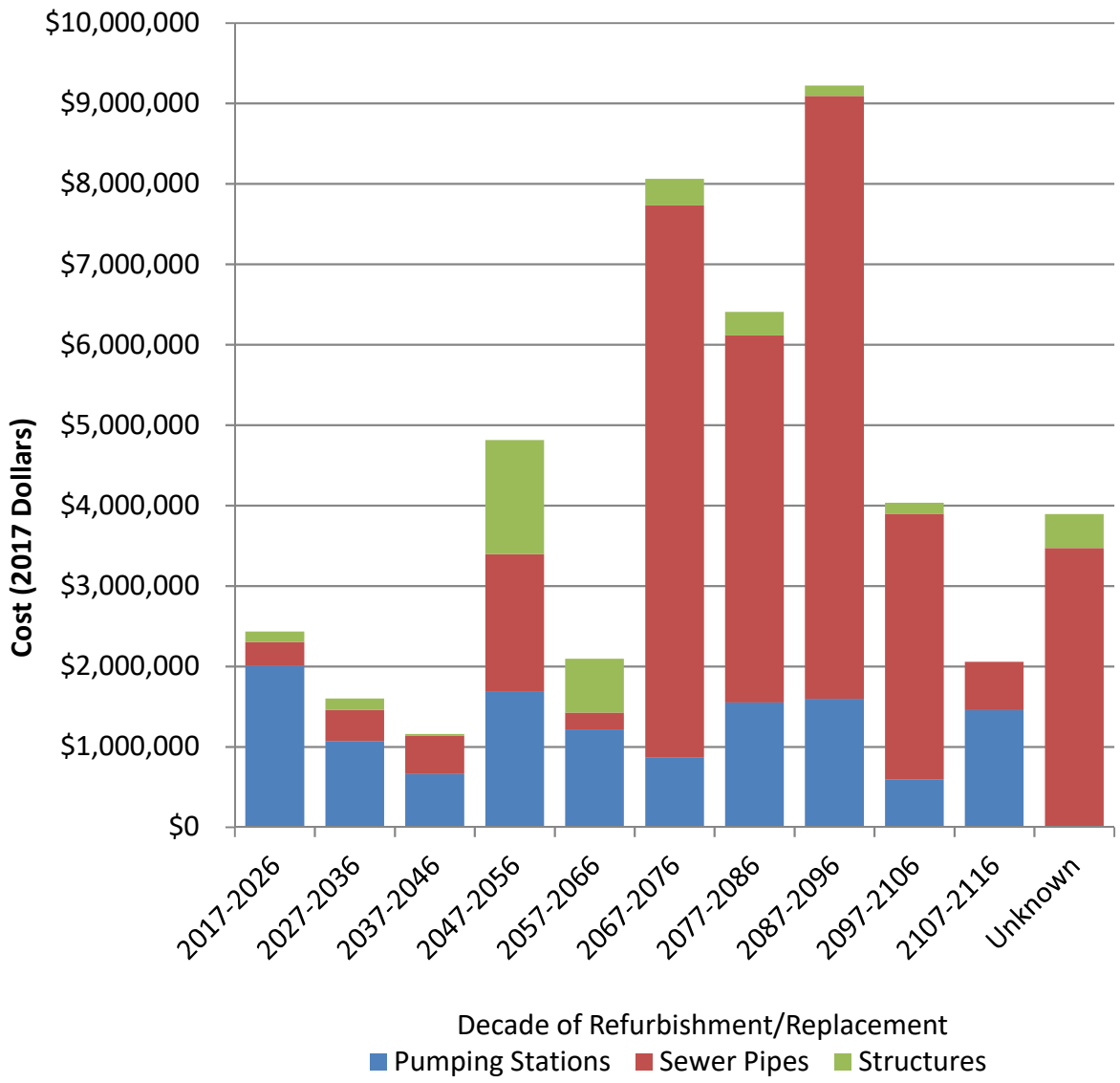
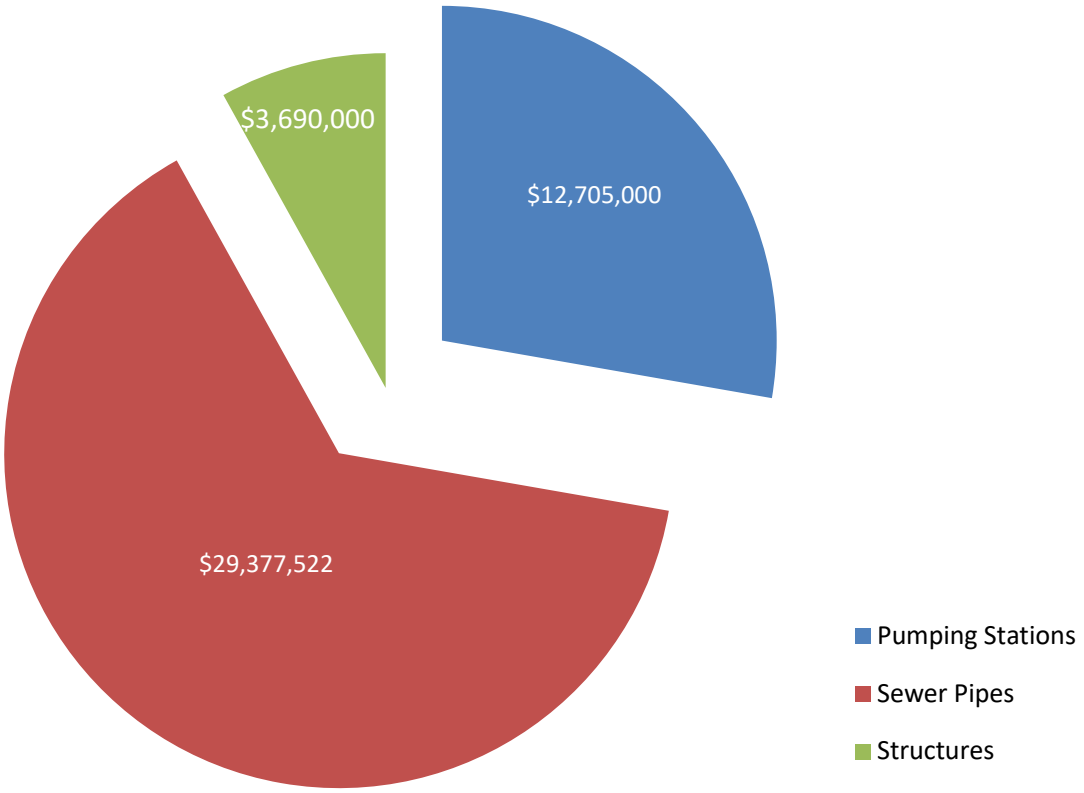


Figure 5. Lifecycle Costs for Major Wastewater System Assets



6.2. Life Cycle Planning

There are four basic options for dealing with assets over time (NMEFC, 2006). Asset Management is intended to optimize spending between these options while meeting the required level of service:

- Repair the assets as they fail
- Operate and maintain the existing assets
- Rehabilitate the assets
- Replace the assets

Provided the level of service is met, it is generally appropriate to replace certain assets when the cost of ownership exceeds the cost of replacement. Annual costs of ownership include risk costs, repairs, and maintenance. Risk costs are the cost impacts of a failure and associated emergency repairs. The Criticality step helps to prioritize projects by risk, but the costs of renewal must also be considered for a complete benefit/cost analysis.

An asset should be renewed when its cost of ownership exceeds the cost of replacement

The primary tool for life-cycle planning of major assets is the Business Case Evaluation (BCE). It is a defendable way to determine if a project is needed and how best to address it. The BCE supports rational decisions to select the lowest lifecycle cost alternative and minimize risk, thus providing the greatest value to the customer.

The Business Case Evaluation is recommended for major assets that do not meet the current LOS or are nearing the end of useful life. The basic BCE Steps are

- Define the problem and drivers.
- Identify and screen alternatives, including "no action".
- Develop life cycle costs including capital, operational, and maintenance costs, for each alternative.
- Define risk costs (financial, environmental, and social = "triple bottom line").
- Recommend the alternative with the lowest net present value that meets the LOS.

Benefit/Cost analysis using the BCE process should be applied to Wolfeboro's major assets as they approach the end of useful life.

6.3. Optimizing Pipe Renewals

Life cycle costs have been identified for budget planning but when and where gravity mains and force mains should be replaced cannot be exactly pinpointed. Unknown factors and insufficient information make accurate predictions for work that is far in the future impossible. Ongoing evaluations are required to optimize the replacement year for each pipe segment.

An approach used in models such as the AWWA BNL Modeling Tool is to define the service life based on the tolerance for risk. The risk of failure or break rate for pipe generally increases with age. Pipes identified as more critical or higher risk have a shorter service life and are cost effective to replace sooner. Conversely, pipes with low consequences of failure allow a higher break rate to be tolerated and a longer time for replacement. As more data is collected in the future, defensible criteria for replacement can be developed to prioritize and optimize pipe renewals.

In summary, the specific locations for future sewer main replacements should be based on factors such as:

- Break rate and tolerance for risk of failure.
- Coordination with Town road or sewer improvements.
- System deficiencies and/or hydraulic constraints, if any.
- Future development and expansion.

7. Funding Plan

7.1. Funding Overview

Wolfeboro's original wastewater collection system was built in the late 1930's. However, most of those original facilities have been refurbished or replaced since then. The vast majority of the Town's wastewater collection pipe has been installed since 1970. Therefore, a large portion of the Town's wastewater collection system assets won't need refurbishment or replacement for some time. See **Appendix A-4** for a map of facilities by year of installation.

The Town has committed substantial resources toward renewing assets in order to avoid a "run to failure" situation. The ultimate goal is to keep the system in good working order without large fluctuations in capital investments – all while maintaining affordable user rates and system development charges. **Table 21**, found in Section 6.1, reflects the fact that almost two-thirds of Wolfeboro's assets will be due for rehabilitation or replacement after 2067, and funding needs will increase accordingly.

7.2. Short-term Funding Needs

The Town has recently made substantial investments into its sanitary sewer collection system. However, short-term needs still remain. An estimated $2.4 million will be needed to refurbish or replace aging collection system assets over the next ten years. Funding for the next 10 years is summarized in **Table 22**.

Table 22. Funding Needs Next Ten Years

Year	Pumping Stations	Sewer Pipes	Structures	Total
2017	$855,000	$0	$130,000	**$985,000**
2018	$100,000	$0	$0	**$100,000**
2019	$10,000	$0	$0	**$10,000**
2020	$350,000	$0	$0	**$350,000**
2021	$215,000	$0	$0	**$215,000**
2022	$235,000	$0	$0	**$235,000**
2023	$0	$0	$0	**$0**
2024	$150,000	$0	$0	**$150,000**
2025	$70,000	$298,563	$0	**$368,563**
2026	$20,000	$0	$0	**$20,000**
TOTAL	**$2,005,000**	**$298,563**	**$130,000**	**$2,433,563**

7.3. Long Term Funding Strategy

The long-term funding step evaluates how to best meet the costs of maintenance, repair, rehabilitation, and replacement of assets. Long term planning is required because the funding needs are significant and unsustainable if deferred until the future.

Wolfeboro's potential sources of funding include:

- Revenues
  - Sewer user charges
  - Sewer connection fees
- Capital reserve funds
  - Set aside by budget or surpluses
- Debt
- Grants

Wolfeboro's long-term funding needs are shown by decade in **Table 23** below.

Table 23. Funding Needs Next 100 Years

Decade	Pumping Stations	Sewer Pipes	Manholes	Total
2017-2026	$2,005,000	$298,563	$130,000	**$2,433,563**
2027-2036	$1,070,000	$388,807	$140,000	**$1,598,807**
2037-2046	$660,000	$477,342	$20,000	**$1,157,342**
2047-2056	$1,690,000	$1,703,703	$1,420,000	**$4,813,703**
2057-2066	$1,215,000	$209,616	$670,000	**$2,094,616**
2067-2076	$870,000	$6,860,052	$330,000	**$8,060,052**
2077-2086	$1,550,000	$4,565,906	$290,000	**$6,405,906**
2087-2096	$1,595,000	$7,498,570	$130,000	**$9,223,570**
2097-2106	$595,000	$3,300,421	$140,000	**$4,035,421**
2107-2116	$1,455,000	$601,820	$0	**$2,056,820**
Unknown	$0	$3,472,721	$420,000	**$3,892,721**
TOTAL	**$12,705,000**	**$29,377,522**	**$3,690,000**	**$45,772,522**

The Town is currently paying down debt for past wastewater system improvement projects. Debt service payments for past I&I work on the sanitary sewer collection system are approximately $180,000 per year. An additional $600,000 per year is required for improvements to the wastewater effluent disposal system. As those debt service payments decline, more cash will be available to place into reserves for future wastewater system needs.

Rather than full replacement, it is possible that assets can be rehabilitated instead. For instance, rather than replacing pipe, it may be possible to prolong its useful life by lining it. These determinations will need to be made on an ongoing basis.

High levels of saving would reduce future risk, but places a greater burden on current users through rate impacts. The target amount of capital reserves to set aside depends on the level of future risk that Wolfeboro accepts. As the system ages, future evaluations should better quantify risk and adjust the required capital reserves if necessary.

8. Asset Management Program Implementation

An Asset Management Program is a working, living system, constantly being updated. These updates come from the employees and customers. Both the staff and customers provide important information that can help to keep asset management program effective. The Town of Wolfeboro is currently exploring software options for its asset management program, and is field testing a tablet-based system.

This asset management report is an interim step in assembling the enormous amount of asset-related data that has already been gathered by the Town, and placing it into a useable, accessible and updateable decision-making tool.

8.1. Maps and GIS Data

A series of map files have been created using ESRI ArcMap 10.5.1. Each map is populated by various shapefiles. Shapefiles consist of GIS data points and their associated characteristics. For instance, each mapped pipe segment is associated with various attributes such as the date installed, diameter, length, material, etc. The attributes are stored in a table, which can be exported to an Excel spreadsheet or an Access database.

Town staff does not currently use ArcMap so paper copies of the maps are included in **Appendix A**. However, the Town is working with its contract operations provider, Woodard and Curran, to select a suitable asset management software. The associated data tables are included in **Appendix B**. Files will also be transmitted in electronic format for use by the Town.

8.2. Replacement Scheduling and Financial Planning Spreadsheet

Asset replacements were scheduled out using an Excel spreadsheet, and were based primarily on installation date and estimated useful life. The spreadsheet is designed to be used as a starting point in scheduling and financing asset replacements. The Town may revise the information to conform to their knowledge of the system or to respond to changing conditions. Following is a brief discussion of each of the spreadsheet tabs.

- Pumping Station Data Table. Asset replacements are scheduled out by year and decade in this tab. Criticality is determined for each component.
- Pumping Station Summary Tables. This worksheet contains several pivot tables which summarize information from the Pumping Station Data Table.
- Pipe Inventory. This worksheet contains pipe data copied from the pipe attribute table contained in **Appendix B**. Importing this data into Excel makes it accessible to Town staff and provides for the use of pivot tables to easily summarize the data.
- Pipe Summary Tables. This worksheet contains several pivot tables which summarize information from the "Pipe Inventory" tab.
- Manhole Inventory. This worksheet contains sewer structure data copied from the sewer structure attribute table contained in **Appendix B**. Copying this data into Excel provides for the use of pivot tables to easily summarize the data.

- Manhole Summary Tables. This worksheet contains several pivot tables which summarize information from the "Manhole Inventory" tab.
- Financial Schedules and Graphs. This worksheet contains several tables which summarize data from the previous worksheets and also graph it.

8.3. Next Steps

In order to build on what has been completed to date, the following steps are recommended.

- The Town should review and evaluate the data and assumptions within this asset management document.
- An enormous amount of data has been collected regarding the condition of the Town's wastewater collection system. The Town should use this data to refine probability of failure scoring, which was based primarily on remaining useful life.
- The Town should work with the Financial Planning and Replacement Scheduling spreadsheet and refine it so that they are comfortable with it.

Future steps might include.

- Continue testing and researching tools for staff to collect and transmit spatial data from the field.
- Continue researching tools for staff to use the data available to support sound decision making.
- Use inspection reports to expand on the condition of the assets.

An overview of the overall asset management program is shown in **Figure 6**.

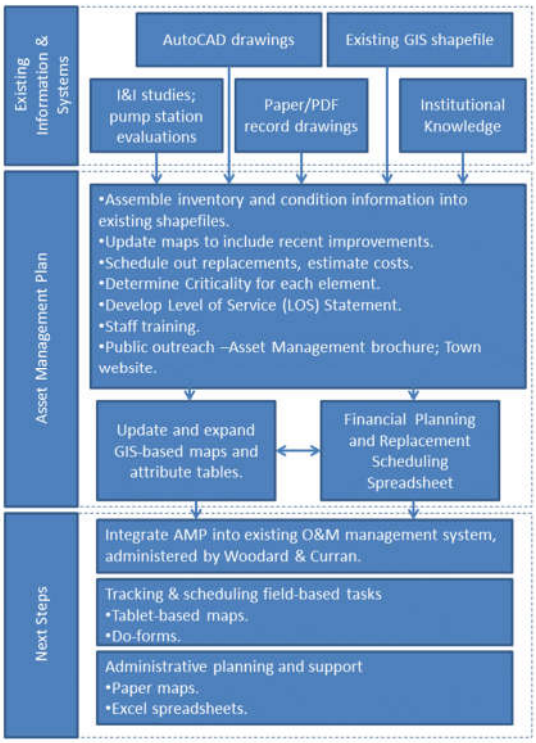


Figure 6. Overview of Asset Management Program

8.4. Training for Staff

Each employee's input and knowledge of the system is vital to a successful and accurate Asset Management Program. The employees must understand their role, and how they can help to improve the overall functionality of the system.

The staff who run the system know the most about it, and can help when deciding which assets are at the highest risk and need the most attention. An effective way for them to communicate this information to the decision makers is by keeping track of maintenance and repairs done on the system using GIS-based software. When something like a sewer leak/backup occurs, the following information should be recorded:

- Cause of backup or unauthorized discharge
- Location/extent
- How it was fixed
- Downtime and impact to consumer
- Estimated size of unauthorized discharge
- Cost/man-hours
- Any difficulties or unexpected obstacles in repairing

The same approach should be used for repairs done to all facilities, including manholes, pumping stations, and treatment facilities. This will help identify the cost of maintaining each asset, and allow for a cost comparison to be made for replacement. This information can help identify if replacing an old asset is more cost effective than continuing with the routine maintenance.

Goals of Staff Training:

- Familiarize staff with GIS-based systems and software.
- Formalize the process of documenting asset evaluations, failures and concerns.

8.5. Customer Outreach

Getting feedback from customers helps to keep the Level of Service up to date. Listening to, and documenting, customer complaints and comments can change the type of service provided, which can affect priority of assets, and how much risk a system is willing to accept.

Customers should also understand how and why money is being spent on system repairs and asset replacements. A more informed public will be more willing to approve rate increases to ensure they receive the type of service they want.

Objectives for customer outreach include:

- Communicate the benefits that new infrastructure will provide to customers in terms of improved sewer service and availability.
    - A brochure on AM can be found in **Appendix F** for the Town to distribute to its customers.
- Provide the necessary communication support to allow for successful increases in sewer rates.

8.6. Suggested Communication Plan

Modes of delivery/communication (see **Table 24** below):

Table 24. Communication Plan

Audience	Outreach Strategies
Internal - Staff	• Continue to develop asset management program. • Conduct regular team meetings on strategic goals, record keeping, and importance of asset management. • Develop staff capability in using a GIS-based system for tracking repairs and upgrades.

External - Customers	• Add information to Town website.
	• Create hotline for calls for construction project suggestions and complaints, and have a response program for addressing both.
	• Notify customers of system updates (projects, issues, construction location/time) through the following medias
	  ○ System sewer bills
	  ○ Asset Management Brochure - **Appendix F**
	  ○ Local newspapers
	• Conduct public survey to receive customer's comments about the sewer system

9. Conclusions and Recommendations

9.1. Summary of Assets Owned

Wolfeboro's major collection system components are summarized in **Table 25** below.

Table 25. Summary of Sewer System Assets

Asset	Description
Collection Mains	Approximately 59,000 lf of gravity collection mains. An estimated $300,000 worth of replacements is needed in the next ten years.
Force Mains	Nearly 24,000 lf of force mains, including low pressure mains. No replacements anticipated until after 2046.
Sanitary Sewer Structures	There are 342 structures in the Town's collection system. The majority, 325, are manholes. The remaining 17 are force main clean-outs or air release valves.
Pumping Stations	Slightly over $2 million worth of replacements and upgrades will be required in the next ten years.

9.2. Ten Year Capital Improvement Plan

Table 26 shows the projects that should be included in a 10–year CIP plan. These assets are reaching the end of their useful life, or are observed to have defects which may prevent them from meeting the desired level of service.

Table 26. Ten-Year CIP Projects and Estimated Costs

Asset	Project	Approximate Cost
Gravity Mains	Approximately 850 lf will soon be due for replacement based on estimated useful life.	$298,000
Sanitary Sewer Structures	Approximately 14 have exceeded their estimated useful life.	$140,000
Mill Street Pumping Station	Improvements to pumping station building and wet well, electrical, HVAC and flow meter.	$750,000
Lehner Street Pumping Station	Improvements to pumping station building and wet well, electrical, HVAC and flow meter. Address accessibility issues.	$420,000
Clark Road Pumping Station	Electrical system, generator and automatic transfer switch.	$180,000
Greenleaf Pumping Station	Electrical system nearing the end of its useful life.	$50,000
Fairway View Pumping Station	Electrical, HVAC, wet well, pumps and motors.	$160,000
Willow Street Pumping Station	Pumps are nearing the end of their useful life.	$30,000
Elm Street Pumping Station	Fiberglass shelter, electrical, generator and automatic transfer switch.	$205,000
Crescent Point Pumping Station	Generator and automatic transfer switch are inoperable and in poor condition.	$100,000
Sewall Road Pumping Station	Pumps are nearing the end of their useful life. Odor control unit is inoperable.	$110,000
	Total:	**$2,443,000**

9.3. Long Term Funding Needs

Total water system replacement costs over the next 100 years by criticality are summarized in **Table 27**. Criticality is an important factor to consider, as it may be feasible to extend the life of some assets beyond their estimated useful lives.

Table 27. Collection System Replacement Costs by Criticality

Decade of Scheduled Replacement	Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
2017-2026	$1,518,563	$335,000	$340,000	$240,000	$2,433,563
2027-2036	$453,865	$134,942	$560,000	$450,000	$1,598,807
2037-2046	$120,000	$487,342	$200,000	$350,000	$1,157,342
2047-2056	$555,000	$230,000	$2,480,901	$1,547,801	$4,813,703
2057-2066	$10,000	$110,000	$870,000	$1,104,616	$2,094,616
2067-2076	$50,000	$105,000	$4,107,644	$3,797,409	$8,060,052
2077-2086	$455,000	$240,000	$3,408,611	$2,302,296	$6,405,906
2087-2096	$700,000	$40,000	$2,508,375	$5,975,196	$9,223,570
2097-2106	$90,000	$60,000	$948,963	$2,936,458	$4,035,421
2107-2116	$455,000	$280,000	$1,068,308	$253,512	$2,056,820
Unknown	$183,351	$3,688,853	$20,517	$0	$3,892,721
Grand Total	**$4,590,779**	**$5,711,137**	**$16,513,318**	**$18,957,287**	**$45,772,522**

Ideally, replacement costs will be spread out as evenly as possible, meaning that the town will require nearly $460,000 per year over the next 100 years unless grants become available or rehabilitation strategies less costly than full replacement are feasible.

9.4. Implementation of AM Plan

- Continue to collect and update asset data and condition assessment and add to Asset Inventory system. Update on an ongoing basis.
    - Record service and failure history for assets to refine the estimated useful life.
    - Evaluate remaining useful life based on available condition information.
    - Continue to use ESRI software (Basic ArcMap 10.5.1) to update maps and attribute tables.
    - It is recommended that one person assume responsibility for updating the Asset Inventory system and keeping track of asset failures. However, an additional employee should be trained as a back-up.
- Update distribution map when pipes are installed.
- Monitor performance data, complaints, etc. to ensure LOS is being met, and refine LOS Statement as needed.
- Update critical assets as renewals are made and information is collected.
    - As assets are replaced and refurbished, update the “probability of failure” ranking to identify which assets are most critical.
- Update life cycle costs and budgeting as needed.

- Submit plan to DES for Asset Management Grant Reimbursement.
- Evaluate options for ongoing field GIS data collection. Should it be done by utility staff in the process of carrying out their repair, inspection and maintenance duties? Or should it be done by an outside firm?
- Continue to refine and improve asset management information, tools and capabilities.

9.5. Communication

- Establish a Communication Program for customers, demonstrating the value of drinking water service and justifying the funding to sustain assets.
- Distribute AM brochure to customers (Attached in **Appendix F**).
- Continue to educate and inform all staff on the AM principles and process.

10. References

AWWA (2013) *Buried No Longer: Confronting America's Water Infrastructure Challenge*. Available at: http://www.awwa.org/portals/0/files/legreg/documents/buriednolonger.pdf (Accessed March 29 2017)

AWWA (2014) *Sample Utility Communications Plan.* Available at: http://www.awwa.org/resources-tools/public-affairs/communications-tools/public-communications-toolkit/sample-utility-communications-plan.aspx (Accessed March 31 2017)

EPA (2008) *Asset Management: A Best Practices Guide*. Available at http://water.epa.gov/infrastructure/sustain/am_resources.cfm (Accessed March 17 2017)

New Mexico Environmental Finance Center (2006) *Asset Management: A Guide For Water and Wastewater Systems*. Available at: http://water.epa.gov/infrastructure/sustain/am_resources.cfm (Accessed 17 March 2017)

APPENDIX A

MAPS

APPENDIX A-1

SANITARY SEWER COLLECTION SYSTEM OVERVIEW
WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Structure_Inventory
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon

Legend

- SewerPipe_Insp_Reports_linksupdated
- Clark Road Subbasin
- Crescent Point Subbasin
- Elm Street Subbasin
- Fairway Subbasin
- Greenleaf Subbasin
- Lehner Subbasin
- Mill Street Subbasin
- Sewall Road Subbasin
- Willow Street Subbasin
- Private Systems

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Mill Street Pump Station

Lehner Street Pump Station

Sewall Road Pump Station

Elm Street Pump Station

Willow Street Pump Station

Crescent Point Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

N

500 0 500 1,000 Feet

APPENDIX A–2

SANITARY SEWER COLLECTION SYSTEM PIPE BY DIAMETER WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Diameter

Holding Tank	2.5	8	
Private Pump Station	3	10	
Pump Station	4	12	
Structure_Inventory	6	Unknown	

Legend

- Clark Road Subbasin
- Crescent Point Subbasin
- Elm Street Subbasin
- Fairway Subbasin
- Greenleaf Subbasin
- Lehner Subbasin
- Mill Street Subbasin
- Sewall Road Subbasin
- Willow Street Subbasin
- Private Systems

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Mill Street Pump Station

Lehner Street Pump Station

Sewall Road Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

Willow Street Pump Station

Elm Street Pump Station

Crescent Point Pump Station

N

500 0 500 1,000 Feet

APPENDIX A–3

SANITARY SEWER COLLECTION SYSTEM PIPE BY MATERIAL WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Material

- Holding Tank
- Private Pump Station
- Pump Station
- Structure_Inventory
- AC
- CI
- CLDI
- DI
- PVC
- VC
- Unknown

Legend

- Private Systems
- Clark Road Subbasin
- Crescent Point Subbasin
- Elm Street Subbasin
- Fairway Subbasin
- Greenleaf Subbasin
- Lehner Subbasin
- Mill Street Subbasin
- Sewall Road Subbasin
- Willow Street Subbasin

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Mill Street Pump Station

Lehner Street Pump Station

Elm Street Pump Station

Willow Street Pump Station

Crescent Point Pump Station

Sewall Road Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

N

500 0 500 1,000 Feet

APPENDIX A–4

SANITARY SEWER COLLECTION SYSTEM PIPE BY YEAR INSTALLED WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Year Installed

Unknown	1980	1998
1930	1982	2000
1937	1985	2001
1938	1988	2003
1940	1989	2005
1956	1991	2010
1971	1992	2011
1977	1993	

Legend

- Private Systems
- Clark Road Subbasin
- Crescent Point Subbasin
- Elm Street Subbasin
- Fairway Subbasin
- Greenleaf Subbasin
- Lehner Subbasin
- Mill Street Subbasin
- Sewall Road Subbasin
- Willow Street Subbasin

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Elm Street Pump Station

Willow Street Pump Station

Crescent Point Pump Station

Lehner Street Pump Station

Mill Street Pump Station

Sewall Road Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

N

500 0 500 1,000 Feet

APPENDIX A–5

SANITARY SEWER COLLECTION SYSTEM INSPECTIONS
WOLFEBORO, NH

UNDERWOOD engineers

DECEMBER 6, 2017

Inspection Completed

Structure Inspections		CCTV Inspections
Yes	Yes	Yes
No	No	No
N/A	N/A	N/A

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

121 FILTER BED ROAD

104 FILTER BED ROAD

35 FILTER BED ROAD

FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Elm Street Pump Station

Willow Street Pump Station

Crescent Point Pump Station

Lehner Street Pump Station

Mill Street Pump Station

Sewall Road Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

FM2

FP-1

P-1 CL*

P-2 AI*

P-3 CL*

P-4 CL*

P-5 CL*

P-6 CL*

P-7 CL*

P-8 CL*

P-9 AU*

P-10 C*

P-11 C*

P-12 C*

P-13 A*

P-14 C*

P-15 C*

RSA1

RSA2

RSA2.1

RSA3

RSA4

RSA5

RSA6

RSA6.1

RSA7

No CAMA Data Avail

N

500 0 500 1,000 Feet

APPENDIX A–6

SANITARY SEWER COLLECTION SYSTEM PIPE BY CRITICALITY WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Criticality

- Highest Risk
- Priority Renewal
- Frequent Monitoring
- Limited Monitoring
- Highest Risk
- Priority Renewal
- Frequent Monitoring
- Limited Monitoring

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Elm Street Pump Station

Willow Street Pump Station

Crescent Point Pump Station

Lehner Street Pump Station

Mill Street Pump Station

Sewall Road Pump Station

Clark Road Pump Station

Fairway View Pump Station

Greenleaf Pump Station

N

500 0 500 1,000 Feet

APPENDIX A–7

SANITARY SEWER COLLECTION SYSTEM
MILL STREET SUBBASIN
WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Sanitary Sewer Structure
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon
- Private Systems

WASTEWATER TREATMENT FACILITY

46 FILTER BED ROAD

2- 6" siphons

1- 6" siphon

1-8" siphon

Mill Street Pump Station

Lehner Street Pump Station

Willow Street Pump Station

Sewall Road Pump Station

297 NORTH MAIN STREET
301 NORTH MAIN STREET
291 NORTH MAIN STREET
10 JENNIFER CIRCLE
5 JENNIFER CIRCLE
VARNEY ROAD
111 VARNEY ROAD
104 FILTER BED ROAD
FILTER BED ROAD
121 FILTER BED ROAD
18 PINE HILL ROAD
128 BAY STREET
BAY STREET
LAKEVIEW DRIVE
108 VARNEY ROAD
100 VARNEY ROAD
73 VARNEY ROAD
84 BAY STREET
105 BAY STREET
ELM STREET
FARM HOUSE LANE
NORTH MAIN STREET
244 NORTH MAIN STREET
183 NORTH MAIN STREET
200 NORTH MAIN STREET
35 FILTER BED ROAD
11 TAYLOR DRIVE
32 KING STREET
KING STREET
BAY STREET
51 MILL STREET
15 WILLOW STREET
68 CE STR
LEHNER STREET
PINE STREET
20 CRESCENT LAKE AVENUE
18 OLD LAKEVIEW TERRACE
OLD LAKEVIEW TERRACE
LUCAS STREET
SEWALL ROAD
73 SEWALL ROAD
DOCKSIDE
SOUTH MAIN STREET

N

500 0 500 1,000 Feet

APPENDIX A-8

SANITARY SEWER
COLLECTION SYSTEM
LEHNER STREET SUBBASIN
WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Sanitary Sewer Structure
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon
- Private Systems

- 6" siphon
- 2- 6" siphons
- 1-8" siphon

Lehner Street Pump Station
Clark Road Pump Station
Fairway View Pump Station

BAY STREET
68 CENTER STREET
67 CENTER STREET
LEHNER STREET
CENTER STREET
35 CENTER STREET
PINE STREET
PINE STREET
INTERLAKE WAY
252 MCMANUS ROAD
185 MCMANUS ROAD
MCMANUS ROAD
182 MCMANUS ROAD
164 MCMANUS ROAD
DOCKSIDE
20 CRESCENT LAKE AVENUE
No CAMA Data Avail
CHRISTIAN RIDGE ROAD
280 SOUTH MAIN STREET
258 SOUTH MAIN STREET
SOUTH MAIN STREET
32 COVES END ROAD
SOUTH MAIN STREET
273 SOUTH MAIN STREET
GOODRICH ROAD
103 CLARK ROAD
39 CLIPPER DRIVE
37 KINGSWOOD ROAD
337 SOUTH MAIN STREET
384 SOUTH MAIN STREET
SOUTH MAIN STREET
24 KINGSWOOD ROAD

N

500 0 500 1,000 Feet

APPENDIX A-9

SANITARY SEWER
COLLECTION SYSTEM
SEWALL ROAD SUBBASIN
WOLFEBORO, NH

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Sanitary Sewer Structure
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon
- Private Systems

5 STANARD ROAD
FOREST ROAD
OLD LAKEVIEW TERRACE
171 FOREST ROAD
FOREST ROAD
500 SEWALL ROAD
SEWALL ROAD
SEWALL ROAD
LUCAS STREET
SEWALL ROAD
73 SEWALL ROAD
448 SEWALL ROAD
161 SEWALL ROAD
379 SEWALL ROAD
180 SEWALL ROAD
SEWALL ROAD
297 SEWALL ROAD
135 CLARK ROAD

Sewall Road Pump Station

FP-1
P-1 CL*
P-2 AI*
P-3 CL*
P-4 CL*
P-5 CL*
P-6 CL*
P-7 CL*
P-8 CL*
P-9 AU*
P-10 C*
P-11 C*
P-12 C*
P-13 A*
P-14 C*
P-15 C*

146A
146.1
146.2
145
145.1
147A
147
146
144
148
163
162
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184

N

500 0 500 1,000 Feet

APPENDIX A–10

SANITARY SEWER
COLLECTION SYSTEM
CLARK ROAD SUBBASIN
FAIRWAY VIEW SUBBASIN
GREENLEAF SUBBASIN

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Sanitary Sewer Structure
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon
- Private Systems

Clark Road Pump Station
Fairway View Pump Station
Greenleaf Pump Station

BREWSTER BEACH
SOUTH MAIN STREET
87 CLARK ROAD
117 CLARK ROAD
103 CLARK ROAD
131 CLARK ROAD
133 CLARK ROAD
135 CLARK ROAD
151 CLARK ROAD
161 CLARK ROAD
162 CLARK ROAD
GREENLEAF DRIVE
96 CLARK ROAD
86 CLARK ROAD
70 CLARK ROAD
44 CLARK ROAD
8 FAWN HAVEN DRIVE
12 FAWN HAVEN DRIVE
FAWN HAVEN DRIVE
11 GOODRICH ROAD
GOODRICH ROAD
5 EAGLE TRACE
108 CLARK ROAD
7 EAGLE TRACE
9 EAGLE TRACE
8 EAGLE TRACE
116 CLARK ROAD
11 EAGLE TRACE
13 EAGLE TRACE
15 EAGLE TRACE
17 EAGLE TRACE
19 EAGLE TRACE
21 EAGLE TRACE
23 EAGLE TRACE
FAIRWAY DRIVE
39 CLIPPER DRIVE
11 FAIRWAY DRIVE
13 FAIRWAY DRIVE
9 FAIRWAY DRIVE
23 GREENLEAF DRIVE
25 GREENLEAF DRIVE
27 GREENLEAF DRIVE
87 CLAFLIN ROAD
91 CLAFLIN ROAD
CLAFLIN ROAD
17 OLD MILL DRIVE
15 OLD MILL DRIVE
13 OLD MILL DRIVE
11 OLD MILL DRIVE
12 OLD MILL DRIVE
10 OLD MILL DRIVE
18 OLD MILL DRIVE
16 OLD MILL DRIVE
14 OLD MILL DRIVE
37 KINGSWOOD ROAD
127 KINGSWOOD ROAD
KINGSWOOD ROAD
337 SOUTH MAIN STREET

N

300 0 300 600 Feet

APPENDIX A–11

SANITARY SEWER
COLLECTION SYSTEM
ELM STREET SUBBASIN
CRESCENT POINT SUBBASIN
WILLOW STREET SUBBASIN

UNDERWOOD engineers

OCTOBER 27, 2017

Legend

- Holding Tank
- Private Pump Station
- Pump Station
- Sanitary Sewer Structure
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon
- Private Systems

N

0 300 600 Feet

Elm Street Pump Station
Willow Street Pump Station
Crescent Point Pump Station

105 106 104B 104A 104 103B 103A 103 102A 102 102B 101B 101A 101 100A 100 100B 97A 97 96 96A 94 94A 95 95A 95B 95C 95D 95E 95F 95Q 95P 95O 95N 95K 95J 95I 95H 95L 95M 95G 92 91 91A 91C 91B 90A 90 89 88A 88 86C 86B 86A 87 86 66E 85

33 FIELDSTONE ROAD
53 ELM STREET
182 CENTER STREET
164 CENTER STREET
HIGH STREET
4 ZEPHYR LANE
2 ZEPHYR LANE
69 WHITTEN NECK ROAD
EDWARDS
125 BAY STREET
66 ELM STREET
117 BAY STREET
13 PARK AVENUE
29 ELM STREET
136 CENTER STREET
7 SILVER STREET
38 ELM STREET
ELM STREET
128 CENTER STREET
19 ELM STREET
105 BAY STREET
RIVER STREET
28 BLACKBERRY LANE
15 BLACKBERRY LANE
11 BLACKBERRY LANE
7 BLACKBERRY LANE
BLACKBERRY LANE
4 ELM STREET
22 RIVER STREET
80 RIVER STREET
102 RIVER STREET
104 RIVER STREET
103 RIVER STREET
99 RIVER STREET
110 RIVER STREET
109 RIVER STREET
39 RIVER STREET
29 RIVER STREET
15 RIVER STREET
33 RIVER STREET
WILLOW STREET
15 WILLOW STREET
77 CENTER STREET
CROOKED POND LANE
51 KINGS PINE ROAD
65 KINGS PINE ROAD
27 GROVE STREET
68 CENTER STREET
67 CENTER STREET
54 CENTER STREET
49 CENTER STREET
57 CROOKED POND LANE
CENTER STREET
LEDGE STREET
36 CENTER STREET
35 CENTER STREET
PINE STREET

APPENDIX A–12

SANITARY SEWER
COLLECTION SYSTEM
BREWSTER ACADEMY

UNDERWOOD engineers

OCTOBER 27, 2017

Union St
Brummitt Ct
Canter St
Memorial Dr
Academy Dr
S Main St
Estabrook Rd
Green St
Academy Dr
Goodrich Rd
Clark Rd
Lamb Ct
Clipper Dr
Eagle Trace

73C
2A
2B
2.1
2C
3
3A
3B
4
5
55
55A
56
53
52A
52
51
50
50A
50A.1
50B
50C
33
33A
32
32A
30
35
36
201.2
201
201.1
202
203
204
205
205A
206
230
231

Brown Hall
Hughes
Sargent
Mason Ct
Mason
Spencer
Main Street Dorm
Haines
Rogers
Boat House

ATHLETIC FIELD

Lake Winnipesaukee

N

100 0 100 200 Feet

LEGEND

- Holding Tank
- Private Pump Station
- Pump Station
- Structure_Inventory
- Force Main
- Low Pressure
- Gravity Lateral
- Gravity Main
- Siphon

APPENDIX B

ATTRIBUTE TABLE SPREADSHEETS

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	northeast side S Main St	4 - 5	Town	Gravity Main	10	PVC	1977	100	60	5	1
Lehner Street	S Main - northeast side	11 - 10	Town	Gravity Main	8	DI	1992	110	85	4	1
Lehner Street	S Main - northeast side	12 - 11	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	S Main - Huggins Hospital area	10 - 9C	Town	Gravity Main	8	DI	2010	110	103	4	1
Elm Street	Center St	100 - 97A	Town	Gravity Main	8	VC	1956	100	39	2	2
Elm Street	Center St	100A - 100	Town	Gravity Main	8	AC	1977	95	55	1	1
Elm Street	Center St	100B - 100	Town	Gravity Main	8	AC	1977	95	55	1	1
Elm Street	Center St	101 - 100A	Town	Gravity Main	8	AC	1977	95	55	1	1
Elm Street	Center St	101A - 101	Town	Gravity Main	8	AC	1977	95	55	1	1
Elm Street	Center St	101B - 101A	Town	Gravity Main	8	AC	1977	95	55	1	1
Mill Street	Elm	102 - Elm Street PS	Town	Gravity Main	8	PVC	1991	100	74	3	1
Mill Street	Elm	102A - 102B	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Elm	102B - 102	Town	Gravity Main	8	PVC	1991	100	74	3	1
Elm Street	Elm	103 - 102A	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Elm	103A - 103	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Elm	103B - 103A	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Elm	104 - 103B	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Elm	104A - 104	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Elm	104B - 104A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Bay St	105 - 106	Town	Gravity Main	8	PVC	1991	100	74	4	1
Mill Street	S Main St	105 S Main St. - 53	Town	Low Pressure	2	PVC	0	100	0	1	4
Mill Street	Bay St	106 - 107	Town	Gravity Main	8	AC	1991	95	69	4	1
Mill Street	Bay St	107 - 108	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Bay St	108 - 109	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Bay St easement	109 - 110	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Bay St	109A - 109	Town	Gravity Main	8	PVC	0	100	0	1	4
Lehner Street	Treadwell Ln	11 Treadwell Ln - 16A.1	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Mill Street	Bay St easement	110 - 111	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Bay St easement	111 - 112	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Bay St easement	111A - 111	Town	Gravity Main	8	AC	1977	95	55	1	1
Mill Street	Bay St easement	111B - 111A	Town	Gravity Main	8	AC	0	95	0	1	4
Mill Street	Bay St easement	112 - 113	Town	Gravity Main	10	PVC	1977	100	60	4	1
Mill Street	Bay St easement	113 - 114	Town	Gravity Main	10	PVC	1977	100	60	4	1
Mill Street	Bay St easement	114 - 115	Town	Gravity Main	10	PVC	1977	100	60	4	1
Mill Street	Bay St easement	115 - 117	Town	Gravity Main	10	PVC	1977	100	60	4	1
Mill Street	Bay St easement	117 - 118	Town	Gravity Main	6	VC	1977	100	60	4	1
Mill Street	Bay St	118 - 119	Town	Gravity Main	6	VC	1977	100	60	4	1
Mill Street	Bay St	119 - 123	Town	Gravity Main	6	VC	1977	100	60	4	1
Mill Street	King	119.1 - 119	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	Elm St	12 Elm St - 102	Town	Gravity Lateral	8	PVC	1991	100	74	1	1
Mill Street	King	120 - 119.1	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	120A - 120B	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	120B - 120C	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	120C - 120D	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	120D - 120	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	121 - 120A	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	121A - 121	Town	Gravity Main	8	PVC	2003	100	86	1	1
Mill Street	King	122 - 115	Town	Gravity Main	6	VC	1977	100	60	1	1
Mill Street	Bay crossing	123 - 124	Town	Siphon	8	VC	1956	100	39	5	2
Mill Street	Bay St	124 - 126	Town	Gravity Main	8	PVC	1956	100	39	5	2
Mill Street	Mill	125 - 128	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	Mill	126 - 125	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	Varney	126A - 126	Town	Gravity Main	10	PVC	1977	100	60	2	1
Mill Street	Varney	127 - 127B	Town	Gravity Main	10	PVC	0	100	0	2	4
Mill Street	Varney	127B - 126A	Town	Gravity Main	10	PVC	0	100	0	2	4
Mill Street	Mill	128 - 128A	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	Mill	128A - 129A	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	Mill	129 - 138D	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	Mill	129A - 129	Town	Gravity Main	10	PVC	1956	100	39	5	2
Lehner Street	S Main - northeast side	13 - 12	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Libby	134 - 134A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Libby	134A - 129	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Mill	138 - 138C	Town	Gravity Main	10	PVC	1956	100	39	5	2
Mill Street	N Main to Mill St PS	138A - 138C	Town	Gravity Main	10	PVC	0	100	0	5	4
Mill Street	N Main to Mill St PS	138B - Mill Street PS	Town	Gravity Main	Unknown	AC	0	95	0	5	4
Mill Street	N Main to Mill St PS	138C - 138B	Town	Gravity Main	10	PVC	0	100	0	5	4

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
4 - 5	Frequent Monitoring	2077	2077-2086	$144,692	413	1977-Sewer System Repair and Construction - HTA 1977
11 - 10	Frequent Monitoring	2102	2097-2106	$104,984	300	1992-S Main Clark Rd Bay St sewers 1992
12 - 11	Frequent Monitoring	2072	2067-2076	$90,998	260	1977 HTA record drawings
10 - 9C	Frequent Monitoring	2120	2117-2126	$94,235	269	2010-As-Built Site Plan - Huggins Hospital - Wolfeboro - Alvin J Coleman and Son 12-19-2010.pdf
100 - 97A	Limited Monitoring	2056	2047-2056	$50,645	145	1956 Wolfeboro Falls record dwgs
100A - 100	Limited Monitoring	2072	2067-2076	$77,422	221	2003 WP map
100B - 100	Limited Monitoring	2072	2067-2076	$3,867	11	2003 WP map
101 - 100A	Limited Monitoring	2072	2067-2076	$17,186	49	1977 HTA record drawings
101A - 101	Limited Monitoring	2072	2067-2076	$42,688	122	1977 HTA record drawings
101B - 101A	Limited Monitoring	2072	2067-2076	$17,287	49	2003 WP map
102 - Elm Street PS	Frequent Monitoring	2091	2087-2096	$10,522	30	1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
102A - 102B	Limited Monitoring	2072	2067-2076	$44,728	128	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
102B - 102	Frequent Monitoring	2091	2087-2096	$74,935	214	1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
103 - 102A	Limited Monitoring	2072	2067-2076	$59,333	170	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
103A - 103	Limited Monitoring	2072	2067-2076	$32,957	94	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
103B - 103A	Limited Monitoring	2072	2067-2076	$33,544	96	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
104 - 103B	Limited Monitoring	2072	2067-2076	$30,797	88	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
104A - 104	Limited Monitoring	2072	2067-2076	$73,468	210	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
104B - 104A	Limited Monitoring	2072	2067-2076	$92,511	264	2003 WP map; 1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
105 - 106	Frequent Monitoring	2091	2087-2096	$120,856	345	1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
105 S Main St. - 53	Priority Renewal	0	Unknown	$131,835	377	mat/dia per 2015 mh insp
106 - 107	Frequent Monitoring	2086	2077-2086	$121,843	348	1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
107 - 108	Frequent Monitoring	2072	2067-2076	$119,511	341	1977 HTA record drawings
108 - 109	Frequent Monitoring	2072	2067-2076	$122,325	350	1977 HTA record drawings
109 - 110	Frequent Monitoring	2072	2067-2076	$43,443	124	1977 HTA record drawings
109A - 109	Priority Renewal	0	Unknown	$86,687	248	2016 mh insp
11 Treadwell Ln - 16A.1	Priority Renewal	0	Unknown	$180,855	517	
110 - 111	Frequent Monitoring	2072	2067-2076	$23,579	67	1977 HTA record drawings
111 - 112	Frequent Monitoring	2072	2067-2076	$95,482	273	1977 HTA record drawings
111A - 111	Limited Monitoring	2072	2067-2076	$81,214	232	1977 HTA record drawings
111B - 111A	Priority Renewal	0	Unknown	$44,756	128	dia/mat per 2016 mh insp
112 - 113	Frequent Monitoring	2077	2077-2086	$25,860	74	1956 record dwgs, 1977 HTA record dwgs
113 - 114	Frequent Monitoring	2077	2077-2086	$112,000	320	1956 record dwgs, 1977 HTA record dwgs
114 - 115	Frequent Monitoring	2077	2077-2086	$130,187	372	1956 record dwgs, 1977 HTA record dwgs
115 - 117	Frequent Monitoring	2077	2077-2086	$80,790	231	1956 record dwgs, 1977 HTA record dwgs
117 - 118	Frequent Monitoring	2077	2077-2086	$42,908	123	1956 record dwgs, 1977 HTA record dwgs
118 - 119	Frequent Monitoring	2077	2077-2086	$77,905	223	1956 record dwgs, 1977 HTA record dwgs
119 - 123	Frequent Monitoring	2077	2077-2086	$85,772	245	1956 record dwgs, 1977 HTA record dwgs
119.1 - 119	Limited Monitoring	2103	2097-2106	$86,860	248	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
12 Elm St - 102	Limited Monitoring	2091	2087-2096	$18,418	53	1991-Contract Dwgs Construction of Gravity Sewer Force Main Water Main 1991
120 - 119.1	Limited Monitoring	2103	2097-2106	$16,658	48	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
120A - 120B	Limited Monitoring	2103	2097-2106	$28,043	80	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
120B - 120C	Limited Monitoring	2103	2097-2106	$23,682	68	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
120C - 120D	Limited Monitoring	2103	2097-2106	$26,211	75	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
120D - 120	Limited Monitoring	2103	2097-2106	$17,609	50	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
121 - 120A	Limited Monitoring	2103	2097-2106	$23,977	69	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
121A - 121	Limited Monitoring	2103	2097-2106	$45,586	130	2003-King St. Imp. Record Drawings March 2003 - Wright Pierce
122 - 115	Limited Monitoring	2077	2077-2086	$163,964	468	1956 record dwgs, 1977 HTA record dwgs
123 - 124	Frequent Monitoring	2056	2047-2056	$94,165	269	1956-Wolfeboro Falls Sewer As-Built
124 - 126	Frequent Monitoring	2056	2047-2056	$46,966	134	1956-Wolfeboro Falls Sewer As-Built
125 - 128	Frequent Monitoring	2056	2047-2056	$47,049	134	1956-Wolfeboro Falls Sewer As-Built
126 - 125	Frequent Monitoring	2056	2047-2056	$41,023	117	1956-Wolfeboro Falls Sewer As-Built
126A - 126	Limited Monitoring	2077	2077-2086	$15,068	43	
127 - 127B	Priority Renewal	0	Unknown	$48,454	138	
127B - 126A	Priority Renewal	0	Unknown	$52,067	149	
128 - 128A	Frequent Monitoring	2056	2047-2056	$19,417	55	1956-Wolfeboro Falls Sewer As-Built
128A - 129A	Frequent Monitoring	2056	2047-2056	$60,286	172	1956-Wolfeboro Falls Sewer As-Built
129 - 138D	Frequent Monitoring	2056	2047-2056	$28,408	81	1956-Wolfeboro Falls Sewer As-Built
129A - 129	Frequent Monitoring	2056	2047-2056	$44,332	127	1956-Wolfeboro Falls Sewer As-Built
13 - 12	Frequent Monitoring	2072	2067-2076	$71,552	204	1977 HTA record drawings
134 - 134A	Limited Monitoring	2072	2067-2076	$64,597	185	1977 HTA record drawings
134A - 129	Limited Monitoring	2072	2067-2076	$65,923	188	1977 HTA record drawings
138 - 138C	Frequent Monitoring	2056	2047-2056	$18,170	52	1956-Wolfeboro Falls Sewer As-Built
138A - 138C	Highest Risk	0	Unknown	$7,786	22	
138B - Mill Street PS	Highest Risk	0	Unknown	$9,701	28	
138C - 138B	Highest Risk	0	Unknown	$8,341	24	

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	Mill	138D - 138	Town	Gravity Main	10	PVC	1956	100	39	5	2
Lehner Street	S Main - northeast side	13A - 13	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	S Main - northeast side	14 - 13A	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	N Main/S Main	141 - 142	Town	Siphon	8	AC	1977	95	55	5	1
Mill Street	N Main	142 - 143	Town	Gravity Main	8	AC	1977	95	55	5	1
Elm Street	Park Ave	142 Center St - 100B	Town	Gravity Lateral	6	CI	0	115	0	1	4
Mill Street	N Main to Mill St PS	143 - 143A	Town	Gravity Main	10	AC	1938	95	16	5	3
Mill Street	N Main to Mill St PS	143A - 143B	Town	Gravity Main	10	AC	1938	95	16	5	3
Mill Street	N Main to Mill St PS	143B - 138A	Town	Gravity Main	12	AC	0	95	0	5	4
Mill Street	N Main	144 - 143	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Lake	145 - 144	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Endicott	145A - 146.1	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Endicott	146 - 145A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Endicott to Lake	146.1 - 146.2	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Endicott to Lake	146.2 - 145	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Endicott	146A - 146.1	Town	Gravity Main	8	AC	0	95	0	1	4
Mill Street	N Main	147 - 144	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	N Main	147A - 147	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	N Main	148 - 147A	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	Center St	148 S Main - 2A	Town	Gravity Lateral	Unknown	AC	0	95	0	2	4
Mill Street	N Main	149 - 148	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	S Main - northeast side	15 - 14	Town	Gravity Main	8	AC	1977	95	55	4	1
Elm Street	Pine Hill Rd	15 Pine Hill Road - to ???	15 Pine Hill Road	Low Pressure	Unknown	Unknown	0	100	0	1	4
Mill Street	N Main	150 - 149	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	N Main	151 - 150	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	N Main	152 - 151	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	N Main	153 - 152	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	N Main	154 - 153	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	N Main	155 - 154	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	N Main	156 - 155	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	N Main	157 - 156	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	N Main	158 - 157	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	N Main	159 - 158	Town	Gravity Main	6	VC	1940	100	23	2	3
Lehner Street	S Main - northeast side	16 - 15	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	N Main	160 - 159	Town	Gravity Main	6	VC	1940	100	23	2	3
Mill Street	N Main	160A - 160	Town	Gravity Main	8	PVC	1985	100	68	2	1
Mill Street	N Main	161 - 160A	Town	Gravity Main	8	PVC	1985	100	68	2	1
Mill Street	N Main	161A - 161	Town	Gravity Main	8	PVC	1985	100	68	2	1
Mill Street	Sewall	162 - 149	Town	Gravity Main	8	AC	1977	95	55	4	1
Mill Street	Pleasant	163 - 162	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Pleasant	164 - 163	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Pleasant	165 - 164	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Pleasant	166 - 165	Town	Gravity Main	8	AC	1977	95	55	2	1
Sewall Road	Sewall	169 - 170	Town	Gravity Main	8	PVC	1988	100	71	1	1
Lehner Street	S Main - northeast side	16A - 16B	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	Treadwell Ln	16A.1 - Gravity Main	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Lehner Street	S Main - northeast side	16B - 16	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	S Main - northeast side	16C - 16A	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	S Main - northeast side	17 - 16B	Town	Gravity Main	8	AC	0	95	0	2	4
Sewall Road	Sewall	170 - 171	Town	Gravity Main	8	PVC	1988	100	71	1	1
Sewall Road	Sewall	171 - 172	Town	Gravity Main	8	PVC	1988	100	71	1	1
Sewall Road	Sewall	172 - Sewall Road PS	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	173 - 172	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	174 - 173	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	175 - 174	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	176 - 175	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	177 - 176	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	178 - 177	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	179 - 178	Town	Gravity Main	10	PVC	1988	100	71	3	1
Lehner Street	S Main - northeast side	17A - 17	Town	Gravity Main	8	PVC	0	100	0	2	4
Sewall Road	Sewall	180 - 179	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	181 - 180	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	182 - 181	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	183 - 182	Town	Gravity Main	10	PVC	1988	100	71	3	1
Sewall Road	Sewall	184 - 183	Town	Gravity Main	10	PVC	1989	100	72	3	1
Lehner Street	S Main - northeast side	18A - 16C	Town	Gravity Main	8	AC	1977	95	55	4	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
138D - 138	Frequent Monitoring	2056	2047-2056	$51,114	146	1956-Wolfeboro Falls Sewer As-Built
13A - 13	Frequent Monitoring	2072	2067-2076	$102,924	294	1977 HTA record drawings
14 - 13A	Frequent Monitoring	2072	2067-2076	$42,448	121	1977 HTA record drawings
141 - 142	Frequent Monitoring	2072	2067-2076	$15,554	44	original install 1937; rehabilitated 1977
142 - 143	Frequent Monitoring	2072	2067-2076	$51,110	146	original install 1937; rehabilitated 1977
142 Center St - 100B	Priority Renewal	0	Unknown	$115,873	331	dia per 2013 mh insp; mat per 2005 AutoCAD
143 - 143A	Highest Risk	2033	2027-2036	$70,280	201	1938-wolfeboro sewers 1938
143A - 143B	Highest Risk	2033	2027-2036	$48,743	139	1938-wolfeboro sewers 1938
143B - 138A	Highest Risk	0	Unknown	$29,671	85	dia per 2015 mh insp
144 - 143	Frequent Monitoring	2072	2067-2076	$49,379	141	1977-Sewer System Repair and Construction - HTA 1977
145 - 144	Limited Monitoring	2072	2067-2076	$127,811	365	1977-Sewer System Repair and Construction - HTA 1977
145A - 146.1	Limited Monitoring	2072	2067-2076	$46,382	133	1977-Sewer System Repair and Construction - HTA 1977
146 - 145A	Limited Monitoring	2072	2067-2076	$71,250	204	1977-Sewer System Repair and Construction - HTA 1977
146.1 - 146.2	Limited Monitoring	2072	2067-2076	$54,314	155	1977-Sewer System Repair and Construction - HTA 1977
146.2 - 145	Limited Monitoring	2072	2067-2076	$44,540	127	1977-Sewer System Repair and Construction - HTA 1977
146A - 146.1	Priority Renewal	0	Unknown	$23,370	67	
147 - 144	Frequent Monitoring	2072	2067-2076	$98,195	281	1977-Sewer System Repair and Construction - HTA 1977
147A - 147	Frequent Monitoring	2072	2067-2076	$50,987	146	1977-Sewer System Repair and Construction - HTA 1977
148 - 147A	Frequent Monitoring	2072	2067-2076	$15,005	43	1977-Sewer System Repair and Construction - HTA 1977
148 S Main - 2A	Priority Renewal	0	Unknown	$102,042	292	2013 CCTV notes
149 - 148	Frequent Monitoring	2072	2067-2076	$68,016	194	1977-Sewer System Repair and Construction - HTA 1977
15 - 14	Frequent Monitoring	2072	2067-2076	$99,769	285	1977 HTA record drawings
15 Pine Hill Road - to ???	Priority Renewal	0	Unknown	$51,278	147	
150 - 149	Frequent Monitoring	2072	2067-2076	$122,087	349	1977-Sewer System Repair and Construction - HTA 1977
151 - 150	Frequent Monitoring	2072	2067-2076	$106,355	304	1977-Sewer System Repair and Construction - HTA 1977
152 - 151	Frequent Monitoring	2072	2067-2076	$108,378	310	1977-Sewer System Repair and Construction - HTA 1977
153 - 152	Frequent Monitoring	2072	2067-2076	$61,368	175	1977-Sewer System Repair and Construction - HTA 1977
154 - 153	Limited Monitoring	2072	2067-2076	$149,454	427	1977-Sewer System Repair and Construction - HTA 1977
155 - 154	Limited Monitoring	2072	2067-2076	$92,692	265	1977-Sewer System Repair and Construction - HTA 1977
156 - 155	Limited Monitoring	2072	2067-2076	$75,720	216	1977-Sewer System Repair and Construction - HTA 1977
157 - 156	Limited Monitoring	2072	2067-2076	$75,083	215	rehabilitated in 1977 per HTA record drawings
158 - 157	Limited Monitoring	2072	2067-2076	$80,420	230	rehabilitated in 1977 per HTA record drawings
159 - 158	Priority Renewal	2040	2037-2046	$152,824	437	2003 WP map
16 - 15	Frequent Monitoring	2072	2067-2076	$94,637	270	1977 HTA record drawings
160 - 159	Priority Renewal	2040	2037-2046	$231,569	662	2003 WP map
160A - 160	Limited Monitoring	2085	2077-2086	$14,639	42	2003 WP map
161 - 160A	Limited Monitoring	2085	2077-2086	$168,954	483	2003 WP map
161A - 161	Limited Monitoring	2085	2077-2086	$151,126	432	2003 WP map
162 - 149	Frequent Monitoring	2072	2067-2076	$112,213	321	1977-Sewer System Repair and Construction - HTA 1977
163 - 162	Limited Monitoring	2072	2067-2076	$110,360	315	1977-Sewer System Repair and Construction - HTA 1977
164 - 163	Limited Monitoring	2072	2067-2076	$110,721	316	1977-Sewer System Repair and Construction - HTA 1977
165 - 164	Limited Monitoring	2072	2067-2076	$117,366	335	1977-Sewer System Repair and Construction - HTA 1977
166 - 165	Limited Monitoring	2072	2067-2076	$95,213	272	1977-Sewer System Repair and Construction - HTA 1977
169 - 170	Limited Monitoring	2088	2087-2096	$80,133	229	
16A - 16B	Frequent Monitoring	2072	2067-2076	$63,199	181	1977 HTA record drawings
16A.1 - Gravity Main	Priority Renewal	0	Unknown	$84,236	241	
16B - 16	Frequent Monitoring	2072	2067-2076	$53,571	153	1977 HTA record drawings
16C - 16A	Frequent Monitoring	2072	2067-2076	$54,029	154	1977 HTA record drawings
17 - 16B	Priority Renewal	0	Unknown	$38,755	111	
170 - 171	Limited Monitoring	2088	2087-2096	$104,086	297	
171 - 172	Limited Monitoring	2088	2087-2096	$85,461	244	
172 - Sewall Road PS	Frequent Monitoring	2088	2087-2096	$12,016	34	
173 - 172	Frequent Monitoring	2088	2087-2096	$50,877	145	
174 - 173	Frequent Monitoring	2088	2087-2096	$99,858	285	
175 - 174	Frequent Monitoring	2088	2087-2096	$108,520	310	
176 - 175	Frequent Monitoring	2088	2087-2096	$107,509	307	
177 - 176	Frequent Monitoring	2088	2087-2096	$97,328	278	
178 - 177	Frequent Monitoring	2088	2087-2096	$116,030	332	
179 - 178	Frequent Monitoring	2088	2087-2096	$81,090	232	
17A - 17	Priority Renewal	0	Unknown	$22,255	64	dia/mat per 2015 mh insp
180 - 179	Frequent Monitoring	2088	2087-2096	$84,592	242	
181 - 180	Frequent Monitoring	2088	2087-2096	$57,347	164	
182 - 181	Frequent Monitoring	2088	2087-2096	$103,980	297	
183 - 182	Frequent Monitoring	2088	2087-2096	$103,636	296	
184 - 183	Frequent Monitoring	2089	2087-2096	$67,822	194	2003 WP map
18A - 16C	Frequent Monitoring	2072	2067-2076	$41,214	118	1977 HTA record drawings

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	S Main - northeast side	19 - 18A	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	Center St	2 - 80A	Town	Gravity Main	10	AC	1977	95	55	5	1
Lehner Street	northeast side S Main St	2.1 - 2B	Town	Gravity Main	10	AC	1977	95	55	5	1
Lehner Street	S Main - northeast side	20 - 19	Town	Gravity Main	8	AC	1930	95	8	4	4
Taylor Home	Taylor Home	200 - Taylor Home PS	Taylor Home	Gravity Main	8	PVC	2000	100	83	3	1
Taylor Home	Taylor Home	200A - 200	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200B - 200A	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200C - 200B	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200D - 200C	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200E - 200	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200F - 200E	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200G - 200F	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200H - 200G	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200I - 200H	Taylor Home	Gravity Main	8	PVC	2000	100	83	2	1
Taylor Home	Taylor Home	200J - 200I	Taylor Home	Gravity Main	8	PVC	2000	100	83	1	1
Taylor Home	Taylor Home	200K - 200H	Taylor Home	Gravity Main	8	PVC	2000	100	83	1	1
Clark Road	Clark	201 - 201.1	Town	Gravity Main	8	PVC	1993	100	76	1	1
Clark Road	Clark	201.1 - 202	Town	Gravity Main	8	PVC	1993	100	76	1	1
Clark Road	Brewster Academy	201.2 - 201.1	Brewster Academy	Gravity Main	8	PVC	0	100	0	1	4
Clark Road	Clark	202 - 203	Town	Gravity Main	8	PVC	1993	100	76	1	1
Clark Road	Clark	203 - 204	Town	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Fawn Haven	203.1 - 203	Fawn Haven	Gravity Main	8	PVC	0	100	0	2	4
Clark Road	Fawn Haven	203A - 203.1	Fawn Haven	Gravity Main	8	PVC	0	100	0	2	4
Clark Road	Clark	204 - 205	Town	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Clark	205 - 205A	Town	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Clark	205A - 206	Town	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Clark	206 - Clark Road PS	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Clark	207 - 206	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Clark	208 - 207	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Clark	209 - 208	Town	Gravity Main	8	PVC	1985	100	68	2	1
Lehner Street	S Main - northeast side	21 - 20	Town	Gravity Main	8	AC	1930	95	8	4	4
Clark Road	Clark	210 - 210A	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Clafin Ln	210B - 210A	Town	Gravity Main	8	PVC	2003	100	86	1	1
Clark Road	Clark	211 - 210	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Greenleaf	212 - 211	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Greenleaf	213 - 212	Town	Gravity Main	8	PVC	1985	100	68	2	1
Clark Road	Greenleaf	214 - 213	Town	Gravity Main	8	PVC	1989	100	72	2	1
Clark Road	Greenleaf	214A - 214	Town	Gravity Main	8	PVC	1989	100	72	2	1
Clark Road	Greenleaf	214B - 214A	Town	Gravity Main	8	PVC	1989	100	72	2	1
Greenleaf	Greenleaf	215 - 216	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	216 - 217	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	217 - 218	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	218 - 219	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	219 - 220	Town	Gravity Main	8	PVC	1989	100	72	1	1
Lehner Street	S Main - northeast side	22 - 21	Town	Gravity Main	8	AC	1930	95	8	4	4
Greenleaf	Greenleaf	220 - Greenleaf PS	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	221 - Greenleaf PS	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	222 - 221	Town	Gravity Main	8	PVC	1989	100	72	1	1
Greenleaf	Greenleaf	223 - 222	Town	Gravity Main	8	PVC	1989	100	72	1	1
Lehner Street	S Main - northeast side	23 - 22	Town	Gravity Main	8	AC	1930	95	8	4	4
Mill Street	from Pleasant to 23 Sewall	23 Sewall - Gravity Main	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Clark Road	Clipper	230 - 206	Town	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Clipper	231 - 230	Clipper Home - Nursing H	Gravity Main	8	PVC	1993	100	76	2	1
Clark Road	Clipper	232 - 231	Clipper Home - Nursing H	Gravity Main	8	PVC	1993	100	76	2	1
Lehner Street	Clark Rd	233 S Main - 34	Town	Gravity Lateral	8	PVC	0	100	0	1	4
Fairway View	Eagle Trace	234 - 235	Town	Gravity Main	8	PVC	1993	100	76	1	1
Fairway View	Eagle Trace	235 - Fairway View PS	Town	Gravity Main	8	PVC	1988	100	71	1	1
Fairway View	Eagle Trace	236 - 235	Town	Gravity Main	8	PVC	1988	100	71	1	1
Fairway View	Eagle Trace	237 - 236	Town	Gravity Main	8	PVC	1988	100	71	1	1
Fairway View	Eagle Trace	238 - 237	Town	Gravity Main	8	PVC	1988	100	71	1	1
Fairway View	Eagle Trace	239 - 238	Town	Gravity Main	8	PVC	1988	100	71	1	1
Lehner Street	Gov Wentworth Regional School District	24 - 23	Gov Wentworth Regional	Gravity Main	8	DI	1982	110	75	4	1
Lehner Street	Gov Wentworth Regional School District	24.1 - 24	Gov Wentworth Regional	Gravity Main	8	PVC	1982	100	65	4	1
Lehner Street	Gov Wentworth Regional School District	24.2 - 24.1	Gov Wentworth Regional	Gravity Main	8	PVC	1982	100	65	4	1
Lehner Street	Gov Wentworth Regional School District	24.3 - 24.2	Gov Wentworth Regional	Gravity Main	8	PVC	1982	100	65	4	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
19 - 18A	Frequent Monitoring	2072	2067-2076	$50,303	144	1977 HTA record drawings
2 - 80A	Frequent Monitoring	2072	2067-2076	$19,323	55	1977-Sewer System Repair and Construction - HTA 1977
2.1 - 2B	Frequent Monitoring	2072	2067-2076	$52,431	150	1977-Sewer System Repair and Construction - HTA 1977
20 - 19	Highest Risk	2025	2017-2026	$68,059	194	1997 WP I&I Repair
200 - Taylor Home PS	Frequent Monitoring	2100	2097-2106	$19,308	55	2003 W&C PS Evaluation
200A - 200	Limited Monitoring	2100	2097-2106	$47,633	136	2003 W&C PS Evaluation
200B - 200A	Limited Monitoring	2100	2097-2106	$62,500	179	2003 W&C PS Evaluation
200C - 200B	Limited Monitoring	2100	2097-2106	$89,730	256	2003 W&C PS Evaluation
200D - 200C	Limited Monitoring	2100	2097-2106	$67,411	193	2003 W&C PS Evaluation
200E - 200	Limited Monitoring	2100	2097-2106	$60,113	172	2003 W&C PS Evaluation
200F - 200E	Limited Monitoring	2100	2097-2106	$47,883	137	2003 W&C PS Evaluation
200G - 200F	Limited Monitoring	2100	2097-2106	$90,287	258	2003 W&C PS Evaluation
200H - 200G	Limited Monitoring	2100	2097-2106	$57,599	165	2003 W&C PS Evaluation
200I - 200H	Limited Monitoring	2100	2097-2106	$67,676	193	2003 W&C PS Evaluation
200J - 200I	Limited Monitoring	2100	2097-2106	$75,755	216	2003 W&C PS Evaluation
200K - 200H	Limited Monitoring	2100	2097-2106	$119,928	343	2003 W&C PS Evaluation
201 - 201.1	Limited Monitoring	2093	2087-2096	$105,630	302	1997 WP I&I
201.1 - 202	Limited Monitoring	2093	2087-2096	$30,809	88	1997 WP I&I
201.2 - 201.1	Priority Renewal	0	Unknown	$135,716	388	2016 Private system inventory to DES
202 - 203	Limited Monitoring	2093	2087-2096	$38,417	110	1997 WP I&I
203 - 204	Limited Monitoring	2093	2087-2096	$104,412	298	1997 WP I&I
203.1 - 203	Priority Renewal	0	Unknown	$78,127	223	2016 Private system inventory to DES
203A - 203.1	Priority Renewal	0	Unknown	$85,620	245	2016 Private system inventory to DES
204 - 205	Limited Monitoring	2093	2087-2096	$24,190	69	1997 WP I&I
205 - 205A	Limited Monitoring	2093	2087-2096	$24,298	69	1997 WP I&I
205A - 206	Limited Monitoring	2093	2087-2096	$82,750	236	1997 WP I&I
206 - Clark Road PS	Limited Monitoring	2085	2077-2086	$25,933	74	1997 WP I&I
207 - 206	Limited Monitoring	2085	2077-2086	$80,613	230	1997 WP I&I
208 - 207	Limited Monitoring	2085	2077-2086	$51,381	147	1997 WP I&I
209 - 208	Limited Monitoring	2085	2077-2086	$125,636	359	1997 WP I&I
21 - 20	Highest Risk	2025	2017-2026	$94,912	271	1997 WP I&I Repair
210 - 210A	Limited Monitoring	2085	2077-2086	$22,825	65	1997 WP I&I
210A - 209	Limited Monitoring	2085	2077-2086	$17,230	49	1997 WP I&I
210B - 210A	Limited Monitoring	2103	2097-2106	$223,991	640	2003-clark rd ps
211 - 210	Limited Monitoring	2085	2077-2086	$45,012	129	1997 WP I&I
212 - 211	Limited Monitoring	2085	2077-2086	$55,000	157	1997 WP I&I
213 - 212	Limited Monitoring	2085	2077-2086	$50,594	145	1997 WP I&I
214 - 213	Limited Monitoring	2089	2087-2096	$52,995	151	2003 WP map
214A - 214	Limited Monitoring	2089	2087-2096	$41,100	117	2003 WP map
214B - 214A	Limited Monitoring	2089	2087-2096	$37,417	107	2003 WP map
215 - 216	Limited Monitoring	2089	2087-2096	$51,818	148	2003 WP map
216 - 217	Limited Monitoring	2089	2087-2096	$55,304	158	2003 WP map
217 - 218	Limited Monitoring	2089	2087-2096	$35,388	101	2003 WP map
218 - 219	Limited Monitoring	2089	2087-2096	$67,475	193	2003 WP map
219 - 220	Limited Monitoring	2089	2087-2096	$49,505	141	2003 WP map
22 - 21	Highest Risk	2025	2017-2026	$92,200	263	1997 WP I&I Repair
220 - Greenleaf PS	Limited Monitoring	2089	2087-2096	$23,649	68	2003 WP map
221 - Greenleaf PS	Limited Monitoring	2089	2087-2096	$33,989	97	2003 WP map
222 - 221	Limited Monitoring	2089	2087-2096	$55,832	160	2003 WP map
223 - 222	Limited Monitoring	2089	2087-2096	$40,949	117	2003 WP map
23 - 22	Highest Risk	2025	2017-2026	$43,392	124	1997 WP I&I Repair
23 Sewall - Gravity Main	Priority Renewal	0	Unknown	$80,649	230	
230 - 206	Limited Monitoring	2093	2087-2096	$124,981	357	1997 WP I&I
231 - 230	Limited Monitoring	2093	2087-2096	$97,943	280	1997 WP I&I
232 - 231	Limited Monitoring	2093	2087-2096	$176,523	504	1997 WP I&I
233 S Main - 34	Priority Renewal	0	Unknown	$23,786	68	
234 - 235	Limited Monitoring	2093	2087-2096	$86,976	249	1997 WP I&I
235 - Fairway View PS	Limited Monitoring	2088	2087-2096	$17,153	49	1997 WP I&I
236 - 235	Limited Monitoring	2088	2087-2096	$78,127	223	1997 WP I&I
237 - 236	Limited Monitoring	2088	2087-2096	$67,299	192	1997 WP I&I
238 - 237	Limited Monitoring	2088	2087-2096	$88,319	252	1997 WP I&I
239 - 238	Limited Monitoring	2088	2087-2096	$98,688	282	1997 WP I&I
24 - 23	Frequent Monitoring	2092	2087-2096	$97,591	279	1982 record dwgs, 2016 Private system inventory to DES
24.1 - 24	Frequent Monitoring	2082	2077-2086	$35,372	101	1982 record dwgs, 2016 Private system inventory to DES
24.2 - 24.1	Frequent Monitoring	2082	2077-2086	$29,167	83	1982 record dwgs, 2016 Private system inventory to DES
24.3 - 24.2	Frequent Monitoring	2082	2077-2086	$40,969	117	1982 record dwgs, 2016 Private system inventory to DES

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Fairway View	Fairway	240 - 235	Town	Gravity Main	8	PVC	1993	100	76	1	1
Fairway View	Fairway	241 - 240	Town	Gravity Main	8	PVC	1993	100	76	1	1
Fairway View	Fairway	242 - 241	Town	Gravity Main	8	PVC	1993	100	76	1	1
Fairway View	Fairway	243 - 242	Town	Gravity Main	8	PVC	1993	100	76	1	1
Lehner Street	S Main/McManus	24A - 24	Gov Wentworth Regional	Gravity Main	8	VC	0	100	0	4	4
Lehner Street	Gov Wentworth Regional School District	24A.1 - 24A	Gov Wentworth Regional	Gravity Main	8	PVC	0	100	0	4	4
Lehner Street	Gov Wentworth Regional School District	24A.2 - 24A.1	Gov Wentworth Regional	Gravity Main	8	PVC	0	100	0	4	4
Lehner Street	Gov Wentworth Regional School District	24A.3 - 24A.2	Gov Wentworth Regional	Gravity Main	8	PVC	0	100	0	4	4
Lehner Street	Gov Wentworth Regional School District	24A.4 - 24A.3	Gov Wentworth Regional	Gravity Main	8	PVC	0	100	0	4	4
Lehner Street	Gov Wentworth Regional School District	24A.5 - 24A.4	Gov Wentworth Regional	Gravity Main	8	PVC	0	100	0	4	4
Greenleaf	Greenleaf	25 Greenleaf - 220	Town	Low Pressure	Unknown	Unknown	1989	100	72	1	1
Elm Street	Elm St	27 Elm St - 103A	Town	Gravity Lateral	Unknown	AC	0	95	0	1	4
Lehner Street	south of S Main	295 S Main St - Gravity la	Town	Gravity Lateral	8	PVC	0	100	0	1	4
Lehner Street	Center St	2A - 2B	Town	Gravity Main	8	PVC	0	100	0	5	1
Lehner Street	Center St	2B - 2	Town	Gravity Main	10	AC	1977	95	55	5	1
Lehner Street	Center St	2C - 2A	Town	Gravity Main	8	VC	0	100	0	2	4
Lehner Street	northeast side S Main St	3 - 2.1	Town	Gravity Main	10	AC	1977	95	55	5	1
Lehner Street	Crescent Lake Ave	30 - 6	Town	Gravity Main	8	AC	1977	95	55	4	1
Lehner Street	Green St	32 - 30	Town	Gravity Main	8	PVC	1977	100	60	4	1
Lehner Street	Coves End Rd	32 Coves End Rd - Gravity	Coves End	Low Pressure	Unknown	Unknown	0	100	0	2	4
Lehner Street	Green St	32A - 32	Town	Gravity Main	8	PVC	1938	100	21	1	3
Lehner Street	Brewster Academy	33 - 33-A	Brewster Academy	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Brewster Academy	33-A - 32	Brewster Academy	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Clark Rd to Green St	34 - 32	Town	Gravity Main	8	PVC	1992	100	75	4	1
Lehner Street	Clark	35 - 34	Town	Gravity Main	8	PVC	1992	100	75	4	1
Mill Street	King St	35 King St - 122	Town	Gravity Lateral	6	VC	0	100	0	1	4
Lehner Street	Clark	36 - 35	Town	Gravity Main	8	PVC	1992	100	75	4	1
Mill Street	Mill	36 Mill St - 138B	Town	Gravity Lateral	Unknown	AC	0	95	0	1	4
Lehner Street	Goodrich	37 - 36	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	Christian Ridge Rd	37 Christian Ridge Rd - G	Town	Force Main	Unknown	Unknown	0	100	0	2	4
Lehner Street	Goodrich	38 - 37	Town	Gravity Main	8	PVC	1998	100	81	1	1
Lehner Street	Goodrich	39 - 38	Town	Gravity Main	8	PVC	1998	100	81	1	1
Lehner Street	northeast side S Main St	3A - 3	Town	Gravity Main	10	AC	1977	95	55	5	1
Lehner Street	northeast side S Main St	3B - 3A	Town	Gravity Main	10	DI	1977	110	70	5	1
Lehner Street	Cropley Hill Rd	4 Center St - 73	Town	Gravity Lateral	8	AC	0	95	0	2	4
Mill Street	Nancy's way to Endicott	4 Nancy's Way - Gravity M	Town	Gravity Lateral	8	AC	0	95	0	1	4
Lehner Street	south of S Main	4 Old Mill Dr - Gravity lat	Town	Gravity Lateral	8	PVC	0	100	0	1	4
Lehner Street	south of S Main	4 Old Mill/295 S Main - 4	Town	Gravity Lateral	8	PVC	0	100	0	1	4
Lehner Street	E Clark	40 - 37	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	E Clark	40A - 40	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	south of S Main	40B - 40A	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	south of S Main	42 - 40B	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	S Main - southwest side	43 - 42	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Bay St	43 King St - 118	Town	Gravity Lateral	6	VC	0	100	0	1	4
Mill Street	Clow	43 Sewall - Gravity Main	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Lehner Street	south of S Main	44 - 43	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	south of S Main	45 - 44	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	south of S Main	45A - 45	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	south of S Main	45B - 45A	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	south of S Main	45C - 45B	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	south of S Main	46 - 45C	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	south of S Main	47 - 46	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	south of S Main	47A - 47	Town	Gravity Main	8	PVC	1998	100	81	2	1
Lehner Street	northeast side S Main St	4A - 4	Town	Gravity Main	10	PVC	1977	100	60	5	1
Lehner Street	Christian Ridge Rd	4B - 4A	Town	Gravity Main	10	PVC	1977	100	60	5	1
Lehner Street	northeast side S Main St	5 - 3B	Town	Gravity Main	10	PVC	1977	100	60	5	1
Mill Street	Brewster Academy	50 - 51	Brewster Academy	Gravity Main	8	AC	0	95	0	3	4
Mill Street	Brewster Academy	50A - 51	Brewster Academy	Gravity Main	6	AC	0	95	0	3	4
Mill Street	Brewster Academy	50A.1 - 50A	Brewster Academy	Gravity Main	6	VC	0	100	0	3	4
Mill Street	Brewster Academy	50B - 50	Brewster Academy	Gravity Main	6	AC	0	95	0	3	4
Mill Street	Brewster Academy	50C - 50	Brewster Academy	Gravity Main	8	AC	0	95	0	3	4
Mill Street	Brewster Academy	51 - 52	Brewster Academy	Gravity Main	6	AC	1938	95	16	3	3
Mill Street	Brewster Academy	52 - 52A	Brewster Academy	Gravity Main	6	AC	1938	95	16	3	3
Mill Street	Brewster Academy	52A - 53	Brewster Academy	Gravity Main	6	AC	1938	95	16	3	3
Mill Street	S Main St	53 - Gravity Main	Town	Gravity Main	6	AC	1938	95	16	3	3
Mill Street	S Main	55 - 56	Town	Gravity Main	8	AC	1977	95	55	3	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
240 - 235	Limited Monitoring	2093	2087-2096	$134,548	384	1997 WP I&I
241 - 240	Limited Monitoring	2093	2087-2096	$49,134	140	1997 WP I&I
242 - 241	Limited Monitoring	2093	2087-2096	$33,477	96	1997 WP I&I
243 - 242	Limited Monitoring	2093	2087-2096	$98,595	282	1997 WP I&I
24A - 24	Highest Risk	0	Unknown	$21,420	61	2016 Private system inventory to DES
24A.1 - 24A	Highest Risk	0	Unknown	$53,071	152	mat, dia from 2016 mh insp, not shown on 1982 record dwgs, 2016 Private system inventory to DES
24A.2 - 24A.1	Highest Risk	0	Unknown	$52,500	150	mat/dia from 2016 mh insp, not shown on 1982 record dwgs, 2016 Private system inventory to DES
24A.3 - 24A.2	Highest Risk	0	Unknown	$52,500	150	mat/dia from 2016 mh insp, not shown on 1982 record dwgs, 2016 Private system inventory to DES
24A.4 - 24A.3	Highest Risk	0	Unknown	$35,000	100	mat/dia from 2016 mh insp, not shown on 1982 record dwgs, 2016 Private system inventory to DES
24A.5 - 24A.4	Highest Risk	0	Unknown	$21,199	61	mat/dia from 2016 mh insp, not shown on 1982 record dwgs, 2016 Private system inventory to DES
25 Greenleaf - 220	Limited Monitoring	2089	2087-2096	$112,995	323	2003 WP map
27 Elm St - 103A	Priority Renewal	0	Unknown	$88,976	254	
295 S Main St - Gravity la	Priority Renewal	0	Unknown	$32,237	92	
2A - 2B	Frequent Monitoring	0	Unknown	$20,517	59	staff comment 9/27/2017
2B - 2	Frequent Monitoring	2072	2067-2076	$83,383	238	1977-Sewer System Repair and Construction - HTA 1977
2C - 2A	Priority Renewal	0	Unknown	$70,500	201	
3 - 2.1	Frequent Monitoring	2072	2067-2076	$82,158	235	1977-Sewer System Repair and Construction - HTA 1977
30 - 6	Frequent Monitoring	2072	2067-2076	$79,011	226	1977-Sewer System Repair and Construction - HTA 1977
32 - 30	Frequent Monitoring	2077	2077-2086	$65,146	186	1977-Sewer System Repair and Construction - HTA 1977
32 Coves End Rd - Gravity	Priority Renewal	0	Unknown	$382,664	1,093	2016 Private system inventory to DES
32A - 32	Priority Renewal	2038	2037-2046	$92,949	266	1997 WP I&I
33 - 33-A	Frequent Monitoring	2072	2067-2076	$65,530	187	2016 Private system inventory to DES
33-A - 32	Frequent Monitoring	2072	2067-2076	$64,295	184	2016 Private system inventory to DES
34 - 32	Frequent Monitoring	2092	2087-2096	$113,495	324	1992-S Main Clark Rd Bay St sewers 1992
35 - 34	Frequent Monitoring	2092	2087-2096	$104,320	298	1992-S Main Clark Rd Bay St sewers 1992
35 King St - 122	Priority Renewal	0	Unknown	$46,225	132	
36 - 35	Frequent Monitoring	2092	2087-2096	$51,418	147	1992-S Main Clark Rd Bay St sewers 1992
36 Mill St - 138B	Priority Renewal	0	Unknown	$41,252	118	
37 - 36	Limited Monitoring	2098	2097-2106	$81,411	233	2003 WP map
37 Christian Ridge Rd - Gı	Priority Renewal	0	Unknown	$254,517	727	
38 - 37	Limited Monitoring	2098	2097-2106	$77,202	221	2003 WP map
39 - 38	Limited Monitoring	2098	2097-2106	$71,341	204	2003 WP map
3A - 3	Frequent Monitoring	2072	2067-2076	$55,752	159	1977-Sewer System Repair and Construction - HTA 1977
3B - 3A	Frequent Monitoring	2087	2087-2096	$23,724	68	1977-Sewer System Repair and Construction - HTA 1977
4 Center St - 73	Priority Renewal	0	Unknown	$76,161	218	
4 Nancy's Way - Gravity M	Priority Renewal	0	Unknown	$45,339	130	
4 Old Mill Dr - Gravity lat	Priority Renewal	0	Unknown	$60,321	172	
4 Old Mill/295 S Main - 4	Priority Renewal	0	Unknown	$48,699	139	
40 - 37	Limited Monitoring	2098	2097-2106	$70,116	200	2003 WP map
40A - 40	Limited Monitoring	2098	2097-2106	$53,594	153	2003 WP map
40B - 40A	Limited Monitoring	2098	2097-2106	$47,071	134	2003 WP map
42 - 40B	Limited Monitoring	2098	2097-2106	$18,031	52	2003 WP map
43 - 42	Limited Monitoring	2072	2067-2076	$21,036	60	rehabilitated 1977 per HTA record drawings
43 King St - 118	Priority Renewal	0	Unknown	$39,025	112	
43 Sewall - Gravity Main	Priority Renewal	0	Unknown	$281,260	804	
44 - 43	Limited Monitoring	2072	2067-2076	$33,013	94	rehabilitated 1977 per HTA record drawings
45 - 44	Limited Monitoring	2072	2067-2076	$19,286	55	rehabilitated 1977 per HTA record drawings
45A - 45	Limited Monitoring	2072	2067-2076	$23,378	67	rehabilitated 1977 per HTA record drawings
45B - 45A	Limited Monitoring	2072	2067-2076	$13,914	40	rehabilitated 1977 per HTA record drawings
45C - 45B	Limited Monitoring	2072	2067-2076	$32,343	92	rehabilitated 1977 per HTA record drawings
46 - 45C	Limited Monitoring	2098	2097-2106	$36,457	104	2003 WP map
47 - 46	Limited Monitoring	2098	2097-2106	$106,925	306	2003 WP map
47A - 47	Limited Monitoring	2098	2097-2106	$84,671	242	2003 WP map
4A - 4	Frequent Monitoring	2077	2077-2086	$74,981	214	1977-Sewer System Repair and Construction - HTA 1977
4B - 4A	Frequent Monitoring	2077	2077-2086	$63,737	182	1977-Sewer System Repair and Construction - HTA 1977
5 - 3B	Frequent Monitoring	2077	2077-2086	$84,410	241	1977-Sewer System Repair and Construction - HTA 1977
50 - 51	Highest Risk	0	Unknown	$47,078	135	dia per 2015 mh insp; 2016 Private system inventory to DES
50A - 51	Highest Risk	0	Unknown	$64,501	184	dia per 2015 mh insp; 2016 Private system inventory to DES
50A.1 - 50A	Highest Risk	0	Unknown	$41,820	119	2015 mh inspection
50B - 50	Highest Risk	0	Unknown	$76,954	220	dia per 2015 mh insp; 2016 Private system inventory to DES
50C - 50	Highest Risk	0	Unknown	$78,965	226	dia per 2015 mh insp; 2016 Private system inventory to DES
51 - 52	Highest Risk	2033	2027-2036	$73,862	211	dia per 2015 mh insp; 2016 Private system inventory to DES
52 - 52A	Highest Risk	2033	2027-2036	$51,011	146	dia per 2015 mh insp; 2016 Private system inventory to DES
52A - 53	Highest Risk	2033	2027-2036	$53,487	153	dia per 2015 mh insp; 2016 Private system inventory to DES
53 - Gravity Main	Highest Risk	2033	2027-2036	$52,285	149	dia per 2015 mh insp; 1938-wolfeboro sewers 1938
55 - 56	Frequent Monitoring	2072	2067-2076	$118,493	339	original install 1937; rehabilitated 1977

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	S Main	55A - 55	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	S Main	56 - 58	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	Union	56A - 56	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner	School St	56B - 56B.1	Town	Gravity Main	Unknown	Unknown	0	100	0	2	3
Lehner	School St	56B.1 - 56A	Town	Gravity Main	Unknown	Unknown	0	100	0	2	3
Mill Street	S Main	58 - 58A	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	S Main	58A - 59	Town	Gravity Main	8	AC	1977	95	55	3	1
Mill Street	S Main	59 - 141	Town	Gravity Main	8	AC	1977	95	55	5	1
Mill Street	Railroad Ave	59 - 61B	Town	Gravity Main	10	CI	1938	115	36	5	2
Elm Street	Elm St	59 Elm St - Elm Street For	Town	Force Main	Unknown	Unknown	0	100	0	1	4
Lehner Street	Crescent Lake Ave	6 - 4B	Town	Gravity Main	10	AC	1977	95	55	4	1
Lehner Street	Treadwell Ln	6 Treadwell Ln - FM	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Mill Street	Lake	60 - 59	Town	Gravity Main	8	AC	1938	95	16	2	3
Mill Street	Railroad Ave	61A - 61B	Town	Gravity Main	8	AC	1938	95	16	5	3
Mill Street	Siphons crossing to Mill St	61B - 138A	Town	Siphon	6	CI	1971	115	69	5	1
Mill Street	Siphons crossing to Mill St	61B - 138A	Town	Siphon	6	CI	1971	115	69	5	1
Mill Street	Railroad Ave	62 - 61A	Town	Gravity Main	10	AC	1938	95	16	5	3
Mill Street	Railroad Ave	62A - 62	Town	Gravity Main	4	AC	0	95	0	2	4
Mill Street	Railroad Ave	62B - 62A	Town	Gravity Main	6	AC	0	95	0	2	4
Mill Street	Railroad Ave	62C - 62	Town	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Railroad Ave	63 - 62	Town	Gravity Main	10	AC	1938	95	16	5	3
Mill Street	S Main	63-73 S Main St - Gravity	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Mill Street	Railroad Ave	63A - 63	Town	Gravity Main	10	CI	1938	115	36	5	2
Mill Street	Lehner St area	64 - 63A	Town	Gravity Main	10	CI	1938	115	36	5	2
Mill Street	Lehner St area	65 - 64	Town	Gravity Main	6	CI	1938	115	36	5	2
Lehner Street	Lehner St area	66 - 66A	Town	Gravity Main	8	VC	1977	100	60	2	1
Elm Street	Elm	66 Elm - Elm Street Force	Town	Force Main	Unknown	Unknown	0	100	0	1	4
Lehner Street	Lehner St area	66A - 66B	Town	Gravity Main	8	VC	1977	100	60	2	1
Lehner Street	Lehner St area	66B - 66G	Town	Gravity Main	8	VC	1977	100	60	2	1
Lehner Street	Lehner St area	66C - Lehner Street PS	Town	Gravity Main	10	VC	1977	100	60	2	1
Lehner Street	Lehner St area	66D - 66G	Town	Gravity Main	8	VC	0	100	0	2	4
Lehner Street	Lehner St area	66E - 66G	Town	Gravity Main	6	VC	0	100	0	2	4
Lehner Street	Lehner St area	66F - 66E	Town	Gravity Main	6	VC	0	100	0	2	4
Lehner Street	Lehner St area	66G - 66C	Town	Gravity Main	8	PVC	1977	100	60	2	1
Lehner Street	Lehner St area	67 - Lehner Street PS	Town	Gravity Main	10	VC	1977	100	60	5	1
Lehner Street	Crooked Pond Ln	67 Center St - 86C	Ledges - Elderly Housing	Gravity Lateral	8	PVC	0	100	0	2	4
Lehner Street	Lehner St area	67A - 67	Town	Gravity Main	8	AC	1938	95	16	5	3
Lehner Street	Lehner St	69 - 67A	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	Treadwell Ln	7 Treadwell Ln - FM	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Lehner Street	Lehner St	70 - 69	Town	Gravity Main	8	AC	1971	95	49	2	2
Lehner Street	Lehner St	71 - 70	Town	Gravity Main	8	AC	1971	95	49	2	2
Lehner	School St	71A - 56B	Town	Gravity Main	Unknown	Unknown	0	100	0	2	3
Lehner Street	Lehner St	72 - 71	Town	Gravity Main	8	AC	1971	95	49	2	2
Lehner Street	Union St	72A - 72	Town	Gravity Main	6	VC	1977	100	60	2	1
Lehner Street	Union	72A.1 - 72A	Town	Gravity Main	6	VC	1977	100	60	2	1
Lehner Street	Cropley Hill Rd	73 - 73A	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	Cropley Hill Rd	73A - 73B	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	Cropley Hill Rd	73B - 73B1	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	Cropley Hill Rd	73B1 - 69	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	Cropley Hill Rd	73C - 73	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	School St	74 - 74A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Glendon St	74A - 75	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	School St	74A.1 - 74	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	School St	74B - 74	Town	Gravity Main	8	AC	0	95	0	2	4
Mill Street	Railroad Ave	75 - 75A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	S Main	75 S Main St - Gravity Ma	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Mill Street	Railroad Ave	75A - 61A	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Lehner St	76 - 76A	Town	Gravity Main	10	CI	1977	115	75	2	1
Mill Street	Railroad Ave	76A - 76A.1	Town	Gravity Main	10	CI	1977	115	75	2	1
Mill Street	Railroad Ave	76A.1 - 76B	Town	Gravity Main	10	CI	1977	115	75	2	1
Mill Street	Railroad Ave	76B - 63A	Town	Gravity Main	10	CI	1977	115	75	2	1
Mill Street	Glendon St	76B - 76A	Town	Gravity Main	8	PVC	2011	100	94	1	5
Mill Street	Railroad Ave	76B1 - Gravity Main	Town	Gravity Main	10	CI	0	115	0	2	4
Mill Street	Pleasant	76B2 - 166	Town	Gravity Main	8	AC	1977	95	55	2	1
Mill Street	Pleasant	76C - 76B2	Town	Gravity Main	8	AC	1977	95	55	2	1
Lehner Street	S Main - Huggins Hospital area	7A - 4B	Town	Gravity Main	10	PVC	2010	100	93	4	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
55A - 55	Limited Monitoring	2072	2067-2076	$101,430	290	original install 1937; rehabilitated 1977
56 - 58	Frequent Monitoring	2072	2067-2076	$132,423	378	original install 1937; rehabilitated 1977
56A - 56	Limited Monitoring	2072	2067-2076	$118,519	339	1977 HTA
56B - 56B.1	Priority Renewal	0	Unknown	$84,525	242	staff comments 9/27/2017
56B.1 - 56A	Priority Renewal	0	Unknown	$15,306	44	staff comments 9/27/2017
58 - 58A	Frequent Monitoring	2072	2067-2076	$44,808	128	original install 1937; rehabilitated 1977
58A - 59	Frequent Monitoring	2072	2067-2076	$40,534	116	original install 1937; rehabilitated 1977
59 - 141	Frequent Monitoring	2072	2067-2076	$42,292	121	original install 1937; rehabilitated 1977
59 - 61B	Frequent Monitoring	2053	2047-2056	$121,084	346	2016 mh insp; 1938-wolfeboro sewers 1938
59 Elm St - Elm Street For	Priority Renewal	0	Unknown	$16,261	46	
6 - 4B	Frequent Monitoring	2072	2067-2076	$113,891	325	2016 mh inspection, 1977-Sewer System Repair and Construction - HTA 1977
6 Treadwell Ln - FM	Priority Renewal	0	Unknown	$33,298	95	
60 - 59	Priority Renewal	2033	2027-2036	$34,942	100	1938-wolfeboro sewers 1938
61A - 61B	Highest Risk	2033	2027-2036	$5,082	15	1938-wolfeboro sewers 1938
61B - 138A	Frequent Monitoring	2086	2077-2086	$137,305	392	1971-CDM WWTF Construction Drawings Oct 1971
61B - 138A	Frequent Monitoring	2086	2077-2086	$137,305	392	1971-CDM WWTF Construction Drawings Oct 1971
62 - 61A	Highest Risk	2033	2027-2036	$76,194	218	dia per 2016 mh insp; 1938-wolfeboro sewers 1938
62A - 62	Priority Renewal	0	Unknown	$30,098	86	dia per 2016 mh insp
62B - 62A	Priority Renewal	0	Unknown	$19,631	56	per 2016 mh insp 5" PVC; assume 6" AC
62C - 62	Priority Renewal	0	Unknown	$51,886	148	
63 - 62	Highest Risk	2033	2027-2036	$97,896	280	dia per staff comment; 1938-wolfeboro sewers 1938
63-73 S Main St - Gravity	Priority Renewal	0	Unknown	$82,159	235	
63A - 63	Frequent Monitoring	2053	2047-2056	$65,648	188	1938-wolfeboro sewers 1938
64 - 63A	Frequent Monitoring	2053	2047-2056	$12,083	35	1938-wolfeboro sewers 1938
65 - 64	Frequent Monitoring	2053	2047-2056	$83,899	240	1938-wolfeboro sewers 1938
66 - 66A	Limited Monitoring	2077	2077-2086	$103,844	297	1977 HTA record drawings
66 Elm - Elm Street Force	Priority Renewal	0	Unknown	$42,437	121	
66A - 66B	Limited Monitoring	2077	2077-2086	$69,168	198	1977 HTA record drawings
66B - 66G	Limited Monitoring	2077	2077-2086	$9,168	26	1977 HTA record drawings
66C - Lehner Street PS	Limited Monitoring	2077	2077-2086	$16,299	47	1977 HTA record drawings
66D - 66G	Priority Renewal	0	Unknown	$9,202	26	dia - 2013 mh insp; mat 2005 AutoCAD
66E - 66G	Priority Renewal	0	Unknown	$61,765	176	2013 mh insp
66F - 66E	Priority Renewal	0	Unknown	$25,723	73	2013 mh insp
66G - 66C	Limited Monitoring	2077	2077-2086	$32,942	94	1977 HTA record drawings
67 - Lehner Street PS	Frequent Monitoring	2077	2077-2086	$29,901	85	1977 HTA record drawings
67 Center St - 86C	Priority Renewal	0	Unknown	$170,569	487	2016 Private system inventory to DES
67A - 67	Highest Risk	2033	2027-2036	$3,384	10	1938-wolfeboro sewers 1938
69 - 67A	Limited Monitoring	2072	2067-2076	$60,587	173	1977 HTA record drawings
7 Treadwell Ln - FM	Priority Renewal	0	Unknown	$24,680	71	
70 - 69	Limited Monitoring	2066	2057-2066	$53,622	153	1997 WP I&I
71 - 70	Limited Monitoring	2066	2057-2066	$50,408	144	1997 WP I&I
71A - 56B	Priority Renewal	0	Unknown	$26,134	75	staff comments 9/27/2017
72 - 71	Limited Monitoring	2066	2057-2066	$105,586	302	1997 WP I&I
72A - 72	Limited Monitoring	2077	2077-2086	$16,697	48	1977-Sewer System Repair and Construction - HTA 1977
72A.1 - 72A	Limited Monitoring	2077	2077-2086	$46,800	134	1977-Sewer System Repair and Construction - HTA 1977
73 - 73A	Limited Monitoring	2072	2067-2076	$46,142	132	1977-Sewer System Repair and Construction - HTA 1977
73A - 73B	Limited Monitoring	2072	2067-2076	$32,950	94	1977 HTA record drawings
73B - 73B1	Limited Monitoring	2072	2067-2076	$20,695	59	1977 HTA record drawings
73B1 - 69	Limited Monitoring	2072	2067-2076	$6,003	17	1977 HTA record drawings
73C - 73	Limited Monitoring	2072	2067-2076	$13,451	38	1977-Sewer System Repair and Construction - HTA 1977
74 - 74A	Limited Monitoring	2072	2067-2076	$57,798	165	1977 HTA record drawings
74A - 75	Limited Monitoring	2072	2067-2076	$26,433	76	1977 HTA record drawings
74A.1 - 74	Limited Monitoring	2072	2067-2076	$55,950	160	1977 HTA record drawings
74B - 74	Priority Renewal	0	Unknown	$34,086	97	dia per 2016 mh insp
75 - 75A	Limited Monitoring	2072	2067-2076	$21,602	62	1977 HTA record drawings
75 S Main St - Gravity Ma	Priority Renewal	0	Unknown	$127,578	365	
75A - 61A	Limited Monitoring	2072	2067-2076	$89,780	257	1977 HTA record drawings
76 - 76A	Limited Monitoring	2092	2087-2096	$95,865	274	1977-Sewer System Repair and Construction - HTA 1977
76A - 76A.1	Limited Monitoring	2092	2087-2096	$6,662	19	1977-Sewer System Repair and Construction - HTA 1977
76A.1 - 76B	Limited Monitoring	2092	2087-2096	$60,808	174	1977-Sewer System Repair and Construction - HTA 1977
76B - 63A	Limited Monitoring	2092	2087-2096	$15,594	45	1977 HTA record drawings
76B - 76A	Limited Monitoring	2111	2107-2116	$28,512	81	staff comment 9/27/2017
76B1 - Gravity Main	Priority Renewal	0	Unknown	$79,784	228	
76B2 - 166	Limited Monitoring	2072	2067-2076	$158,182	452	1977-Sewer System Repair and Construction - HTA 1977
76C - 76B2	Limited Monitoring	2072	2067-2076	$91,838	262	1977-Sewer System Repair and Construction - HTA 1977
7A - 4B	Frequent Monitoring	2110	2107-2116	$52,794	151	2010-As-Built Site Plan - Huggins Hospital - Wolfeboro - Alvin J Coleman and Son 12-19-2010.pdf

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	S Main - Huggins Hospital area	7B - 7A	Town	Gravity Main	10	PVC	2010	100	93	4	1
Lehner Street	S Main - Huggins Hospital area	7C - 7B	Town	Gravity Main	10	PVC	2010	100	93	4	1
Lehner Street	Edgewood Terr	8 Edgewood Terr - 19	Edgewood Drive	Low Pressure	2	PVC	0	100	0	2	4
Lehner Street	Treadwell Ln	8 Treadwell Ln - FM	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Lehner Street	Pine St	80 - 80B	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Lehner St	80A - 67A	Town	Gravity Main	8	AC	1977	95	55	5	1
Lehner Street	Pine St	80B - 80A	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Center St	80C - 80A	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	81 - 80	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	81A - 81	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	81B - 81A	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	82 - 81B	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	83 - 82	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Pine St	84 - 83	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Center St	85 - 80C	Town	Gravity Main	8	AC	1977	95	55	3	1
Lehner Street	Center St	86 - 85	Town	Gravity Main	8	PVC	1977	100	60	3	1
Lehner Street	Center St	86A - 86	Town	Gravity Main	8	PVC	1977	100	60	3	1
Lehner Street	Center St	86B - 86A	Town	Gravity Main	8	PVC	0	100	0	3	4
Lehner Street	Center St	86C - 86B	Town	Gravity Main	8	PVC	1980	100	63	2	1
Lehner Street	Center St	87 - 86	Town	Gravity Main	8	AC	0	95	0	2	4
Clark Road	Clafin Ln	87-91 Clafin Road - prope	Romney Complex	Low Pressure	3	Unknown	2003	100	86	1	1
Clark Road	Clafin Ln	87-91 Clafin Road proper	Romney Complex	Low Pressure	3	Unknown	2003	100	86	1	1
Lehner Street	Grove St	88 - 86A	Town	Gravity Main	8	PVC	1977	100	60	2	1
Lehner Street	Grove St	88A - 88	Town	Gravity Main	8	PVC	1977	100	60	2	1
Lehner Street	Grove St	89 - 88A	Town	Gravity Main	8	PVC	1977	100	60	2	1
Lehner Street	S Main - Huggins Hospital area	8A - 7C	Town	Gravity Main	10	PVC	2010	100	93	4	1
Mill Street	S Main - Huggins Hospital area	8B - 8A	Town	Gravity Main	10	PVC	2010	100	93	4	1
Mill Street	S Main - Huggins Hospital area	8C - 8B	Town	Gravity Main	10	PVC	2010	100	93	4	1
Lehner Street	Treadwell Ln	9 Treadwell Ln - FM	Town	Low Pressure	Unknown	Unknown	0	100	0	2	4
Willow Street	Center St	90 - 90A	Town	Gravity Main	8	DI	1977	110	70	2	1
Willow Street	Center St	90A - 91B	Town	Gravity Main	8	DI	1977	110	70	2	1
Elm Street	Center St	91 - 92	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Center St	91A - 91	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Center St	91B - 91A	Town	Gravity Main	8	DI	1977	110	70	2	1
Elm Street	Center St	91C - 91	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	Center St	92 - 93	Town	Gravity Main	8	AC	1956	95	34	2	2
Elm Street	Elm	93 - 102B	Town	Gravity Main	8	AC	1956	95	34	3	2
Elm Street	Center St	94 - 93	Town	Gravity Main	8	AC	1977	95	55	3	1
Elm Street	River	94A - 94	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	River	95 - 94A	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	River	95A - 95	Town	Gravity Main	8	AC	1977	95	55	2	1
Elm Street	River	95B - 95A	Town	Gravity Main	8	PVC	0	100	0	2	4
Elm Street	River	95C - 95B	Town	Gravity Main	8	PVC	0	100	0	2	4
Elm Street	River	95D - 95C	Town	Gravity Main	8	PVC	0	100	0	2	4
Elm Street	River	95E - 95D	Town	Gravity Main	8	PVC	0	100	0	2	4
Elm Street	River	95F - 95E	Town	Gravity Main	8	PVC	2005	100	88	2	1
Crescent Point	River	95G - 95H	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95H - 95I	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95I - Crescent Point PS	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95J - 95I	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95K - 95J	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95L - 95I	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	River	95M - 95L	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	Blackberry	95N - Crescent Point PS	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	Blackberry	95O - 95N	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	Blackberry	95P - 95O	Town	Gravity Main	8	PVC	2005	100	88	1	1
Crescent Point	Blackberry	95Q - 95P	Town	Gravity Main	8	PVC	2005	100	88	1	1
Elm Street	Center St	96 - 96A	Town	Gravity Main	8	AC	1956	100	39	2	2
Elm Street	Center St	96A - 94	Town	Gravity Main	8	AC	1956	95	34	2	2
Elm Street	Center St	97 - 96	Town	Gravity Main	8	VC	1956	100	39	2	2
Elm Street	Center St	97A - 97	Town	Gravity Main	8	VC	1956	100	39	2	2
Lehner Street	S Main - Huggins Hospital area	9C - 8C	Town	Gravity Main	8	PVC	2010	100	93	4	1
Mill Street	Brewster Academy	Academic Building - 50B	Brewster Academy	Gravity Lateral	6	PVC	0	100	0	3	4
Mill Street	Adams St	Adams St - 163	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Lehner Street	Pine St/Millwood Rd	Avery Cottages - 84	Avery Cottages	Low Pressure	3	Unknown	0	100	0	2	4
Mill Street	Brewster Academy	BA Building - 52	Brewster Academy	Low Pressure	2	Unknown	0	100	0	3	4

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
7B - 7A	Frequent Monitoring	2110	2107-2116	$53,536	153	2016 mh insp; 2010-As-Built Huggins Hospital
7C - 7B	Frequent Monitoring	2110	2107-2116	$108,238	309	2016 mh insp; 2010-As-Built Huggins Hospital
8 Edgewood Terr - 19	Priority Renewal	0	Unknown	$150,185	429	2016 mh insp, 2016 Private system inventory to DES
8 Treadwell Ln - FM	Priority Renewal	0	Unknown	$47,969	137	
80 - 80B	Frequent Monitoring	2072	2067-2076	$88,417	253	1977 HTA record drawings
80A - 67A	Frequent Monitoring	2072	2067-2076	$82,868	237	1977 HTA record drawings
80B - 80A	Frequent Monitoring	2072	2067-2076	$18,032	52	1977 HTA record drawings
80C - 80A	Frequent Monitoring	2072	2067-2076	$45,608	130	1977 HTA record drawings
81 - 80	Frequent Monitoring	2072	2067-2076	$99,674	285	1977 HTA record drawings
81A - 81	Frequent Monitoring	2072	2067-2076	$25,673	73	1977 HTA record drawings
81B - 81A	Frequent Monitoring	2072	2067-2076	$45,653	130	1977 HTA record drawings
82 - 81B	Frequent Monitoring	2072	2067-2076	$24,891	71	1977 HTA record drawings
83 - 82	Frequent Monitoring	2072	2067-2076	$31,736	91	1977-Sewer System Repair and Construction - HTA 1977
84 - 83	Frequent Monitoring	2072	2067-2076	$97,037	277	1977-Sewer System Repair and Construction - HTA 1977
85 - 80C	Frequent Monitoring	2072	2067-2076	$58,143	166	1977 HTA record drawings
86 - 85	Frequent Monitoring	2077	2077-2086	$69,588	199	1977 HTA record drawings
86A - 86	Frequent Monitoring	2077	2077-2086	$24,450	70	1977 HTA record drawings
86B - 86A	Highest Risk	0	Unknown	$77,853	222	
86C - 86B	Limited Monitoring	2080	2077-2086	$82,139	235	2003 WP map
87 - 86	Priority Renewal	0	Unknown	$82,522	236	2013 mh insp
87-91 Clafin Road - prope	Limited Monitoring	2103	2097-2106	$367,254	1,049	2003-clark rd ps
87-91 Clafin Road proper	Limited Monitoring	2103	2097-2106	$110,372	315	2003-clark rd ps
88 - 86A	Limited Monitoring	2077	2077-2086	$70,569	202	1977 HTA record drawings
88A - 88	Limited Monitoring	2077	2077-2086	$70,273	201	1977 HTA record drawings
89 - 88A	Limited Monitoring	2077	2077-2086	$61,420	175	1977 HTA record drawings
8A - 7C	Frequent Monitoring	2110	2107-2116	$55,934	160	2016 mh insp; 2010-As-Built Huggins Hospital
8B - 8A	Frequent Monitoring	2110	2107-2116	$12,837	37	2016 mh insp; 2010-As-Built Huggins Hospital
8C - 8B	Frequent Monitoring	2110	2107-2116	$49,311	141	2010-As-Built Site Plan - Huggins Hospital - Wolfeboro - Alvin J Coleman and Son 12-19-2010.pdf
9 Treadwell Ln - FM	Priority Renewal	0	Unknown	$30,355	87	
90 - 90A	Limited Monitoring	2087	2087-2096	$26,563	76	1977 HTA record drawings
90A - 91B	Limited Monitoring	2087	2087-2096	$34,496	99	1977 HTA record drawings
91 - 92	Limited Monitoring	2072	2067-2076	$29,883	85	1977 HTA record drawings
91A - 91	Limited Monitoring	2072	2067-2076	$8,673	25	1977 HTA record drawings
91B - 91A	Limited Monitoring	2087	2087-2096	$22,104	63	1977 HTA record drawings
91C - 91	Limited Monitoring	2072	2067-2076	$24,141	69	1977 HTA record drawings
92 - 93	Limited Monitoring	2051	2047-2056	$96,671	276	1956-Wolfeboro Falls Sewer As-Built
93 - 102B	Frequent Monitoring	2051	2047-2056	$105,754	302	1956-Wolfeboro Falls Sewer As-Built
94 - 93	Frequent Monitoring	2072	2067-2076	$97,780	279	1977 HTA record dwgs
94A - 94	Limited Monitoring	2072	2067-2076	$55,555	159	1977 HTA record dwgs
95 - 94A	Limited Monitoring	2072	2067-2076	$61,467	176	1977 HTA record dwgs
95A - 95	Limited Monitoring	2072	2067-2076	$39,512	113	1977 HTA record dwgs
95B - 95A	Priority Renewal	0	Unknown	$112,765	322	
95C - 95B	Priority Renewal	0	Unknown	$66,242	189	
95D - 95C	Priority Renewal	0	Unknown	$83,931	240	
95E - 95D	Priority Renewal	0	Unknown	$27,814	79	
95F - 95E	Limited Monitoring	2105	2097-2106	$85,909	245	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95G - 95H	Limited Monitoring	2105	2097-2106	$78,820	225	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95H - 95I	Limited Monitoring	2105	2097-2106	$100,786	288	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95I - Crescent Point PS	Limited Monitoring	2105	2097-2106	$147,732	422	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95J - 95I	Limited Monitoring	2105	2097-2106	$77,905	223	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95K - 95J	Limited Monitoring	2105	2097-2106	$47,269	135	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95L - 95I	Limited Monitoring	2105	2097-2106	$67,056	192	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95M - 95L	Limited Monitoring	2105	2097-2106	$95,551	273	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95N - Crescent Point PS	Limited Monitoring	2105	2097-2106	$143,891	411	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95O - 95N	Limited Monitoring	2105	2097-2106	$60,659	173	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95P - 95O	Limited Monitoring	2105	2097-2106	$149,296	427	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
95Q - 95P	Limited Monitoring	2105	2097-2106	$65,505	187	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
96 - 96A	Limited Monitoring	2056	2047-2056	$48,361	138	1956 Wolfeboro Falls record dwgs
96A - 94	Limited Monitoring	2051	2047-2056	$89,070	254	1956 Wolfeboro Falls record dwgs
97 - 96	Limited Monitoring	2056	2047-2056	$74,778	214	1956 Wolfeboro Falls record dwgs
97A - 97	Limited Monitoring	2056	2047-2056	$138,276	395	1956 Wolfeboro Falls record dwgs
9C - 8C	Frequent Monitoring	2110	2107-2116	$54,030	154	2010-As-Built Site Plan - Huggins Hospital - Wolfeboro - Alvin J Coleman and Son 12-19-2010.pdf
Academic Building - 50B	Highest Risk	0	Unknown	$23,482	67	dia/mat per 2015 mh insp; 2016 Private system inventory to DES
Adams St - 163	Priority Renewal	0	Unknown	$68,274	195	
Avery Cottages - 84	Priority Renewal	0	Unknown	$477,055	1,363	dia per private system inventory, 9/2016
BA Building - 52	Highest Risk	0	Unknown	$46,983	134	dia per 2015 mh insp; 2016 Private system inventory to DES

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	Brewster Academy	BA Building - BA-PS-1	Brewster Academy	Gravity Lateral	Unknown	PVC	0	100	0	2	4
Lehner Street	Brewster Academy	BA-PS-1 - 36	Brewster Academy	Low Pressure	3	PVC	0	100	0	2	4
Mill Street	Brewster Academy	BA-PS-2 (inside bldg) - pr	Brewster Academy	Low Pressure	3	PVC	0	100	0	2	4
Crescent Point	Blackberry Lane	Blackberry Lane - 95F	Town	Low Pressure	Unknown	Unknown	0	100	0	2	3
Mill Street	Brewster Academy	Boat House PS - MH 51	Brewster Academy	Low Pressure	Unknown	Unknown	0	100	0	3	4
Mill Street	Brewster Academy	Brown Hall PS - 52A	Brewster Academy	Low Pressure	Unknown	Unknown	0	100	0	3	4
Clark Road	Clark	Clark Road PS - 36	Town	Force Main	6	PVC	1985	100	68	3	1
Crescent Point	River	Crescent Point PS - 95F	Town	Force Main	4	PVC	2005	100	88	2	1
Mill Street	Brewster Academy	East Brook Dining Hall - 5	Brewster Academy	Low Pressure	2	PVC	0	100	0	3	4
Lehner Street	Edgewood Terr	Edgewood Terr - 19	Town	Gravity Lateral	6	AC	0	95	0	2	4
Elm Street	Elm	Elm Street PS - 105	Town	Force Main	6	CLDI	1991	110	84	3	1
Mill Street	Brewster Academy	Estabrook Hall - 50B	Brewster Academy	Gravity Lateral	6	PVC	0	100	0	3	4
Mill Street	Brewster Academy	Estabrook Hall - 50B	Brewster Academy	Gravity Lateral	6	PVC	0	100	0	3	4
Fairway View	Eagle Trace	Fairway View PS - 230	Town	Force Main	4	PVC	1988	100	71	2	1
Mill Street	WWTP	FM2 - WWTP	Town	Force Main	10	CI	1992	115	90	5	1
Sewall Road	Sewall	FP-1 - P-1 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Mill Street	Friend St	Friend St - 153	Town	Gravity Lateral	8	AC	1937	95	15	1	3
Lehner Street	near Kingwood	Golf Course - 20	Golf Course	Low Pressure	3	PVC	0	100	0	2	4
Lehner Street	Gov Wentworth Regional School District	Gov Wentworth Regi - 24	Gov Wentworth Regional	Low Pressure	3	Unknown	0	100	0	4	4
Greenleaf	Greenleaf	Greenleaf PS - 214B	Town	Force Main	4	PVC	1989	100	72	2	1
Mill Street	Brewster Academy	Haines - 50B	Brewster Academy	Gravity Lateral	6	PVC	0	100	0	3	4
Elm Street	Beck Dr	Harriman Hill - Beck Drive	Harriman Hill	Low Pressure	4	Unknown	0	100	0	2	4
Elm Street	High St	High St - 100B	Town	Gravity Lateral	6	VC	0	100	0	1	4
Mill Street	Brewster Academy	Holding Tank 1 - Mason H	Brewster Academy	Gravity Lateral	Unknown	PVC	0	100	0	3	4
Mill Street	Brewster Academy	Holding Tank 2 - Mason H	Brewster Academy	Gravity Lateral	Unknown	PVC	0	100	0	3	4
Mill Street	Brewster Academy	Hughes Hall - Holding tan	Brewster Academy	Gravity Lateral	Unknown	PVC	0	100	0	3	4
Mill Street	Varney Rd	lateral - 15 Varney Road -	Town	Gravity Lateral	Unknown	VC	0	100	0	1	4
Lehner Street	Lehner St area	Lehner Street PS - 65	Town	Force Main	6	DI	1938	110	31	5	2
Mill Street	Brewster Academy	Main Street Dorm - 50B	Brewster Academy	Gravity Lateral	6	AC	0	95	0	3	4
Mill Street	Brewster Academy	Mason Hall PS - Gravity M	Brewster Academy	Low Pressure	Unknown	Unknown	0	100	0	3	4
Mill Street	Mill/Varney/Filter Bed	Mill Street PS - FM2	Town	Force Main	12	CI	1971	115	69	5	1
Sewall Road	Sewall	P-1 CL* - P-2 AI*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-10 C* - P-11 C*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-11 C* - P-12 C*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-12 C* - P-13 A*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-13 A* - P-14 C*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-14 C* - P-15 C*	Town	Low Pressure	4	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-15 C* - 184	Town	Low Pressure	4	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-2 AI* - P-3 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-3 CL* - P-4 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-4 CL* - P-5 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-5 CL* - P-6 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-6 CL* - P-7 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-7 CL* - P-8 CL*	Town	Low Pressure	2.5	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-8 CL* - P-9 AU*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Sewall Road	Sewall	P-9 AU* - P-10 C*	Town	Low Pressure	3	PVC	1989	100	72	2	1
Clark Road	Clark	private property - 103 Cla	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Clark Road	Clark	private property - 111 Cla	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Clark Road	Clark	private property - 117 Cla	Town	Low Pressure	Unknown	Unknown	0	100	0	1	4
Lehner Street	Brewster Academy	PS near Smith Center - Gr	Brewster Academy	Low Pressure	4	Unknown	2001	100	84	3	1
Mill Street	Brewster Academy	Rogers Hall PS - 50A.1	Brewster Academy	Low Pressure	Unknown	Unknown	0	100	0	3	4
Mill Street	Varney	RSA1 - 127	Town	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Varney	RSA2 - RSA1	Town	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Varney	RSA3 - RSA2	Town	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Varney	RSA4 - RSA3	Town	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Wesley Ln	RSA5 - RSA4	Wesley Lane	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Wesley Ln	RSA6 - RSA6.1	Wesley Lane	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Wesley Ln	RSA6.1 - RSA5	Wesley Lane	Gravity Main	8	PVC	0	100	0	2	4
Mill Street	Wesley Ln	RSA7 - RSA5	Wesley Lane	Gravity Main	8	PVC	0	100	0	2	4
Lehner Street	Center St	S Main & Center St - 2A	Town	Gravity Lateral	6	AC	0	95	0	2	4
Sewall	Sewall Rd	Sewall Point Rd - 184	Town	Gravity Lateral	Unknown	PVC	1989	100	72	1	1
Sewall Road	Sewall	Sewall Road PS - 162	Town	Force Main	6	PVC	1988	100	71	4	1
Mill Street	N Main to Sky Ridge Farm Condo	Sky Ridge Farm Condo - 1	Sky Ridge Farm Condo	Low Pressure	4	Unknown	0	100	0	2	4
Lehner Street	Christian Ridge Rd	Sky Ridge Farm Condos -	Christian Ridge	Gravity Lateral	10	PVC	0	100	0	2	4
Mill Street	Brewster Academy	Spencer Hall - Holding Ta	Brewster Academy	Gravity Lateral	Unknown	PVC	0	100	0	3	4
Taylor Home	Taylor Home PS to WWTP	Taylor Home PS - WWTP	Taylor Home	Force Main	4	Unknown	2000	100	83	3	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
BA Building - BA-PS-1	Priority Renewal	0	Unknown	$73,021	209	2016 Private system inventory to DES
BA-PS-1 - 36	Priority Renewal	0	Unknown	$219,272	626	2016 Private system inventory to DES
BA-PS-2 (inside bldg) - pri	Priority Renewal	0	Unknown	$16,788	48	2016 Private system inventory to DES
Blackberry Lane - 95F	Priority Renewal	0	Unknown	$144,813	414	staff comments 9/27/2017
Boat House PS - MH 51	Highest Risk	0	Unknown	$229,533	656	
Brown Hall PS - 52A	Highest Risk	0	Unknown	$34,119	97	2016 Private system inventory to DES
Clark Road PS - 36	Frequent Monitoring	2085	2077-2086	$503,709	1,439	1997 WP I&I
Crescent Point PS - 95F	Limited Monitoring	2105	2097-2106	$174,261	498	mat/dia 2016 mh inspection; age estimated based on WS maps (2003, 2008)
East Brook Dining Hall - 5	Highest Risk	0	Unknown	$77,508	221	dia/mat per 2015 mh insp; 2016 Private system inventory to DES
Edgewood Terr - 19	Priority Renewal	0	Unknown	$140,557	402	2005 CAD
Elm Street PS - 105	Frequent Monitoring	2101	2097-2106	$643,979	1,840	1991 record dwgs
Estabrook Hall - 50B	Highest Risk	0	Unknown	$53,319	152	dia/mat per 2015 mh insp; 2016 Private system inventory to DES
Estabrook Hall - 50B	Highest Risk	0	Unknown	$34,056	97	dia/mat per 2015 mh insp; 2016 Private system inventory to DES
Fairway View PS - 230	Limited Monitoring	2088	2087-2096	$146,605	419	dia/mat per 2016 mh insp
FM2 - WWTP	Frequent Monitoring	2107	2107-2116	$186,627	533	S&W 1992
FP-1 - P-1 CL*	Limited Monitoring	2089	2087-2096	$465,183	1,329	2003 WP map
Friend St - 153	Priority Renewal	2032	2027-2036	$49,138	140	1937-Wolfeboro Sewer Plans 1927
Golf Course - 20	Priority Renewal	0	Unknown	$327,040	934	2016 Private system inventory to DES
Gov Wentworth Regi - 24	Highest Risk	0	Unknown	$421,990	1,206	not shown on 1982 record dwgs
Greenleaf PS - 214B	Limited Monitoring	2089	2087-2096	$236,468	676	2003 WP map
Haines - 50B	Highest Risk	0	Unknown	$109,691	313	dia/mat per 2015 mh insp; 2016 Private system inventory to DES
Harriman Hill - Beck Drive	Priority Renewal	0	Unknown	$850,265	2,429	
High St - 100B	Priority Renewal	0	Unknown	$128,474	367	
Holding Tank 1 - Mason H	Highest Risk	0	Unknown	$11,438	33	2016 Private system inventory to DES
Holding Tank 2 - Mason H	Highest Risk	0	Unknown	$20,599	59	2016 Private system inventory to DES
Hughes Hall - Holding tan	Highest Risk	0	Unknown	$43,298	124	2016 Private system inventory to DES
lateral - 15 Varney Road -	Priority Renewal	0	Unknown	$39,231	112	
Lehner Street PS - 65	Frequent Monitoring	2048	2047-2056	$366,504	1,047	1938-wolfeboro sewers 1938
Main Street Dorm - 50B	Highest Risk	0	Unknown	$89,642	256	2015 mh insp; 2016 Private system inventory to DES
Mason Hall PS - Gravity M	Highest Risk	0	Unknown	$113,975	326	2016 Private system inventory to DES
Mill Street PS - FM2	Frequent Monitoring	2086	2077-2086	$986,122	2,817	1971 CDM
P-1 CL* - P-2 AI*	Limited Monitoring	2089	2087-2096	$144,483	413	2003 WP map
P-10 C* - P-11 C*	Limited Monitoring	2089	2087-2096	$81,196	232	2003 WP map
P-11 C* - P-12 C*	Limited Monitoring	2089	2087-2096	$121,181	346	2003 WP map
P-12 C* - P-13 A*	Limited Monitoring	2089	2087-2096	$102,353	292	2003 WP map
P-13 A* - P-14 C*	Limited Monitoring	2089	2087-2096	$107,183	306	2003 WP map
P-14 C* - P-15 C*	Limited Monitoring	2089	2087-2096	$195,054	557	2003 WP map
P-15 C* - 184	Limited Monitoring	2089	2087-2096	$176,486	504	2003 WP map
P-2 AI* - P-3 CL*	Limited Monitoring	2089	2087-2096	$168,783	482	2003 WP map
P-3 CL* - P-4 CL*	Limited Monitoring	2089	2087-2096	$179,177	512	2003 WP map
P-4 CL* - P-5 CL*	Limited Monitoring	2089	2087-2096	$161,909	463	2003 WP map
P-5 CL* - P-6 CL*	Limited Monitoring	2089	2087-2096	$127,889	365	2003 WP map
P-6 CL* - P-7 CL*	Limited Monitoring	2089	2087-2096	$175,076	500	2003 WP map
P-7 CL* - P-8 CL*	Limited Monitoring	2089	2087-2096	$209,328	598	2003 WP map
P-8 CL* - P-9 AU*	Limited Monitoring	2089	2087-2096	$74,627	213	2003 WP map
P-9 AU* - P-10 C*	Limited Monitoring	2089	2087-2096	$174,228	498	2003 WP map
private property - 103 Cla	Priority Renewal	0	Unknown	$81,125	232	
private property - 111 Cla	Priority Renewal	0	Unknown	$91,917	263	
private property - 117 Cla	Priority Renewal	0	Unknown	$97,257	278	
PS near Smith Center - Gr	Frequent Monitoring	2101	2097-2106	$259,970	743	2016 Private system inventory to DES
Rogers Hall PS - 50A.1	Highest Risk	0	Unknown	$60,917	174	
RSA1 - 127	Priority Renewal	0	Unknown	$66,709	191	
RSA2 - RSA1	Priority Renewal	0	Unknown	$70,281	201	
RSA3 - RSA2	Priority Renewal	0	Unknown	$23,263	66	
RSA4 - RSA3	Priority Renewal	0	Unknown	$58,868	168	
RSA5 - RSA4	Priority Renewal	0	Unknown	$48,221	138	2016 Private system inventory to DES
RSA6 - RSA6.1	Priority Renewal	0	Unknown	$37,322	107	2016 Private system inventory to DES
RSA6.1 - RSA5	Priority Renewal	0	Unknown	$35,318	101	2016 Private system inventory to DES
RSA7 - RSA5	Priority Renewal	0	Unknown	$80,650	230	2016 Private system inventory to DES
S Main & Center St - 2A	Priority Renewal	0	Unknown	$112,428	321	
Sewall Point Rd - 184	Limited Monitoring	2089	2087-2096	$54,882	157	2003 WP map
Sewall Road PS - 162	Frequent Monitoring	2088	2087-2096	$383,504	1,096	
Sky Ridge Farm Condo - 1	Priority Renewal	0	Unknown	$175,096	500	2016 Private system inventory to DES
Sky Ridge Farm Condos -	Priority Renewal	0	Unknown	$42,252	121	2016 Private system inventory to DES
Spencer Hall - Holding Ta	Highest Risk	0	Unknown	$17,048	49	2016 Private system inventory to DES
Taylor Home PS - WWTP	Frequent Monitoring	2100	2097-2106	$181,090	517	2003 W&C PS Evaluation

Subbasin	STREET	Reach	Owner	Type	Diameter	Material	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	School St	Union St properties - 74B	Town	Gravity Lateral	Unknown	AC	0	95	0	2	4
Willow Street	Willow	Willow Street PS - 90	Town	Force Main	4	PVC	2005	100	88	2	1

Reach	Criticality	Replacement Year	Replacement Decade	Replacement Cost	Length (ft)	Source
Union St properties - 74B	Priority Renewal	0	Unknown	$48,786	139	
Willow Street PS - 90	Limited Monitoring	2105	2097-2106	$117,382	335	2016 mh insp

SEWER MAINS BY OWNERSHIP AND TYPE

Sum of Length (ft)	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
15 Pine Hill Road				147	147
Avery Cottages				1,363	1,363
Brewster Academy	2,152			3,026	5,178
Clipper Home - Nursing Home	784				784
Coves End				1,093	1,093
Edgewood Drive				429	429
Fawn Haven	468				468
Golf Course				934	934
Gov Wentworth Regional School District	1,254			1,206	2,459
Harriman Hill				2,429	2,429
Romney Complex				1,365	1,365
Sky Ridge Farm Condo				500	500
Taylor Home	2,302		517		2,820
Town	59,039	1,098	11,595	12,473	84,205
Wesley Lane	576				576
Grand Total	**66,575**	**1,098**	**12,113**	**24,965**	**104,750**

TOWN-OWNED SEWER MAINS BY DIAMETER AND TYPE

Owner	Town

Sum of Length (ft)	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
2				377	377
2.5				4,662	4,662
3				1,888	1,888
4	86		1,928	1,062	3,075
6	3,034	785	5,422		9,240
8	44,564	313			44,878
10	10,883		533		11,416
12	85		2,817		2,902
Unknown	388		895	4,484	5,767
Grand Total	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

TOWN-OWNED SEWER MAINS BY MATERIAL AND TYPE

Owner	Town

Sum of Length (ft)	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
AC	24,331	44			24,375
CI	1,547	785	3,351		5,682
CLDI			1,840		1,840
DI	875		1,047		1,922
PVC	27,705		4,463	7,988	40,156
VC	4,222	269			4,491
Unknown	360		895	4,484	5,739
Grand Total	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

TOWN-OWNED SEWER MAINS BY YEAR INSTALLED AND TYPE

Owner	Town

Sum of Length (ft)	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
Unknown	4,489		895	4,538	9,922
1930	853				853
1938	2,184		1,047		3,231
1940	1,098				1,098
1956	2,744	269			3,013
1971	599	785	2,817		4,201
1977	25,482	44			25,527
1980	235				235
1985	2,311		1,439		3,750
1988	4,692		1,515		6,206
1989	1,752		676	7,935	10,362
1991	938		1,840		2,778
1992	1,069		533		1,602
1993	2,681				2,681
1998	1,848				1,848
2003	1,407				1,407
2005	3,201		833		4,034
2010	1,374				1,374
2011	81				81
Grand Total	**59,039**	**1,098**	**11,595**	**12,473**	**84,205**

TOWN-OWNED SEWER MAINS BY TYPE AND CRITICALITY

Owner	Town

Sum of Length (ft)	Column Labels				
Row Labels	**Highest Risk**		**Priority Renev**	**Frequent Monitorin**	**Limited Monitoring**	**Grand Total**
Gravity Main		2,245	5,513	22,194	29,087	59,039
Siphon				1,098		1,098
Force Main			895	8,773	1,928	11,595
Low Pressure			4,538		7,935	12,473
Grand Total		**2,245**	**10,946**	**32,064**	**38,949**	**84,205**

REPLACEMENT COSTS FOR TOWN-OWNED PIPE BY REPLACEMENT YEAR AND TYPE

Owner	Town

Sum of Replacement Cost	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
Unknown	$1,571,245		$313,214	$1,588,262	$3,472,721
2025	$298,563				$298,563
2033	$388,807				$388,807
2038	$92,949				$92,949
2040	$384,393				$384,393
2048			$366,504		$366,504
2051	$291,495				$291,495
2053	$282,714				$282,714
2056	$668,825	$94,165			$762,990
2066	$209,616				$209,616
2072	$6,844,498	$15,554			$6,860,052
2077	$1,788,538				$1,788,538
2080	$82,139				$82,139
2085	$808,944		$503,709		$1,312,654
2086	$121,843	$274,611	$986,122		$1,382,575
2087	$106,887				$106,887
2088	$1,642,046		$530,108		$2,172,154
2089	$613,242		$236,468	$2,777,131	$3,626,841
2091	$206,313				$206,313
2092	$448,160				$448,160
2093	$938,216				$938,216
2098	$646,818				$646,818
2101			$643,979		$643,979
2102	$104,984				$104,984
2103	$492,616				$492,616
2105	$1,120,381		$291,643		$1,412,023
2107			$186,627		$186,627
2110	$386,681				$386,681
2111	$28,512				$28,512
2120	$94,235				$94,235
Grand Total	**$20,663,660**	**$384,330**	**$4,058,374**	**$4,365,393**	**$29,471,757**

REPLACEMENT COSTS FOR TOWN-OWNED PIPE BY REPLACEMENT DECADE AND TYPE

Owner	Town

Sum of Replacement Cost	Column Labels				
Row Labels	**Gravity Main**	**Siphon**	**Force Main**	**Low Pressure**	**Grand Total**
2017-2026	$298,563				$298,563
2027-2036	$388,807				$388,807
2037-2046	$477,342				$477,342
2047-2056	$1,243,033	$94,165	$366,504		$1,703,703
2057-2066	$209,616				$209,616
2067-2076	$6,844,498	$15,554			$6,860,052
2077-2086	$2,801,465	$274,611	$1,489,831		$4,565,906
2087-2096	$3,954,863		$766,576	$2,777,131	$7,498,570
2097-2106	$2,364,799		$935,622		$3,300,421
2107-2116	$415,193		$186,627		$601,820
2117-2126	$94,235				$94,235
Unknown	$1,571,245		$313,214	$1,588,262	$3,472,721
Grand Total	**$20,663,660**	**$384,330**	**$4,058,374**	**$4,365,393**	**$29,471,757**

REPLACEMENT COSTS FOR TOWN-OWNED PIPE BY REPLACEMENT DECADE AND CRITICALITY

Owner	Town
Type	(Multiple Items)

Sum of Replacement Cost	Column Labels				
Row Labels	**Highest Risk**	**Priority Renewal**	**Frequent Monitoring**	**Limited Monitoring**	**Grand Total**
2017-2026	$298,563				$298,563
2027-2036	$353,865	$34,942			$388,807
2037-2046		$477,342			$477,342
2047-2056			$1,205,901	$497,801	$1,703,703
2057-2066				$209,616	$209,616
2067-2076			$3,607,644	$3,252,409	$6,860,052
2077-2086			$2,998,611	$1,567,296	$4,565,906
2087-2096			$1,973,375	$5,525,196	$7,498,570
2097-2106			$748,963	$2,551,458	$3,300,421
2107-2116			$573,308	$28,512	$601,820
2117-2126			$94,235		$94,235
Unknown	$133,351	$3,318,853	$20,517		$3,472,721
Grand Total	**$785,779**	**$3,831,137**	**$11,222,553**	**$13,632,287**	**$29,471,757**

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	Center St		2	Manhole	Town	1977	75	35	5	2
Lehner Street	Center St		2.1	Manhole	Town	1977	75	55	5	1
Lehner Street	northeast side S Main St		3	Manhole	Town	1977	75	55	5	1
Lehner Street	northeast side S Main St		4	Manhole	Town	1977	75	35	5	2
Lehner Street	northeast side S Main St		5	Manhole	Town	1977	75	35	5	2
Lehner Street	northeast side S Main St		6	Manhole	Town	1977	75	35	4	2
Lehner Street	north east side S Main St	Old Ridge Road	10	Manhole	Town	0	75	0	4	4
Lehner Street	north east side S Main St		11	Manhole	Town	1992	75	70	4	1
Lehner Street	north east side S Main St	South Main Stre	12	Manhole	Town	1977	75	35	4	2
Lehner Street	north east side S Main St		13	Manhole	Town	1977	75	55	4	1
Lehner Street	north east side S Main St	South Main Stre	14	Manhole	Town	1977	75	55	4	1
Lehner Street	north east side S Main St	South Main Stre	15	Manhole	Town	1977	75	55	4	1
Lehner Street	north east side S Main St	South Main Stre	16	Manhole	Town	1977	75	35	4	2
Lehner Street	north east side S Main St		17	Manhole	Town	0	75	0	2	4
Lehner Street	north east side S Main St		19	Manhole	Town	1930	75	-12	4	5
Lehner Street	north east side S Main St	South Main Stre	20	Manhole	Town	1997	75	55	4	1
Lehner Street	north east side S Main St	South Main Stre	21	Manhole	Town	1997	75	55	4	1
Lehner Street	north east side S Main St	South Main Stre	22	Manhole	Town	1930	75	-12	4	5
Lehner Street	north east side S Main St		23	Manhole	Town	1982	75	40	4	2
Lehner Street	Gov Wentworth School District		24	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24.1	Manhole	ntworth Regional School	1982	75	40	4	2
Lehner Street	Gov Wentworth School District	South Main Stre	24.2	Manhole	ntworth Regional School	1982	75	40	4	2
Lehner Street	Gov Wentworth School District	South Main Stre	24.3	Manhole	ntworth Regional School	1982	75	40	4	2
Lehner Street	Green St	South Main Stre	30	Manhole	Town	1977	75	35	4	2
Lehner Street	Green St		32	Manhole	Town	1977	75	55	4	1
Lehner Street	Brewster Academy		32.1	Manhole	Brewster Academy	1977	75	55	3	1
Lehner Street	Brewster Academy		33	Manhole	Brewster Academy	1977	75	55	3	1
Lehner Street	Clark Rd		34	Manhole	Town	1992	75	50	4	1
Lehner Street	Clark Rd		35	Manhole	Town	1992	75	50	4	1
Lehner Street	Clark Rd		36	Manhole	Town	1992	75	50	4	1
Lehner Street	Goodrich Rd	Goodrich Street	37	Manhole	Town	1998	75	56	2	1
Lehner Street	Goodrich Rd	Goodrich Street	38	Manhole	Town	1998	75	56	1	1
Lehner Street	Goodrich Rd	Goodrich Street	39	Manhole	Town	1998	75	56	1	1
Mill Street	E Clark Rd	East Clark Road	40	Manhole	Town	1998	75	56	2	1
Lehner Street	southwest side S Main St	South Main Stre	42	Manhole	Town	1998	75	56	2	1
Lehner Street	southwest side S Main St	South Main Stre	43	Manhole	Town	1997	75	55	2	1
Lehner Street	southwest side S Main St	South Main Stre	44	Manhole	Town	1977	75	55	2	1
Lehner Street	southwest side S Main St	South Main Stre	45	Manhole	Town	1977	75	55	2	1
Lehner Street	southwest side S Main St	South Main Stre	46	Manhole	Town	1998	75	56	2	1
Lehner Street	southwest side S Main St		47	Manhole	Town	1998	75	56	2	1
Mill Street	Brewster Academy		50	Manhole	Brewster Academy	0	75	0	3	4
Mill Street	Brewster Academy		51	Manhole	Brewster Academy	1938	75	-4	3	5
Mill Street	Brewster Academy		52	Manhole	Brewster Academy	1938	75	-4	3	5
Mill Street	S Main St		53	Manhole	Brewster Academy	1938	75	-4	3	5
Mill Street	S Main St	South Main Stre	55	Manhole	Town	0	75	0	2	4
Mill Street	S Main St		56	Manhole	Town	1977	75	35	3	2
Mill Street	S Main St		57	Manhole	Town	1977	75	35	3	2
Mill Street	S Main St		58	Manhole	Town	1977	75	35	3	2
Mill Street	S Main St		59	Manhole	Town	1977	75	35	5	2
Mill Street	Lake Ave		60	Manhole	Town	1938	75	-4	2	5
Mill Street	Railroad Ave		62	Manhole	Town	1938	75	-4	5	5

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
2	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
2.1	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
3	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
4	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
5	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
6	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
10	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
11	Frequent Monitoring	2067	2067-2076	2142	2137-2146	$10,000	1
12	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
13	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
14	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
15	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
16	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
17	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
19	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
20	Frequent Monitoring	2072	2067-2076	2147	2147-2156	$10,000	1
21	Frequent Monitoring	2072	2067-2076	2147	2147-2156	$10,000	1
22	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
23	Frequent Monitoring	2057	2057-2066	2132	2127-2136	$10,000	1
24	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24.1	Frequent Monitoring	2057	2057-2066	2132	2127-2136	$10,000	1
24.2	Frequent Monitoring	2057	2057-2066	2132	2127-2136	$10,000	1
24.3	Frequent Monitoring	2057	2057-2066	2132	2127-2136	$10,000	1
30	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
32	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
32.1	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
33	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
34	Frequent Monitoring	2067	2067-2076	2142	2137-2146	$10,000	1
35	Frequent Monitoring	2067	2067-2076	2142	2137-2146	$10,000	1
36	Frequent Monitoring	2067	2067-2076	2142	2137-2146	$10,000	1
37	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
38	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
39	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
40	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
42	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
43	Limited Monitoring	2072	2067-2076	2147	2147-2156	$10,000	1
44	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
45	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
46	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
47	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
50	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
51	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
52	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
53	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
55	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
56	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
57	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
58	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
59	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
60	Priority Renewal	2017	2017-2026	2092	2087-2096	$10,000	2
62	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	Railroad Ave	Railroad Avenu	63	Manhole	Town	1977	75	35	5	2
Mill Street	Railroad Ave	Railroad Avenu	64	Manhole	Town	1938	75	-4	5	5
Mill Street	Railroad Ave		65	Manhole	Town	1938	75	-4	5	5
Lehner Street	Lehner St area		66	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St		67	Manhole	Town	1977	75	35	5	2
Lehner Street	Lehner St		69	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St		70	Manhole	Town	1977	75	55	2	1
Lehner Street	Lehner St		71	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St		72	Manhole	Town	1977	75	35	2	2
Lehner Street	Cropley Hill Rd		73	Manhole	Town	1977	75	35	2	2
Mill Street	Glendon St	School Street	74	Manhole	Town	0	75	0	2	4
Mill Street	Glendon St	Glendon Street	75	Manhole	Town	1977	75	35	2	2
Mill Street	Lehner St	Lehner Street B	76	Manhole	Town	1977	75	35	2	2
Lehner Street	Pine St		80	Manhole	Town	1977	75	35	3	2
Lehner Street	Pine St		81	Manhole	Town	1977	75	35	3	2
Lehner Street	Pine St		82	Manhole	Town	1977	75	55	3	1
Lehner Street	Pine St		83	Manhole	Town	1977	75	35	3	2
Lehner Street	Pine St		84	Manhole	Town	1977	75	35	2	2
Lehner Street	Center St		85	Manhole	Town	1977	75	55	3	1
Lehner Street	Center St		86	Manhole	Town	1977	75	35	3	2
Lehner Street	Center St		87	Manhole	Town	0	75	0	2	4
Lehner Street	Grove St	Grove Street	88	Manhole	Town	1977	75	35	2	2
Lehner Street	Grove St	Grove Street	89	Manhole	Town	1977	75	55	2	1
Willow Street	Center St	Center Street (\	90	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		91	Manhole	Town	1977	75	35	2	2
Mill Street	Center St		92	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		93	Manhole	Town	1977	75	35	3	2
Elm Street	Center St		94	Manhole	Town	1977	75	35	3	2
Elm Street	River St		95	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		96	Manhole	Town	1956	75	14	2	3
Elm Street	Center St		97	Manhole	Town	1956	75	14	2	3
Elm Street	Center St		100	Manhole	Town	1977	75	35	1	2
Elm Street	Center St		101	Manhole	Town	1977	75	35	1	2
Elm Street	Elm St		102	Manhole	Town	1991	75	49	3	2
Elm Street	Elm St		103	Manhole	Town	1977	75	35	2	2
Elm Street	Elm St		104	Manhole	Town	1977	75	35	2	2
Mill Street	Bay St	Bay Street	105	Manhole	Town	1991	75	49	4	2
Mill Street	Bay St	Bay Street	106	Manhole	Town	1991	75	49	4	2
Mill Street	Bay St	Bay Street	107	Manhole	Town	1991	75	49	4	2
Mill Street	Bay St	Bay Street	108	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St	Bay Street	109	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement	Bay Street Ease	110	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement		111	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement	Bay Street (rear	112	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement	Bay Street (rear	113	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement	Bay Street	114	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement		115	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St easement	Bay Street	117	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St	Bay Street	118	Manhole	Town	1977	75	35	4	2
Mill Street	Bay St	Bay Street at Ki	119	Manhole	Town	1977	75	35	4	2
Mill Street	King St	King Street	119.1	Manhole	Town	2003	75	61	1	1

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
63	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
64	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
65	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
66	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
67	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
69	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
70	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
71	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
72	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
73	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
74	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
75	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
76	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
80	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
81	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
82	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
83	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
84	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
85	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
86	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
87	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
88	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
89	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
90	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
91	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
92	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
93	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
94	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
95	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
96	Priority Renewal	2031	2027-2036	2106	2097-2106	$10,000	2
97	Priority Renewal	2031	2027-2036	2106	2097-2106	$10,000	2
100	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
101	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
102	Frequent Monitoring	2066	2057-2066	2141	2137-2146	$10,000	1
103	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
104	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
105	Frequent Monitoring	2066	2057-2066	2141	2137-2146	$10,000	1
106	Frequent Monitoring	2066	2057-2066	2141	2137-2146	$10,000	1
107	Frequent Monitoring	2066	2057-2066	2141	2137-2146	$10,000	1
108	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
109	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
110	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
111	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
112	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
113	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
114	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
115	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
117	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
118	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
119	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
119.1	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Mill Street	King St	King Street	120	Manhole	Town	2003	75	61	1	1
Mill Street	King St	King Street	121	Manhole	Town	2003	75	61	1	1
Mill Street	King St		122	Manhole	Town	1977	75	35	1	2
Mill Street	Bay St	Bay Street Near	123	Manhole	Town	1977	75	35	5	2
Mill Street	Bay St	Bay Street Near	124	Manhole	Town	1956	75	14	5	3
Mill Street	Mill St	Mill Street at Ba	125	Manhole	Town	1956	75	14	5	3
Mill Street	Mill St	Bay Street Near	126	Manhole	Town	1956	75	14	5	3
Mill Street	Varney Rd	Varney Road	127	Manhole	Town	0	75	0	2	4
Mill Street	Mill St	Mill Street at Hi	128	Manhole	Town	1956	75	14	5	3
Mill Street	Mill St		129	Manhole	Town	1956	75	14	5	3
Mill Street	Libby St		134	Manhole	Town	1977	75	35	2	2
Mill Street	Mill St		138	Manhole	Town	1956	75	14	5	3
Mill Street	S Main St	South Main Stre	141	Manhole	Town	1977	75	35	5	2
Mill Street	N Main St	North Main Stre	142	Manhole	Town	1977	75	35	5	2
Mill Street	N Main St		143	Manhole	Town	1977	75	35	5	2
Mill Street	N Main St		144	Manhole	Town	1977	75	35	4	2
Mill Street	Lake St		145.1	Manhole	Town	1977	75	35	2	2
Mill Street	Endicott St		146	Manhole	Town	1977	75	35	2	2
Mill Street	Endicott St		146.1	Manhole	Town	1977	75	35	2	2
Mill Street	between Endicott and Lake		146.2	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		147	Manhole	Town	1977	75	35	4	2
Mill Street	N Main St		148	Manhole	Town	1977	75	35	4	2
Mill Street	N Main St		149	Manhole	Town	1977	75	35	4	2
Mill Street	N Main St		150	Manhole	Town	1977	75	35	3	2
Mill Street	N Main St		151	Manhole	Town	1977	75	35	3	2
Mill Street	N Main St		152	Manhole	Town	1977	75	35	3	2
Mill Street	N Main St		153	Manhole	Town	1977	75	35	3	2
Mill Street	N Main St		154	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		155	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		156	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		157	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		158	Manhole	Town	1977	75	35	2	2
Mill Street	N Main St		159	Manhole	Town	1940	75	-2	2	5
Mill Street	N Main St		160	Manhole	Town	1940	75	-2	2	5
Mill Street	N Main St	North Main Stre	161	Manhole	Town	1985	75	43	2	2
Mill Street	Sewall Rd		162	Manhole	Town	1977	75	35	4	2
Mill Street	Pleasant St		163	Manhole	Town	1977	75	35	2	2
Mill Street	Pleasant St	Pleasant Street	164	Manhole	Town	1977	75	35	2	2
Mill Street	Pleasant St	Pleasant Street	165	Manhole	Town	1977	75	35	2	2
Mill Street	Pleasant St	Pleasant Street	166	Manhole	Town	1977	75	35	2	2
Sewall Road	Sewall Road		169	Manhole	Town	1988	75	46	1	2
Mill Street	Sewall Road		170	Manhole	Town	1988	75	46	1	2
Sewall Road	Sewall Road		171	Manhole	Town	1988	75	66	1	1
Sewall Road	Sewall Road		172	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		173	Manhole	Town	1988	75	46	3	2
Sewall Road	Sewall Road		174	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		175	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		176	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		177	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		178	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		179	Manhole	Town	1988	75	66	3	1

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
120	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
121	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
122	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
123	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
124	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
125	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
126	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
127	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
128	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
129	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
134	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
138	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
141	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
142	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
143	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
144	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
145.1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
146	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
146.1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
146.2	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
147	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
148	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
149	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
150	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
151	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
152	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
153	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
154	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
155	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
156	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
157	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
158	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
159	Priority Renewal	2017	2017-2026	2092	2087-2096	$10,000	2
160	Priority Renewal	2017	2017-2026	2092	2087-2096	$10,000	2
161	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
162	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
163	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
164	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
165	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
166	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
169	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
170	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
171	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
172	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
173	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
174	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
175	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
176	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
177	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
178	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
179	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Sewall Road	Sewall Road		180	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		181	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		182	Manhole	Town	1988	75	66	3	1
Sewall Road	Sewall Road		183	Manhole	Town	1988	75	46	3	2
Sewall Road	Sewall Road		184	Manhole	Town	1989	75	67	3	1
Taylor Home	Taylor Home	Taylor Drive	200	Manhole	Taylor Home	2000	75	58	3	1
Clark Road	Clark rd		201	Manhole	Town	1993	75	51	1	1
Clark Road	Clark rd	Clark Road	201.1	Manhole	Town	1993	75	51	1	1
Clark Road	Brewster Academy	Brewster Acade	201.2	Manhole	Brewster Academy	0	75	0	1	4
Clark Road	Clark rd		202	Manhole	Town	1993	75	51	1	1
Clark Road	Clark rd	Clark Road at F	203	Manhole	Town	1993	75	51	2	1
Clark Road	Fawn Haven	Fawnhaven Driv	203.1	Manhole	Fawn Haven	0	75	0	2	4
Clark Road	Clark rd		204	Manhole	Town	1993	75	51	2	1
Clark Road	Clark rd	Clark Road	205	Manhole	Town	1993	75	51	2	1
Clark Road	Clark rd	Clark Road at Cl	206	Manhole	Town	1985	75	63	2	1
Clark Road	Clark Rd	Clark Road	207	Manhole	Town	1985	75	43	2	2
Clark Road	Clark rd	Clark Road	208	Manhole	Town	1985	75	43	2	2
Mill Street	Clark rd		209	Manhole	Town	1985	75	63	2	1
Clark Road	Clark rd	Clark Road	210	Manhole	Town	1985	75	43	2	2
Clark Road	Clark rd	Greenleaf Drive	211	Manhole	Town	1985	75	43	2	2
Clark Road	Greenleaf	Greenleaf Drive	212	Manhole	Town	1985	75	43	2	2
Clark Road	Greenleaf	Greenleaf Drive	213	Manhole	Town	1985	75	43	2	2
Clark Road	Greenleaf	Greenleaf Drive	214	Manhole	Town	1989	75	47	2	2
Greenleaf	Greenleaf	Greenleaf Drive	215	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	216	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	217	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	218	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	219	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	220	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	221	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	222	Manhole	Town	1989	75	47	1	2
Greenleaf	Greenleaf	Greenleaf Drive	223	Manhole	Town	1989	75	47	1	2
Clark Road	Clipper Dr	Clipper Road ne	230	Manhole	Town	1993	75	51	2	1
Clark Road	Clipper Dr	Eagle Trace R.O	231	Manhole	pper Home - Nursing Hoı	1993	75	51	2	1
Clark Road	Clipper Dr	Clipper Drive	232	Manhole	pper Home - Nursing Hoı	1993	75	51	2	1
Fairway View	Eagel Trace	Eagle Trace	234	Manhole	Town	1993	75	51	1	1
Fairway View	Eagel Trace	Eagle Trace	235	Manhole	Town	1988	75	46	1	2
Fairway View	Eagel Trace	Eagle Trace	236	Manhole	Town	1988	75	46	1	2
Fairway View	Eagel Trace	Eagle Trace at F	237	Manhole	Town	1988	75	46	1	2
Fairway View	Eagel Trace	Eagle Trace	238	Manhole	Town	1988	75	46	1	2
Fairway View	Eagel Trace	Eagle Trace	239	Manhole	Town	1988	75	46	1	2
Fairway View	Fairway Drive	Fairway Drive n	240	Manhole	Town	1993	75	51	1	1
Fairway View	Fairway Drive	Fairway Drive n	241	Manhole	Town	1993	75	51	1	1
Fairway View	Fairway Drive	Fairway Drive n	242	Manhole	Town	1993	75	51	1	1
Fairway View	Fairway Drive	Clipper Drive	243	Manhole	Town	1993	75	51	1	1
Elm Street	Center St		100A	Manhole	Town	1977	75	35	1	2
Elm Street	Center St		100B	Manhole	Town	1956	75	14	2	3
Elm Street	Center St		101A	Manhole	Town	1977	75	35	1	2
Elm Street	Center St		101B	Manhole	Town	1977	75	35	1	2
Elm Street	Elm St		102A	Manhole	Town	1977	75	35	2	2
Elm Street	Elm St		102B	Manhole	Town	1991	75	49	3	2

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
180	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
181	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
182	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
183	Frequent Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
184	Frequent Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
200	Frequent Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
201	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
201.1	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
201.2	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
202	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
203	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
203.1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
204	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
205	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
206	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
207	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
208	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
209	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
210	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
211	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
212	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
213	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
214	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
215	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
216	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
217	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
218	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
219	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
220	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
221	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
222	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
223	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
230	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
231	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
232	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
234	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
235	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
236	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
237	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
238	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
239	Limited Monitoring	2063	2057-2066	2138	2137-2146	$10,000	1
240	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
241	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
242	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
243	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
100A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
100B	Priority Renewal	2031	2027-2036	2106	2097-2106	$10,000	2
101A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
101B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
102A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
102B	Frequent Monitoring	2066	2057-2066	2141	2137-2146	$10,000	1

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Elm Street	Elm St		103A	Manhole	Town	1977	75	35	2	2
Elm Street	Elm St		103B	Manhole	Town	1977	75	35	2	2
Elm Street	Elm St		104A	Manhole	Town	1977	75	35	2	2
Mill Street	Elm St		104B	Manhole	Town	1977	75	35	2	2
Mill Street	Bay St		109A	Manhole	Town	0	75	0	1	4
Mill Street	Bay St easement		111A	Manhole	Town	1977	75	35	1	2
Mill Street	Bay St easement	Bay Street (rear	111B	Manhole	Town	0	75	0	1	4
Mill Street	King St		120A	Manhole	Town	2003	75	61	1	1
Mill Street	King St	King Street	120B	Manhole	Town	2003	75	61	1	1
Mill Street	King St		120C	Manhole	Town	2003	75	61	1	1
Mill Street	King St	King Street	120D	Manhole	Town	2003	75	61	1	1
Mill Street	King St	King Street	121A	Manhole	Town	2003	75	61	1	1
Mill Street	Mill St	Mill Street at Ba	126A	Manhole	Town	0	75	0	2	4
Mill Street	Varney Rd	Varney Road	127B	Manhole	Town	0	75	0	2	4
Mill Street	Mill St	Mill Street	128A	Manhole	Town	1956	75	14	5	3
Mill Street	Mill St	Mill Street	129A	Manhole	Town	1956	75	14	5	3
Mill Street	Libby St		134A	Manhole	Town	0	75	0	2	4
Mill Street	Mill St		138A	Manhole	Town	0	75	0	5	4
Mill Street	Mill St		138B	Manhole	Town	0	75	0	5	4
Mill Street	Mill St		138C	Manhole	Town	0	75	0	5	4
Mill Street	Mill St		138D	Manhole	Town	1956	75	14	5	3
Mill Street	Mill St		138E	Manhole	Town	0	75	0	1	4
Lehner Street	north east side S Main St	South Main Stre	13A	Manhole	Town	1977	75	35	4	2
Mill Street	Mill St		143A	Manhole	Town	0	75	0	5	4
Mill Street	Mill St		143B	Manhole	Town	1938	75	-4	5	5
Mill Street	Endicott St		145A	Manhole	Town	1977	75	35	2	2
Mill Street	Endicott St		146A	Manhole	Town	0	75	0	1	4
Mill Street	N Main St		147A	Manhole	Town	1977	75	35	4	2
Mill Street	N Main St		160A	Manhole	Town	1985	75	43	2	2
Mill Street	N Main St		161A	Manhole	Town	1985	75	43	2	2
Lehner Street	Treadwell Ln	South Main Stre	16A	Manhole	Town	1977	75	35	4	2
Lehner Street	Treadwell Ln		16A.1	Manhole	Town	0	75	0	2	4
Lehner Street	north east side S Main St		16B	Manhole	Town	1977	75	35	4	2
Lehner Street	north east side S Main St	South Main Stre	16C	Manhole	Town	1977	75	55	4	1
Lehner Street	north east side S Main St		17A	Manhole	Town	0	75	0	2	4
Lehner Street	north east side S Main St	South Main Stre	18A	Manhole	Town	1977	75	35	4	2
Taylor Home	Taylor Home	Taylor Drive	200A	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200B	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200C	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200D	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home		200E	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200F	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200G	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200H	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200I	Manhole	Taylor Home	2000	75	58	2	1
Taylor Home	Taylor Home	Taylor Drive	200J	Manhole	Taylor Home	2000	75	58	1	1
Taylor Home	Taylor Home		200K	Manhole	Taylor Home	2000	75	58	1	1
Clark Road	Fawn Haven	Fawnhaven Driv	203A	Manhole	Fawn Haven	0	75	0	2	4
Clark Road	Clark rd	Clark Road	205A	Manhole	Town	1993	75	51	2	1
Clark Road	Clark rd		210A	Manhole	Town	1985	75	43	2	2
Clark Road	Clafin Ln		210B	Manhole	Town	2003	75	61	1	1

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
103A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
103B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
104A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
104B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
109A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
111A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
111B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
120A	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
120B	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
120C	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
120D	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
121A	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1
126A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
127B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
128A	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
129A	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
134A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
138A	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
138B	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
138C	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
138D	Highest Risk	2031	2027-2036	2106	2097-2106	$10,000	2
138E	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
13A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
143A	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
143B	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
145A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
146A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
147A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
160A	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
161A	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
16A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
16A.1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
16B	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
16C	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
17A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
18A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
200A	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200B	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200C	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200D	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200E	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200F	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200G	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200H	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200I	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200J	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
200K	Limited Monitoring	2075	2067-2076	2150	2147-2156	$10,000	1
203A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
205A	Limited Monitoring	2068	2067-2076	2143	2137-2146	$10,000	1
210A	Limited Monitoring	2060	2057-2066	2135	2127-2136	$10,000	1
210B	Limited Monitoring	2078	2077-2086	2153	2147-2156	$10,000	1

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Clark Road	Greenleaf	Greenleaf Drive	214A	Manhole	Town	1989	75	47	2	2
Clark Road	Greenleaf	Greenleaf Drive	214B	Manhole	Town	1989	75	47	2	2
Lehner Street	Gov Wentworth School District	South Main Stre	24A	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24A.1	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24A.2	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24A.3	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24A.4	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Gov Wentworth School District	South Main Stre	24A.5	Manhole	ntworth Regional School	0	75	0	4	4
Lehner Street	Center St		2A	Manhole	Town	0	75	0	2	4
Lehner Street	Center St		2B	Manhole	Town	1977	75	35	5	2
Lehner Street	Center St		2C	Manhole	Town	0	75	0	2	4
Lehner Street	Green St		32A	Manhole	Town	1997	75	55	1	1
Lehner Street	northeast side S Main St		3A	Manhole	Town	1977	75	35	5	2
Lehner Street	northeast side S Main St		3B	Manhole	Town	1997	75	55	5	1
Lehner Street	E Clark Rd	East Clark Road	40A	Manhole	Town	1998	75	56	2	1
Lehner Street	southwest side S Main St	South Main Stre	40B	Manhole	Town	1998	75	56	2	1
Lehner Street	southwest side S Main St	South Main Stre	45A	Manhole	Town	1977	75	55	2	1
Lehner Street	southwest side S Main St	South Main Stre	45B	Manhole	Town	1977	75	55	2	1
Lehner Street	southwest side S Main St	South Main Stre	45C	Manhole	Town	1998	75	76	2	1
Lehner Street	southwest side S Main St	South Main Stre	47A	Manhole	Town	1998	75	56	2	1
Lehner Street	northeast side S Main St	Crescet lake Ave	4A	Manhole	Town	1977	75	35	5	2
Lehner Street	northeast side S Main St	21 Crescent Lak	4B	Manhole	Town	1977	75	35	5	2
Mill Street	Brewster Academy		50A	Manhole	Brewster Academy	0	75	0	3	4
Mill Street	Brewster Academy	located in base	50A.1	Manhole	Brewster Academy	0	75	0	3	4
Mill Street	Brewster Academy		50B	Manhole	Brewster Academy	0	75	0	3	4
Mill Street	Brewster Academy		50C	Manhole	Brewster Academy	0	75	0	3	4
Mill Street	Brewster Academy		52A	Manhole	Brewster Academy	1938	75	-4	3	5
Mill Street	S Main St		55A	Manhole	Town	1977	75	35	2	2
Mill Street	Union St	Union Street at	56A	Manhole	Town	1977	75	35	2	2
Lehner Street	School St		56B	Manhole	Town	0	75	0	2	3
Lehner Street	School St		56B.1	Manhole	Town	0	75	0	2	3
Mill Street	Railroad Ave	Railroad Avenu	61A	Manhole	Town	1938	75	-4	5	5
Mill Street	Railroad Ave	Railroad Avenu	61B	Manhole	Town	1938	75	-4	5	5
Mill Street	Railroad Ave		62A	Manhole	Town	0	75	0	2	4
Mill Street	Railroad Ave		62B	Manhole	Town	0	75	0	2	4
Mill Street	Railroad Ave	Railroad Avenu	62C	Manhole	Town	0	75	0	2	4
Mill Street	Railroad Ave	Railroad Avenu	63A	Manhole	Town	1938	75	-4	5	5
Lehner Street	Lehner St area		66A	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St area		66B	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St area		66C	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St area		66D	Manhole	Town	1938	75	-4	2	5
Lehner Street	Lehner St area		66E	Manhole	Town	0	75	0	2	4
Lehner Street	Lehner St area		66F	Manhole	Town	0	75	0	2	4
Lehner Street	Lehner St area		66G	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St		67A	Manhole	Town	1977	75	35	5	2
Lehner Street	Lehner St area		71A	Manhole	Town	0	75	0	2	3
Lehner Street	Lehner St area		72A	Manhole	Town	0	75	0	2	4
Lehner Street	Lehner St area	Railroad Avenu	72A.1	Manhole	Town	1977	75	35	2	2
Lehner Street	Cropley Hill Rd		73A	Manhole	Town	1977	75	35	2	2
Lehner Street	Cropley Hill Rd		73B	Manhole	Town	1977	75	35	2	2
Lehner Street	Lehner St area		73B1	Manhole	Town	1977	75	55	2	1

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
214A	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
214B	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
24A	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24A.1	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24A.2	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24A.3	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24A.4	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
24A.5	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
2A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
2B	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
2C	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
32A	Limited Monitoring	2072	2067-2076	2147	2147-2156	$10,000	1
3A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
3B	Frequent Monitoring	2072	2067-2076	2147	2147-2156	$10,000	1
40A	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
40B	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
45A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
45B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
45C	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
47A	Limited Monitoring	2073	2067-2076	2148	2147-2156	$10,000	1
4A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
4B	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
50A	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
50A.1	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
50B	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
50C	Highest Risk	Unknown	Unknown	Unknown	Unknown	$10,000	1
52A	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
55A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
56A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
56B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
56B.1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
61A	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
61B	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
62A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
62B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
62C	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
63A	Highest Risk	2017	2017-2026	2092	2087-2096	$10,000	2
66A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
66B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
66C	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
66D	Priority Renewal	2017	2017-2026	2092	2087-2096	$10,000	2
66E	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
66F	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
66G	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
67A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
71A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
72A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
72A.1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
73A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
73B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
73B1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	Cropley Hill Rd		73C	Manhole	Town	1977	75	35	2	2
Mill Street	Glendon St	School Street at	74A	Manhole	Town	1977	75	35	2	2
Mill Street	Glendon St	School Street	74A.1	Manhole	Town	1977	75	35	2	2
Mill Street	Glendon St		74B	Manhole	Town	0	75	0	2	4
Mill Street	Glendon St	Glendon Street	75A	Manhole	Town	0	75	0	2	4
Mill Street	Lehner St	Lehner Street a	76A	Manhole	Town	1977	75	35	2	2
Mill Street	Lehner St	Pleasant Street	76A.1	Manhole	Town	1977	75	35	2	2
Lehner Street	Glendon St		76A.2	Manhole	Town	2011	75	94	1	1
Mill Street	Railroad Ave	Glendon Street	76B	Manhole	Town	1977	75	35	2	2
Mill Street	Railroad Ave		76B1	Manhole	Town	0	75	0	2	4
Mill Street	Pleasant St	Pleasant Street	76B2	Manhole	Town	1977	75	35	2	2
Mill Street	Pleasant St	Pleasant Street	76C	Manhole	Town	1977	75	35	2	2
Lehner Street	northeast side S Main St	Huggins Hospit	7A	Manhole	Town	2010	75	68	4	1
Lehner Street	northeast side S Main St	Huggins Hospit	7B	Manhole	Town	2010	75	68	4	1
Lehner Street	northeast side S Main St	Huggins Hospit	7C	Manhole	Town	2010	75	68	4	1
Lehner Street	Lehner St		80A	Manhole	Town	1977	75	55	5	1
Lehner Street	Pine St		80B	Manhole	Town	1977	75	35	3	2
Lehner Street	Center St		80C	Manhole	Town	1977	75	55	3	1
Lehner Street	Pine St		81A	Manhole	Town	1977	75	35	3	2
Lehner Street	Pine St		81B	Manhole	Town	1977	75	35	3	2
Lehner Street	Center St		86A	Manhole	Town	1977	75	55	3	1
Lehner Street	Center St		86B	Manhole	Town	0	75	0	2	4
Lehner Street	Center St		86C	Manhole	Town	1980	75	58	2	1
Lehner Street	Grove St	Grove Street	88A	Manhole	Town	1977	75	55	2	1
Lehner Street	northeast side S Main St	Huggins Hospit	8A	Manhole	Town	2010	75	68	4	1
Lehner Street	northeast side S Main St	Huggins Hospit	8B	Manhole	Town	2010	75	68	4	1
Lehner Street	northeast side S Main St		8C	Manhole	Town	2010	75	68	4	1
Willow Street	Center St		90A	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		91A	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		91B	Manhole	Town	1977	75	35	2	2
Elm Street	Center St		91C	Manhole	Town	1977	75	35	2	2
Elm Street	River St		94A	Manhole	Town	1977	75	35	2	2
Elm Street	River St		95A	Manhole	Town	1977	75	35	2	2
Elm Street	River St		95B	Manhole	Town	0	75	0	2	4
Elm Street	River St		95C	Manhole	Town	0	75	0	2	4
Elm Street	River St		95D	Manhole	Town	0	75	0	2	4
Elm Street	River St		95E	Manhole	Town	0	75	0	2	4
Elm Street	River St		95F	Manhole	Town	2005	75	63	2	1
Crescent Point	River St	River Street	95G	Manhole	Town	2005	75	63	1	1
Crescent Point	River St	River Street Eas	95H	Manhole	Town	2005	75	63	1	1
Crescent Point	River St	River Street Eas	95I	Manhole	Town	2005	75	63	1	1
Crescent Point	River St		95J	Manhole	Town	2005	75	63	1	1
Crescent Point	River St	River Street	95K	Manhole	Town	2005	75	63	1	1
Crescent Point	River St	River Street	95L	Manhole	Town	2005	75	63	1	1
Crescent Point	River St	River Street	95M	Manhole	Town	2005	75	63	1	1
Crescent Point	Blackberry Ln	River Street	95N	Manhole	Town	2005	75	63	1	1
Crescent Point	Blackberry Ln		95O	Manhole	Town	2005	75	63	1	1
Crescent Point	Blackberry Ln	Blackberry Lane	95P	Manhole	Town	2005	75	63	1	1
Crescent Point	Blackberry Ln	Blackberry Lane	95Q	Manhole	Town	2005	75	63	1	1
Elm Street	Center St		96A	Manhole	Town	1956	75	14	2	3
Elm Street	Center St		97A	Manhole	Town	1956	75	14	2	3

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
73C	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
74A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
74A.1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
74B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
75A	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
76A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
76A.1	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
76A.2	Limited Monitoring	2086	2077-2086	2161	2157-2166	$10,000	1
76B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
76B1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
76B2	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
76C	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
7A	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
7B	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
7C	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
80A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
80B	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
80C	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
81A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
81B	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
86A	Frequent Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
86B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
86C	Limited Monitoring	2055	2047-2056	2130	2127-2136	$10,000	1
88A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
8A	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
8B	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
8C	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
90A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
91A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
91B	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
91C	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
94A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
95A	Limited Monitoring	2052	2047-2056	2127	2127-2136	$10,000	1
95B	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
95C	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
95D	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
95E	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
95F	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95G	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95H	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95I	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95J	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95K	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95L	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95M	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95N	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95O	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95P	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
95Q	Limited Monitoring	2080	2077-2086	2155	2147-2156	$10,000	1
96A	Priority Renewal	2031	2027-2036	2106	2097-2106	$10,000	2
97A	Priority Renewal	2031	2027-2036	2106	2097-2106	$10,000	2

Subbasin	Street	Location	ID	Structure Type	Owner	Year Installed	Useful Life	Remaining Useful Life	Impact of Failure	Probability of Failure
Lehner Street	northeast side S Main St	Huggins Hospit	9C	Manhole	Town	2010	75	68	4	1
Mill Street	Filter Bed Rd		FM2	orce main clean-out or AF	Town	1971	75	29	5	3
Sewall Road	Sewall Road	Flushing port at	FP-1	FM Flushing Port	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-1 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-10 C*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-11 C*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-12 C*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-13 A*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-14 C*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-15 C*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-2 AI*	Air Release Valve	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-3 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-4 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-5 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-6 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-7 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-8 CL*	FM Clean-out	Town	1989	75	47	2	2
Sewall Road	Sewall Road		P-9 AU*	Air Release Valve	Town	1989	75	47	2	2
Mill Street	Varney Rd	Varney Road	RSA1	Manhole	Town	0	75	0	2	4
Mill Street	Varney Rd		RSA2	Manhole	Town	0	75	0	2	4
Mill Street	Varney Rd		RSA2.1	Manhole	Town	1971	75	29	5	3
Mill Street	Varney Rd		RSA3	Manhole	Town	0	75	0	2	4
Mill Street	Varney Rd		RSA4	Manhole	Town	0	75	0	2	4
Mill Street	Wesley Lane		RSA5	Manhole	Wesley Lane	0	75	0	2	4
Mill Street	Wesley Lane		RSA6	Manhole	Wesley Lane	0	75	0	2	4
Mill Street	Wesley Lane		RSA6.1	Manhole	Wesley Lane	0	75	0	2	4
Mill Street	Wesley Lane		RSA7	Manhole	Wesley Lane	0	75	0	2	4

ID	Criticality	Replacement Year	Replacement Decade	Replacement Year 2	Replacement Decade 2	Replacement Cost	Repl_Freq
9C	Frequent Monitoring	2085	2077-2086	2160	2157-2166	$10,000	1
FM2	Highest Risk	2046	2037-2046	2121	2117-2126	$10,000	1
FP-1	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-1 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-10 C*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-11 C*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-12 C*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-13 A*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-14 C*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-15 C*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-2 AI*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-3 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-4 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-5 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-6 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-7 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-8 CL*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
P-9 AU*	Limited Monitoring	2064	2057-2066	2139	2137-2146	$10,000	1
RSA1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA2	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA2.1	Highest Risk	2046	2037-2046	2121	2117-2126	$10,000	1
RSA3	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA4	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA5	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA6	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA6.1	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1
RSA7	Priority Renewal	Unknown	Unknown	Unknown	Unknown	$10,000	1

SANITARY SEWER STRUCTURES BY OWNER AND TYPE

Count of Structure Type	Column Labels					
Row Labels	Air Release Valve	FM Clean-out	FM Flushing Port	Force main clean-out or ARV	Manhole	Grand Total
Brewster Academy					12	12
Clipper Home - Nursing Home					2	2
Fawn Haven					2	2
Gov Wentworth Regional School District					10	10
Taylor Home					12	12
Town	2	13	1	1	325	342
Wesley Lane					4	4
Grand Total	**2**	**13**	**1**	**1**	**367**	**384**

SANITARY SEWER STRUCTURES BY YEAR INSTALLED AND TYPE

Owner	Town

Count of Structure Type	Column Labels					
Row Labels	Air Release Valve	FM Clean-out	FM Flushing Port	Force main clean-out or ARV	Manhole	Grand Total
Unknown					42	42
1930					2	2
1938					9	9
1940					2	2
1956					14	14
1971				1	1	2
1977					141	141
1980					1	1
1982					1	1
1985					12	12
1988					20	20
1989	2	13	1		13	29
1991					5	5
1992					4	4
1993					13	13
1997					5	5
1998					11	11
2003					9	9
2005					12	12
2010					7	7
2011					1	1
Grand Total	**2**	**13**	**1**	**1**	**325**	**342**

SANITARY SEWER STRUCTURES BY TYPE AND CRITICALITY

Owner	Town

Count of Structure Type	Column Labels				
Row Labels	Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Grand Total
Air Release Valve				2	2
FM Clean-out				13	13
FM Flushing Port				1	1
Force main clean-out or ARV	1				1
Manhole	24	46	101	154	325
Grand Total	**25**	**46**	**101**	**170**	**342**

Owner Town

SANITARY SEWER STRUCTURES BY ESTIMATED YEAR OF REPLACEMENT

Count of Structure Type	Column Labels					
Row Labels	Air Release Valve	FM Clean-out	FM Flushing Port	Force main clean-out or ARV	Manhole	Grand Total
2017					13	13
2031					14	14
2046				1	1	2
2052					141	141
2055					1	1
2057					1	1
2060					12	12
2063					20	20
2064	2	13	1		13	29
2066					5	5
2067					4	4
2068					13	13
2072					5	5
2073					11	11
2078					9	9
2080					12	12
2085					7	7
2086					1	1
Unknown					42	42
Grand Total	**2**	**13**	**1**	**1**	**325**	**342**

*Structures due for replacement before 2041 will have to be replaced again within the 100-year time period. See table below.

STRUCTURES THAT WILL BE REPLACED TWICE IN 100 YEARS

Owner Town

Count of Structure Type	Column Labels		
Row Labels	2092	2106	Grand Total
2017			
Manhole	13		13
2017 Total	**13**		**13**
2031			
Manhole		14	14
2031 Total		**14**	**14**
Grand Total	**13**	**14**	**27**

369	No. of total replacements
$10,000	Unit cost per structure
$3,690,000	Total replacement cost

CCTV Inspection File/Folder Name - Matched to Map				
2 - 80A	55A - 55.pdf	86 - 85	104A - 104.pdf	162 - 149.pdf
2.1 - 2B.pdf	56 - 57.pdf	86A - 86	104B - 104A.pdf	169 - 170.pdf
2A - 2B	58 - 59	86B - 86A	122 - 115.pdf	170 - 171.pdf
2B - 2	59 - 141.pdf	86C - 86B	129 - 138D.pdf	171 - 172.pdf
3 - 2.1.pdf	60 - 59.pdf	91 - 92.pdf	134 - 134A.pdf	172 - Sewall Road PS.pdf
3A - 3.pdf	62A - 62.pdf	91C - 91.pdf	134A - 129.pdf	173 - 172.pdf
3B - 3A.pdf	66 - 66A.pdf	92 - 93.pdf	138 - 138C.pdf	174 - 173
5 - 3B.pdf	66A - 66B.pdf	93 - 102B.pdf	138A - 138C.pdf	175 - 174.pdf
10 - 9C	66B - 66G.pdf	94 - 93	138D - 138.pdf	176 - 175.pdf
11 - 10.pdf	66D - 66G.pdf	94A - 94	142 - 143.pdf	177 - 176.pdf
12 - 11.pdf	66E - 66G.pdf	95 - 94A.pdf	142 Center St - 100B.pdf	178 - 177.pdf
13 - 12.pdf	66G - 66C.pdf	95A - 95.pdf	143 - 143A.pdf	179 - 178.pdf
13A - 13.pdf	69 - 67A.pdf	95B - 95A.pdf	143A - 143B.pdf	180 - 179.pdf
14 - 13A.pdf	70 - 69.pdf	95D - 95C.pdf	143B - 138A.pdf	181 - 180.pdf
16A - 16B.pdf	71 - 70.pdf	95E - 95D.pdf	144 - 143.pdf	182 - 181.pdf
16C - 16A.pdf	72 - 71.pdf	95F - 95E	145 - 146.1.pdf	183 - 182.pdf
17 - 16B.pdf	72A - 72.pdf	96 - 96A	145.1 - 144.pdf	184 - 183.pdf
17A - 17.pdf	72A.1 - 72A.pdf	96A - 94	146 - 145.pdf	Dead End - 97A.pdf
24 - 23.pdf	73 - 73A.pdf	97 - 96	147 - 144.pdf	Edgewood Terr - 19.pdf
32A - 32.pdf	73A - 73B.pdf	97A - 97.pdf	147A - 147.pdf	ESE - 232.pdf
33 - 33A.pdf	73B - 73B1.pdf	100 - 97A.pdf	148 - 147A.pdf	Estabrook Hall - 50B.pdf
33A - 32.pdf	73B1 - 69.pdf	100 - 100B.pdf	149 - 148.pdf	Friend St - 153.pdf
34 - 32.pdf	73C - 73.pdf	100A - 100.pdf	150 - 149.pdf	High St - 100B.pdf
35 - 34.pdf	80 - 80B	101 - 100A.pdf	151 - 150.pdf	
36 - 35.pdf	80A - 67A.pdf	101A - 101.pdf	152 - 151.pdf	
50A - 51.pdf	80B - 80A	101B - 101A.pdf	153 - 152.pdf	
50B - 50.pdf	80C - 80A	102A - 102B.pdf	154 - 153	
50C - 50.pdf	81 - 80	102A - 103.pdf	155 - 154.pdf	
51 - 52.pdf	81A - 81	102B - 102.pdf	156 - 155.pdf	
52 - 52A.pdf	82 - 81A	103 - 102A.pdf	157 - 156.pdf	
52A - 53.pdf	83 - 82	103A - 103.pdf	158 - 157.pdf	
53 - Gravity Main.pdf	84 - 83	103B - 103A.pdf	159 - 158.pdf	
55 - 56.pdf	85 - 80C	104 - 103B	160 - 159.pdf	

CCTV Inspection File/Folder Name - Not Matched to Map			
60A - 60.pdf	101 - 100.pdf	Dead End - 63.pdf	TH - TP.pdf

Sewer Structure Inspections Completed - File/Folder Name							
MH 2A	MH 16A.1.pdf	MH 50.pdf	MH 74B.pdf	MH 95I.pdf	MH 122.pdf	MH 161A.pdf	MH 214B.pdf
MH 2B	MH 16A.pdf	MH 50A.pdf	MH 75.pdf	MH 95J.pdf	MH 123.pdf	MH 162.pdf	MH 215.pdf
MH 63	MH 16B.pdf	MH 50B.pdf	MH 75A.pdf	MH 95K.pdf	MH 124.pdf	MH 163.pdf	MH 216.pdf
MH 93	MH 16C.pdf	MH 50C.pdf	MH 76.pdf	MH 95L.pdf	MH 125.pdf	MH 164.pdf	MH 217.pdf
MH 102	MH 17.pdf	MH 51.pdf	MH 76A.1.pdf	MH 95M.pdf	MH 126.pdf	MH 165.pdf	MH 218.pdf
MH 102A	MH 17A.pdf	MH 52.pdf	MH 76A.pdf	MH 95N.pdf	MH 126A.pdf	MH 166.pdf	MH 219.pdf
MH 102B	MH 18A.pdf	MH 53.pdf	MH 76B.pdf	MH 95O.pdf	MH 127.pdf	MH 169.pdf	MH 220.pdf
MH 104	MH 19.pdf	MH 55.pdf	MH 76B2.pdf	MH 95P.pdf	MH 127B.pdf	MH 174.pdf	MH 221.pdf
MH 104A	MH 20.pdf	MH 56.pdf	MH 76C.pdf	MH 95Q.pdf	MH 128.pdf	MH 176.pdf	MH 222.pdf
MH 104B	MH 21.pdf	MH 56A.pdf	MH 77.pdf	MH 96.pdf	MH 128A.pdf	MH 178.pdf	MH 223.pdf
MH 141	MH 22.pdf	MH 57.pdf	MH 80 A.pdf	MH 97 A.pdf	MH 129.pdf	MH 180.pdf	MH 230.pdf
MH 142	MH 23.pdf	MH 58.pdf	MH 80 B.pdf	MH 97.pdf	MH 129A.pdf	MH 181.pdf	MH 231.pdf
MH 170	MH 24.1.pdf	MH 59.pdf	MH 80 C.pdf	MH 100 A.pdf	MH 134.pdf	MH 183.pdf	MH 232.pdf
MH 171	MH 24.2.pdf	MH 60.pdf	MH 80.pdf	MH 100 B.pdf	MH 134A.pdf	MH 184.pdf	MH 234.pdf
MH 172	MH 24.3.pdf	MH 61A.pdf	MH 81 A.pdf	MH 100.pdf	MH 138.pdf	MH 200.pdf	MH 235.pdf
MH 173	MH 24.pdf	MH 61B.pdf	MH 81.pdf	MH 101 A.pdf	MH 138A.pdf	MH 200A.pdf	MH 236.pdf
MH 175	MH 24A.1.pdf	MH 62.pdf	MH 82.pdf	MH 101 B.pdf	MH 138B.pdf	MH 200B.pdf	MH 237.pdf
MH 177	MH 24A.2.pdf	MH 62A.pdf	MH 83.pdf	MH 101.pdf	MH 138C.pdf	MH 200C.pdf	MH 238.pdf
MH 179	MH 24A.3.pdf	MH 62B.pdf	MH 84.pdf	MH 103 A.pdf	MH 138D.pdf	MH 200D.pdf	MH 239.pdf
MH 182	MH 24A.4.pdf	MH 62C.pdf	MH 85.pdf	MH 103 B.pdf	MH 138E.pdf	MH 200E.pdf	MH 240.pdf
MH 2.1.pdf	MH 24A.5.pdf	MH 63A.pdf	MH 86 A.pdf	MH 103.pdf	MH 143.pdf	MH 200F.pdf	MH 241.pdf
MH 2.pdf	MH 24A.pdf	MH 64.pdf	MH 86 B.pdf	MH 105.pdf	MH 143A.pdf	MH 200G.pdf	MH 242.pdf
MH 2C.pdf	MH 30.pdf	MH 66 A.pdf	MH 86 C.pdf	MH 106.pdf	MH 143B.pdf	MH 200H.pdf	MH 243.pdf
MH 3.pdf	MH 32.pdf	MH 66 B.pdf	MH 86.pdf	MH 107.pdf	MH 144.pdf	MH 200I.pdf	MH RSA1.pdf
MH 3A.pdf	MH 32A.pdf	MH 66 C.pdf	MH 87.pdf	MH 108.pdf	MH 145.1.pdf	MH 200J.pdf	MH RSA2.1.pdf
MH 3B.pdf	MH 33.pdf	MH 66 D.pdf	MH 88.pdf	MH 109.pdf	MH 145.pdf	MH 200K.pdf	MH RSA2.pdf
MH 4.pdf	MH 33A.pdf	MH 66 E.pdf	MH 88A.pdf	MH 109A.pdf	MH 146.1.pdf	MH 201.1.pdf	MH RSA3.pdf
MH 4A.pdf	MH 34.pdf	MH 66 G.pdf	MH 89.pdf	MH 110.pdf	MH 146.2.pdf	MH 201.2.pdf	MH RSA4.pdf
MH 4B.pdf	MH 35.pdf	MH 66.pdf	MH 90.pdf	MH 111.pdf	MH 146.pdf	MH 201.pdf	MH RSA5.pdf
MH 5.pdf	MH 36.pdf	MH 66F.pdf	MH 90A.pdf	MH 111A.pdf	MH 146A.pdf	MH 202.pdf	MH RSA6.1.pdf
MH 6.pdf	MH 37.pdf	MH 67.pdf	MH 91 A.pdf	MH 111B.pdf	MH 147.pdf	MH 203.1.pdf	MH RSA6.pdf
MH 7A.pdf	MH 38.pdf	MH 67A.pdf	MH 91.pdf	MH 112.pdf	MH 147A.pdf	MH 203.pdf	MH RSA7.pdf
MH 7B.pdf	MH 39.pdf	MH 69.pdf	MH 91B.pdf	MH 113.pdf	MH 148.pdf	MH 203A.pdf	
MH 7C.pdf	MH 40.pdf	MH 70.pdf	MH 91C.pdf	MH 114.pdf	MH 149.pdf	MH 204.pdf	
MH 8A.pdf	MH 40A.pdf	MH 71.pdf	MH 92.pdf	MH 115.pdf	MH 150.pdf	MH 205.pdf	
MH 8B.pdf	MH 40B.pdf	MH 72 A.pdf	MH 94 A.pdf	MH 117.pdf	MH 151.pdf	MH 205A.pdf	
MH 8C.pdf	MH 42.pdf	MH 72.pdf	MH 94.pdf	MH 118.pdf	MH 152.pdf	MH 206.pdf	
MH 9C.pdf	MH 43.pdf	MH 72A.1 (fka 63).pdf	MH 95 A.pdf	MH 119.1.pdf	MH 153.pdf	MH 207.pdf	
MH 10.pdf	MH 44.pdf	MH 73 A.pdf	MH 95 B.pdf	MH 119.pdf	MH 154.pdf	MH 208.pdf	
MH 11.pdf	MH 45.pdf	MH 73 C.pdf	MH 95 C.pdf	MH 120.pdf	MH 155.pdf	MH 209.pdf	
MH 12.pdf	MH 45A.pdf	MH 73.pdf	MH 95 D.pdf	MH 120A.pdf	MH 156.pdf	MH 210.pdf	
MH 13.pdf	MH 45B.pdf	MH 73B.pdf	MH 95 E.pdf	MH 120B.pdf	MH 157.pdf	MH 211.pdf	
MH 13A.pdf	MH 45C.pdf	MH 73B1.pdf	MH 95 F.pdf	MH 120C.pdf	MH 158.pdf	MH 212.pdf	
MH 14.pdf	MH 46.pdf	MH 74.pdf	MH 95.pdf	MH 120D.pdf	MH 159.pdf	MH 213.pdf	
MH 15.pdf	MH 47.pdf	MH 74A.1.pdf	MH 95G.pdf	MH 121.pdf	MH 160.pdf	MH 214.pdf	
MH 16.pdf	MH 47A.pdf	MH 74A.pdf	MH 95H.pdf	MH 121A.pdf	MH 161.pdf	MH 214A.pdf	

APPENDIX C

PUMPING STATION SPREADSHEETS

Year 1 =
2017

PUMP STATION REPLACEMENTS DATA TABLE

Critcal Asset Description	Critical Asset Sub-components	Year Installed	Replaced-Rehabilitated	Start Year	Useful Life	Replacement Cost
Mill Street Pump Station	Pump Building	1939	N/A	1939	75	$ 100,000
Mill Street Pump Station	Pump Building Roof	1992	N/A	1992	30	$ 25,000
Mill Street Pump Station	Pump Building Wet Well[1]	1939	N/A	1939	75	$ 100,000
Mill Street Pump Station	New Pump Building Wet Well Access[2]	2020	N/A	2020	75	$ 75,000
Mill Street Pump Station	Pump Building - Valves and Piping	1939	N/A	1939	50	$ 50,000
Mill Street Pump Station	Pump Building - Electrical	1992	N/A	1992	30	$ 100,000
Mill Street Pump Station	Pump Building - HVAC	1992	N/A	1992	30	$ 30,000
Mill Street Pump Station	Pump Building - Heating System	1992	N/A	1992	30	$ 20,000
Mill Street Pump Station	Pump #1 (40 hp)	2009	N/A	2009	20	$ 50,000
Mill Street Pump Station	Rebuild Pump #1	2014	N/A	2014	5	$ 10,000
Mill Street Pump Station	Pump #2 (40 hp)	2011	N/A	2011	20	$ 50,000
Mill Street Pump Station	Rebuild Pump #2	2016	N/A	2016	5	$ 10,000
Mill Street Pump Station	Pump Motor #1 (40 hp)	2015	N/A	2015	20	$ 25,000
Mill Street Pump Station	Rebuild Pump Motor #1	2025	N/A	2025	10	$ 10,000
Mill Street Pump Station	Pump Motor #2 (40 hp)	2016	N/A	2016	20	$ 25,000
Mill Street Pump Station	Rebuild Pump Motor #2	2026	N/A	2026	10	$ 10,000
Mill Street Pump Station	New Grinder	2020	N/A	2020	20	$ 50,000
Mill Street Pump Station	Rebuild Grinder	2030	N/A	2030	10	$ 20,000
Mill Street Pump Station	Motor Control Panel	1992	N/A	1992	30	$ 30,000
Mill Street Pump Station	Additional Wet Well Building	1972	N/A	1972	60	$ 50,000
Mill Street Pump Station	Additional Wet Well Building - Roof	1972	N/A	1972	30	$ 10,000
Mill Street Pump Station	Additional Wet Well	1972	N/A	1972	75	$ 100,000
Mill Street Pump Station	Additional Wet Well - Electrical	1972	N/A	1972	30	$ 30,000
Mill Street Pump Station	Additional Wet Well - HVAC	1972	N/A	1972	30	$ 30,000
Mill Street Pump Station	Additional Wet Well - Misc. Metals	1972	N/A	1972	50	$ 30,000
Mill Street Pump Station	Generator and Transfer Switch	1992	N/A	1992	50	$ 100,000
Mill Street Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Mill Street Pump Station	Flow Meter	1992	N/A	1992	15	$ 10,000
Lehner Street Pump Station	Pump Building	1938	N/A	1938	75	$ 100,000
Lehner Street Pump Station	Pump Building - Roof	2016	N/A	2016	30	$ 10,000
Lehner Street Pump Station	New Wet Well Access[2]	2020	N/A	2020	75	$ 50,000
Lehner Street Pump Station	Relocate Electrical Outside[2]	2020	N/A	2020	30	$ 75,000
Lehner Street Pump Station	Wet Well[3]	1938	N/A	1938	75	$ 100,000
Lehner Street Pump Station	Electrical	1938	N/A	1938	30	$ 50,000
Lehner Street Pump Station	HVAC	1938	N/A	1938	30	$ 20,000
Lehner Street Pump Station	Motor Control Panel	2010	N/A	2010	30	$ 30,000
Lehner Street Pump Station	Generator and Transfer Switch	2010	N/A	2010	30	$ 100,000
Lehner Street Pump Station	Pump #1 (7.5 hp)	2010	N/A	2010	20	$ 20,000
Lehner Street Pump Station	Pump #2 (7.5 hp)	2010	N/A	2010	20	$ 20,000
Lehner Street Pump Station	Pump Motor #1 (7.5 hp)	2010	N/A	2010	20	$ 10,000
Lehner Street Pump Station	Pump Motor #2 (7.5 hp)	2010	N/A	2010	20	$ 10,000
Lehner Street Pump Station	Valves and Piping	1938	N/A	1938	50	$ 25,000
Lehner Street Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Clark Road Pump Station	Pump Building - Fiberglass	1985	N/A	1985	50	$ 25,000
Clark Road Pump Station	Wet Well	1985	N/A	1985	75	$ 100,000
Clark Road Pump Station	Electrical	1985	N/A	1985	30	$ 50,000
Clark Road Pump Station	Motor Control Panel	1985	N/A	1985	30	$ 30,000
Clark Road Pump Station	Generator and Transfer Switch	1985	N/A	1985	35	$ 100,000
Clark Road Pump Station	Pump #1 (20 hp)	2009	N/A	2009	30	$ 20,000
Clark Road Pump Station	Pump #2 (20 hp)	2013	N/A	2013	30	$ 20,000
Clark Road Pump Station	Pump Motor #1 (20 hp)	2013	N/A	2013	30	$ 10,000
Clark Road Pump Station	Pump Motor #2 (20 hp)	2013	N/A	2013	30	$ 10,000
Clark Road Pump Station	Valves and Piping	1985	N/A	1985	50	$ 25,000
Clark Road Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Greenleaf Drive Pump Station	Wet Well	1985	N/A	1985	75	$ 100,000
Greenleaf Drive Pump Station	Wet Well - addition/upgrade	2008	N/A	2008	75	$ 25,000
Greenleaf Drive Pump Station	Holding Tank	1985	N/A	1985	75	$ 25,000
Greenleaf Drive Pump Station	Electrical	1985	N/A	1985	30	$ 25,000
Greenleaf Drive Pump Station	Motor Control Panel	1985	N/A	1985	30	$ 25,000
Greenleaf Drive Pump Station	Pump #1 (1 hp)	2015	N/A	2015	20	$ 5,000
Greenleaf Drive Pump Station	Pump #2 (1 hp)	2015	N/A	2015	20	$ 5,000
Greenleaf Drive Pump Station	Valves and Piping	1985	N/A	1985	50	$ 25,000
Greenleaf Drive Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000

Year 1 =
2017

PUMP STATION REPLACEMENTS DATA TABLE		EVALUATE INITIAL REPLACEMENT DATE				EVALUATE CRITICALITY			
Critcal Asset Description	Critical Asset Sub-components	Calculated First-Year Replacement	Overdue for Replacement	Reset to Year 1 if Overdue	Remaining Useful Life	Impact of Failure	Probability of Failure	Risk Score	Criticality
Mill Street Pump Station	Pump Building	2014	Yes	2017	-3	5	4	20	Highest Risk
Mill Street Pump Station	Pump Building Roof	2022			5	5	2	10	Frequent Monitoring
Mill Street Pump Station	Pump Building Wet Well[1]	2014	Yes	2017	-3	5	5	25	Highest Risk
Mill Street Pump Station	New Pump Building Wet Well Access[2]	2020			78	5	1	5	Frequent Monitoring
Mill Street Pump Station	Pump Building - Valves and Piping	1989	Yes	2017	-28	4	4	16	Highest Risk
Mill Street Pump Station	Pump Building - Electrical	2022			5	4	4	16	Highest Risk
Mill Street Pump Station	Pump Building - HVAC	2022			5	4	4	16	Highest Risk
Mill Street Pump Station	Pump Building - Heating System	2022			5	4	4	16	Highest Risk
Mill Street Pump Station	Pump #1 (40 hp)	2029			12	4	2	8	Frequent Monitoring
Mill Street Pump Station	Rebuild Pump #1	2019			2	4	2	8	Frequent Monitoring
Mill Street Pump Station	Pump #2 (40 hp)	2031			14	4	2	8	Frequent Monitoring
Mill Street Pump Station	Rebuild Pump #2	2021			4	4	2	8	Frequent Monitoring
Mill Street Pump Station	Pump Motor #1 (40 hp)	2035			18	4	2	8	Frequent Monitoring
Mill Street Pump Station	Rebuild Pump Motor #1	2025			18	4	2	8	Frequent Monitoring
Mill Street Pump Station	Pump Motor #2 (40 hp)	2036			19	4	2	8	Frequent Monitoring
Mill Street Pump Station	Rebuild Pump Motor #2	2026			19	4	2	8	Frequent Monitoring
Mill Street Pump Station	New Grinder	2020			23	2	1	2	Limited Monitoring
Mill Street Pump Station	Rebuild Grinder	2030			23	2	1	2	Limited Monitoring
Mill Street Pump Station	Motor Control Panel	2022			5	3	3	9	Highest Risk
Mill Street Pump Station	Additional Wet Well Building	2032			15	4	1	4	Frequent Monitoring
Mill Street Pump Station	Additional Wet Well Building - Roof	2002	Yes	2017	-15	4	3	12	Highest Risk
Mill Street Pump Station	Additional Wet Well	2047			30	5	2	10	Frequent Monitoring
Mill Street Pump Station	Additional Wet Well - Electrical	2002	Yes	2017	-15	4	1	4	Frequent Monitoring
Mill Street Pump Station	Additional Wet Well - HVAC	2002	Yes	2017	-15	4	3	12	Highest Risk
Mill Street Pump Station	Additional Wet Well - Misc. Metals	2022			5	2	3	6	Priority Renewal
Mill Street Pump Station	Generator and Transfer Switch	2042			25	4	3	12	Highest Risk
Mill Street Pump Station	Alarm/Detection System	2030			13	5	2	10	Frequent Monitoring
Mill Street Pump Station	Flow Meter	2007	Yes	2017	-10	4	5	20	Highest Risk
Lehner Street Pump Station	Pump Building	2013	Yes	2017	-4	4	4	16	Highest Risk
Lehner Street Pump Station	Pump Building - Roof	2046			29	4	2	8	Frequent Monitoring
Lehner Street Pump Station	New Wet Well Access[2]	2020			78	5	4	20	Highest Risk
Lehner Street Pump Station	Relocate Electrical Outside[2]	2020			33	3	4	12	Highest Risk
Lehner Street Pump Station	Wet Well[3]	2013	Yes	2017	-4	5	4	20	Highest Risk
Lehner Street Pump Station	Electrical	1968	Yes	2017	-49	3	4	12	Highest Risk
Lehner Street Pump Station	HVAC	1968	Yes	2017	-49	3	4	12	Highest Risk
Lehner Street Pump Station	Motor Control Panel	2040			23	3	2	6	Frequent Monitoring
Lehner Street Pump Station	Generator and Transfer Switch	2040			23	3	1	3	Frequent Monitoring
Lehner Street Pump Station	Pump #1 (7.5 hp)	2030			13	3	2	6	Frequent Monitoring
Lehner Street Pump Station	Pump #2 (7.5 hp)	2030			13	3	2	6	Frequent Monitoring
Lehner Street Pump Station	Pump Motor #1 (7.5 hp)	2030			13	3	2	6	Frequent Monitoring
Lehner Street Pump Station	Pump Motor #2 (7.5 hp)	2030			13	3	2	6	Frequent Monitoring
Lehner Street Pump Station	Valves and Piping	1988	Yes	2017	-29	2	3	6	Priority Renewal
Lehner Street Pump Station	Alarm/Detection System	2030			13	4	2	8	Frequent Monitoring
Clark Road Pump Station	Pump Building - Fiberglass	2035			18	3	2	6	Frequent Monitoring
Clark Road Pump Station	Wet Well	2060			43	4	1	4	Frequent Monitoring
Clark Road Pump Station	Electrical	2015	Yes	2017	-2	3	3	9	Highest Risk
Clark Road Pump Station	Motor Control Panel	2015	Yes	2017	-2	3	3	9	Highest Risk
Clark Road Pump Station	Generator and Transfer Switch	2020			3	3	3	9	Highest Risk
Clark Road Pump Station	Pump #1 (20 hp)	2039			22	2	1	2	Limited Monitoring
Clark Road Pump Station	Pump #2 (20 hp)	2043			26	2	1	2	Limited Monitoring
Clark Road Pump Station	Pump Motor #1 (20 hp)	2043			26	2	1	2	Limited Monitoring
Clark Road Pump Station	Pump Motor #2 (20 hp)	2043			26	2	1	2	Limited Monitoring
Clark Road Pump Station	Valves and Piping	2035			18	2	1	2	Limited Monitoring
Clark Road Pump Station	Alarm/Detection System	2030			13	4	2	8	Frequent Monitoring
Greenleaf Drive Pump Station	Wet Well	2060			43	3	1	3	Frequent Monitoring
Greenleaf Drive Pump Station	Wet Well - addition/upgrade	2083			66	2	1	2	Limited Monitoring
Greenleaf Drive Pump Station	Holding Tank	2060			43	3	1	3	Frequent Monitoring
Greenleaf Drive Pump Station	Electrical	2015	Yes	2017	-2	3	1	3	Frequent Monitoring
Greenleaf Drive Pump Station	Motor Control Panel	2015	Yes	2017	-2	3	1	3	Frequent Monitoring
Greenleaf Drive Pump Station	Pump #1 (1 hp)	2035			18	1	1	1	Limited Monitoring
Greenleaf Drive Pump Station	Pump #2 (1 hp)	2035			18	1	1	1	Limited Monitoring
Greenleaf Drive Pump Station	Valves and Piping	2035			18	1	1	1	Limited Monitoring
Greenleaf Drive Pump Station	Alarm/Detection System	2030			13	2	1	2	Limited Monitoring

Year 1 =
2017

PUMP STATION REPLACEMENTS DATA TABLE		COST OF CRITICAL ASSET REPLACEMENTS - FIRST TEN YEARS									
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Critcal Asset Description	Critical Asset Sub-components	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Mill Street Pump Station	Pump Building	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building Roof	$ -	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building Wet Well[1]	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	New Pump Building Wet Well Access[2]	$ -	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building - Valves and Piping	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building - Electrical	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building - HVAC	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump Building - Heating System	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Pump #1 (40 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Rebuild Pump #1	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -
Mill Street Pump Station	Pump #2 (40 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Rebuild Pump #2	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000
Mill Street Pump Station	Pump Motor #1 (40 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Rebuild Pump Motor #1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -
Mill Street Pump Station	Pump Motor #2 (40 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Rebuild Pump Motor #2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000
Mill Street Pump Station	New Grinder	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Rebuild Grinder	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well Building	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well Building - Roof	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well - Electrical	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well - HVAC	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Additional Wet Well - Misc. Metals	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
Mill Street Pump Station	Generator and Transfer Switch	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mill Street Pump Station	Flow Meter	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump Building	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump Building - Roof	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	New Wet Well Access[2]	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Relocate Electrical Outside[2]	$ -	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Wet Well[3]	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Electrical	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	HVAC	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Generator and Transfer Switch	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump #1 (7.5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump #2 (7.5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump Motor #1 (7.5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Pump Motor #2 (7.5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Valves and Piping	$ 25,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lehner Street Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Pump Building - Fiberglass	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Electrical	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Motor Control Panel	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Generator and Transfer Switch	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Pump #1 (20 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Pump #2 (20 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Pump Motor #1 (20 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Pump Motor #2 (20 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Road Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Wet Well - addition/upgrade	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Holding Tank	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Electrical	$ 25,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Motor Control Panel	$ 25,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Pump #1 (1 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Pump #2 (1 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greenleaf Drive Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Year 1 =	2017	2027	2037	2047	2057	2067	2077	2087	2097	2107	
2017	2026	2036	2046	2056	2066	2076	2086	2096	2106	2116	
	COST OF ASSET REPLACEMENTS - NEXT 100 YEARS										
PUMP STATION REPLACEMENTS DATA TABLE	**0 to 10**	**10 to 20**	**20 to 30**	**30 to 40**	**40 to 50**	**50 to 60**	**60 to 70**	**70 to 80**	**80 to 90**	**90 to 100**	**0 to 100**
Critcal Asset Description	**Critical Asset Sub-components**	**2017-2026**	**2027-2036**	**2037-2046**	**2047-2056**	**2057-2066**	**2067-2076**	**2077-2086**	**2087-2096**	**2097-2106**	**2107-2116**	**2017-2116**
Mill Street Pump Station	Pump Building	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 200,000**
Mill Street Pump Station	Pump Building Roof	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	**$ 100,000**
Mill Street Pump Station	Pump Building Wet Well[1]	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 200,000**
Mill Street Pump Station	New Pump Building Wet Well Access[2]	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 75,000**
Mill Street Pump Station	Pump Building - Valves and Piping	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ -	**$ 100,000**
Mill Street Pump Station	Pump Building - Electrical	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	**$ 400,000**
Mill Street Pump Station	Pump Building - HVAC	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Mill Street Pump Station	Pump Building - Heating System	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	**$ 80,000**
Mill Street Pump Station	Pump #1 (40 hp)	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	**$ 250,000**
Mill Street Pump Station	Rebuild Pump #1	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	**$ 150,000**
Mill Street Pump Station	Pump #2 (40 hp)	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	**$ 250,000**
Mill Street Pump Station	Rebuild Pump #2	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	$ 20,000	$ 10,000	**$ 150,000**
Mill Street Pump Station	Pump Motor #1 (40 hp)	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	**$ 125,000**
Mill Street Pump Station	Rebuild Pump Motor #1	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	**$ 50,000**
Mill Street Pump Station	Pump Motor #2 (40 hp)	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	$ -	$ 25,000	**$ 125,000**
Mill Street Pump Station	Rebuild Pump Motor #2	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	**$ 50,000**
Mill Street Pump Station	New Grinder	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	**$ 250,000**
Mill Street Pump Station	Rebuild Grinder	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Mill Street Pump Station	Motor Control Panel	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Mill Street Pump Station	Additional Wet Well Building	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	**$ 100,000**
Mill Street Pump Station	Additional Wet Well Building - Roof	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	**$ 40,000**
Mill Street Pump Station	Additional Wet Well	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Mill Street Pump Station	Additional Wet Well - Electrical	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Mill Street Pump Station	Additional Wet Well - HVAC	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Mill Street Pump Station	Additional Wet Well - Misc. Metals	$ 30,000	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	**$ 60,000**
Mill Street Pump Station	Generator and Transfer Switch	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 200,000**
Mill Street Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Mill Street Pump Station	Flow Meter	$ 10,000	$ 10,000	$ -	$ 10,000	$ 10,000	$ -	$ 10,000	$ 10,000	$ -	$ 10,000	**$ 70,000**
Lehner Street Pump Station	Pump Building	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 200,000**
Lehner Street Pump Station	Pump Building - Roof	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	**$ 30,000**
Lehner Street Pump Station	New Wet Well Access[2]	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 50,000**
Lehner Street Pump Station	Relocate Electrical Outside[2]	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ 75,000**
Lehner Street Pump Station	Wet Well[3]	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 200,000**
Lehner Street Pump Station	Electrical	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	**$ 200,000**
Lehner Street Pump Station	HVAC	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	**$ 80,000**
Lehner Street Pump Station	Motor Control Panel	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	**$ 90,000**
Lehner Street Pump Station	Generator and Transfer Switch	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	**$ 300,000**
Lehner Street Pump Station	Pump #1 (7.5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Lehner Street Pump Station	Pump #2 (7.5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Lehner Street Pump Station	Pump Motor #1 (7.5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Lehner Street Pump Station	Pump Motor #2 (7.5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Lehner Street Pump Station	Valves and Piping	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	**$ 50,000**
Lehner Street Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Clark Road Pump Station	Pump Building - Fiberglass	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	**$ 50,000**
Clark Road Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Clark Road Pump Station	Electrical	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	**$ 200,000**
Clark Road Pump Station	Motor Control Panel	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Clark Road Pump Station	Generator and Transfer Switch	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ 100,000	$ -	$ -	**$ 300,000**
Clark Road Pump Station	Pump #1 (20 hp)	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	**$ 60,000**
Clark Road Pump Station	Pump #2 (20 hp)	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	**$ 60,000**
Clark Road Pump Station	Pump Motor #1 (20 hp)	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	**$ 30,000**
Clark Road Pump Station	Pump Motor #2 (20 hp)	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	**$ 30,000**
Clark Road Pump Station	Valves and Piping	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	**$ 50,000**
Clark Road Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Greenleaf Drive Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Greenleaf Drive Pump Station	Wet Well - addition/upgrade	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	**$ 25,000**
Greenleaf Drive Pump Station	Holding Tank	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ -	**$ 25,000**
Greenleaf Drive Pump Station	Electrical	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	**$ 100,000**
Greenleaf Drive Pump Station	Motor Control Panel	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	**$ 100,000**
Greenleaf Drive Pump Station	Pump #1 (1 hp)	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	**$ 25,000**
Greenleaf Drive Pump Station	Pump #2 (1 hp)	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	$ -	$ 5,000	**$ 25,000**
Greenleaf Drive Pump Station	Valves and Piping	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	**$ 50,000**
Greenleaf Drive Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**

PUMP STATION REPLACEMENTS DATA TABLE

Critcal Asset Description	Critical Asset Sub-components	Year Installed	Replaced-Rehabilitated	Start Year	Useful Life	Replacement Cost
Fairview Pump Station	Steel Casing[4]	1988	N/A	1988	40	$ 50,000
Fairview Pump Station	Wet Well	1988	N/A	1988	75	$ 100,000
Fairview Pump Station	Electrical	1988	N/A	1988	30	$ 50,000
Fairview Pump Station	Motor Control Panel	1988	N/A	1988	30	$ 30,000
Fairview Pump Station	HVAC	1988	N/A	1988	30	$ 20,000
Fairview Pump Station	Pump #1 (5 hp)	2004	N/A	2004	20	$ 20,000
Fairview Pump Station	Pump #2 (5 hp)	2005	N/A	2005	20	$ 20,000
Fairview Pump Station	Pump Motor #1 (5 hp)	2004	N/A	2004	20	$ 10,000
Fairview Pump Station	Pump Motor #2 (5 hp)	2005	N/A	2005	20	$ 10,000
Fairview Pump Station	Valves and Piping	1988	N/A	1988	50	$ 25,000
Fairview Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Willow Street Pump Station	Guide Rails	2005	N/A	2005	50	$ 10,000
Willow Street Pump Station	Wet Well	2005	N/A	2005	75	$ 100,000
Willow Street Pump Station	Electrical	2005	N/A	2005	30	$ 40,000
Willow Street Pump Station	Motor Control Panel	2005	N/A	2005	30	$ 30,000
Willow Street Pump Station	Pump #1 (6 hp)	2005	N/A	2005	20	$ 15,000
Willow Street Pump Station	Pump #2 (6 hp)	2005	N/A	2005	20	$ 15,000
Willow Street Pump Station	Valves and Piping	2005	N/A	2005	50	$ 25,000
Willow Street Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Elm Street Pump Station	Pump Building - Fiberglass	1991	N/A	1991	30	$ 25,000
Elm Street Pump Station	Wet Well	1991	N/A	1991	75	$ 100,000
Elm Street Pump Station	Electrical	1991	N/A	1991	30	$ 50,000
Elm Street Pump Station	Motor Control Panel	1991	N/A	1991	30	$ 30,000
Elm Street Pump Station	Generator and Transfer Switch	1991	N/A	1991	30	$ 100,000
Elm Street Pump Station	Pump #1 (5 hp)	1991	2011	2011	20	$ 20,000
Elm Street Pump Station	Pump #2 (5 hp)	1991	2012	2012	20	$ 20,000
Elm Street Pump Station	Pump Motor #1 (5 hp)	1991	2013	2013	20	$ 10,000
Elm Street Pump Station	Pump Motor #2 (5 hp)	1991	2013	2013	20	$ 10,000
Elm Street Pump Station	Valves and Piping	1991	N/A	1991	50	$ 25,000
Elm Street Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Crescent Point Pump Station	Pump Building - Fiberglass	2005	N/A	2005	30	$ 25,000
Crescent Point Pump Station	Wet Well	2005	N/A	2005	75	$ 100,000
Crescent Point Pump Station	Electrical	2005	N/A	2005	30	$ 50,000
Crescent Point Pump Station	Motor Control Panel	2005	N/A	2005	30	$ 30,000
Crescent Point Pump Station	Generator and Transfer Switch [5]	2005	N/A	2005	30	$ 100,000
Crescent Point Pump Station	Pump #1 (5 hp)	2015	N/A	2015	20	$ 20,000
Crescent Point Pump Station	Pump #2 (5 hp)	2016	N/A	2016	20	$ 20,000
Crescent Point Pump Station	Pump Motor #1 (5 hp)	2010	N/A	2010	20	$ 10,000
Crescent Point Pump Station	Pump Motor #2 (5 hp)	2013	N/A	2013	20	$ 10,000
Crescent Point Pump Station	Valves and Piping	2005	N/A	2005	50	$ 25,000
Crescent Point Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Sewall Road Pump Station	Wet Well	1988	N/A	1988	75	$ 100,000
Sewall Road Pump Station	Valve Vault	2004	N/A	2004	75	$ 50,000
Sewall Road Pump Station	Valve Vault - HVAC	2004	N/A	2004	30	$ 5,000
Sewall Road Pump Station	Electrical	2004	N/A	2004	30	$ 50,000
Sewall Road Pump Station	Motor Control Panel	2004	N/A	2004	30	$ 30,000
Sewall Road Pump Station	Generator and Transfer Switch	2004	N/A	2004	30	$ 100,000
Sewall Road Pump Station	Pump #1 (10 hp)	2004	N/A	2004	20	$ 50,000
Sewall Road Pump Station	Pump #2 (10 hp)	2004	N/A	2004	20	$ 50,000
Sewall Road Pump Station	Valves and Piping	2004	N/A	2004	50	$ 25,000
Sewall Road Pump Station	Alarm/Detection System	2010	N/A	2010	20	$ 15,000
Sewall Road Pump Station	Odor Control Unit[6]	2004	N/A	2004	20	$ 10,000
Sewall Road Pump Station	Guide Rails	2004	N/A	2004	30	$ 10,000

Notes:
(1) Original wet well at Mill St. pump station appears to be in poor condition.
(2) One-time event in lieu of regular replacement.
(3) Wet well at Lehner St. appears to be in poor condition. Access is also an issue.
(4) I&I enters at point where steel casing meets concrete wet well.
(5) According to staff, generator and transfer switch is inoperable and in poor condition.
(6) Odor control unit inoperable.
(7) Orange high-lighted items are non-recurring or subordinate items. They have been manually calculated.

PUMP STATION REPLACEMENTS DATA TABLE		EVALUATE INITIAL REPLACEMENT DATE			EVALUATE CRITICALITY				
Critcal Asset Description	Critical Asset Sub-components	Calculated First-Year Replacement	Overdue for Replacement	Reset to Year 1 if Overdue	Remaining Useful Life	Impact of Failure	Probability of Failure	Risk Score	Criticality
Fairview Pump Station	Steel Casing[4]	2028			11	2	3	6	Priority Renewal
Fairview Pump Station	Wet Well	2063			46	2	3	6	Priority Renewal
Fairview Pump Station	Electrical	2018			1	2	3	6	Priority Renewal
Fairview Pump Station	Motor Control Panel	2018			1	2	3	6	Priority Renewal
Fairview Pump Station	HVAC	2018			1	2	3	6	Priority Renewal
Fairview Pump Station	Pump #1 (5 hp)	2024			7	1	2	2	Limited Monitoring
Fairview Pump Station	Pump #2 (5 hp)	2025			8	1	2	2	Limited Monitoring
Fairview Pump Station	Pump Motor #1 (5 hp)	2024			7	1	2	2	Limited Monitoring
Fairview Pump Station	Pump Motor #2 (5 hp)	2025			8	1	1	1	Limited Monitoring
Fairview Pump Station	Valves and Piping	2038			21	1	1	1	Limited Monitoring
Fairview Pump Station	Alarm/Detection System	2030			13	2	2	4	Limited Monitoring
Willow Street Pump Station	Guide Rails	2055			38	2	1	2	Limited Monitoring
Willow Street Pump Station	Wet Well	2080			63	2	1	2	Limited Monitoring
Willow Street Pump Station	Electrical	2035			18	2	2	4	Limited Monitoring
Willow Street Pump Station	Motor Control Panel	2035			18	2	2	4	Limited Monitoring
Willow Street Pump Station	Pump #1 (6 hp)	2025			8	1	2	2	Limited Monitoring
Willow Street Pump Station	Pump #2 (6 hp)	2025			8	1	2	2	Limited Monitoring
Willow Street Pump Station	Valves and Piping	2055			38	1	1	1	Limited Monitoring
Willow Street Pump Station	Alarm/Detection System	2030			13	2	2	4	Limited Monitoring
Elm Street Pump Station	Pump Building - Fiberglass	2021			4	3	3	9	Highest Risk
Elm Street Pump Station	Wet Well	2066			49	4	1	4	Frequent Monitoring
Elm Street Pump Station	Electrical	2021			4	3	3	9	Highest Risk
Elm Street Pump Station	Motor Control Panel	2021			4	2	3	6	Priority Renewal
Elm Street Pump Station	Generator and Transfer Switch	2021			4	3	1	3	Frequent Monitoring
Elm Street Pump Station	Pump #1 (5 hp)	2031			14	2	1	2	Limited Monitoring
Elm Street Pump Station	Pump #2 (5 hp)	2032			15	2	1	2	Limited Monitoring
Elm Street Pump Station	Pump Motor #1 (5 hp)	2033			16	2	1	2	Limited Monitoring
Elm Street Pump Station	Pump Motor #2 (5 hp)	2033			16	2	1	2	Limited Monitoring
Elm Street Pump Station	Valves and Piping	2041			24	2	1	2	Limited Monitoring
Elm Street Pump Station	Alarm/Detection System	2030			13	4	2	8	Frequent Monitoring
Crescent Point Pump Station	Pump Building - Fiberglass	2035			18	2	2	4	Limited Monitoring
Crescent Point Pump Station	Wet Well	2080			63	2	1	2	Limited Monitoring
Crescent Point Pump Station	Electrical	2035			18	2	2	4	Limited Monitoring
Crescent Point Pump Station	Motor Control Panel	2035			18	2	2	4	Limited Monitoring
Crescent Point Pump Station	Generator and Transfer Switch[5]	2017			18	2	5	10	Priority Renewal
Crescent Point Pump Station	Pump #1 (5 hp)	2035			18	2	2	4	Limited Monitoring
Crescent Point Pump Station	Pump #2 (5 hp)	2036			19	2	2	4	Limited Monitoring
Crescent Point Pump Station	Pump Motor #1 (5 hp)	2030			13	2	2	4	Limited Monitoring
Crescent Point Pump Station	Pump Motor #2 (5 hp)	2033			16	2	2	4	Limited Monitoring
Crescent Point Pump Station	Valves and Piping	2055			38	1	1	1	Limited Monitoring
Crescent Point Pump Station	Alarm/Detection System	2030			13	2	2	4	Limited Monitoring
Sewall Road Pump Station	Wet Well	2063			46	3	1	3	Frequent Monitoring
Sewall Road Pump Station	Valve Vault	2079			62	3	1	3	Frequent Monitoring
Sewall Road Pump Station	Valve Vault - HVAC	2034			17	3	2	6	Frequent Monitoring
Sewall Road Pump Station	Electrical	2034			17	3	2	6	Frequent Monitoring
Sewall Road Pump Station	Motor Control Panel	2034			17	3	2	6	Frequent Monitoring
Sewall Road Pump Station	Generator and Transfer Switch	2034			17	3	1	3	Frequent Monitoring
Sewall Road Pump Station	Pump #1 (10 hp)	2024			7	2	2	4	Limited Monitoring
Sewall Road Pump Station	Pump #2 (10 hp)	2024			7	2	2	4	Limited Monitoring
Sewall Road Pump Station	Valves and Piping	2054			37	2	1	2	Limited Monitoring
Sewall Road Pump Station	Alarm/Detection System	2030			13	2	2	4	Limited Monitoring
Sewall Road Pump Station	Odor Control Unit[6]	2024			7	2	5	10	Priority Renewal
Sewall Road Pump Station	Guide Rails	2034			17	3	2	6	Frequent Monitoring

Notes:
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(6) Odor control unit inoperable.
(7) Orange high-lighted items are non-recurring or subordinate items. They have been man

PUMP STATION REPLACEMENTS DATA TABLE		COST OF CRITICAL ASSET REPLACEMENTS - FIRST TEN YEARS									
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Critcal Asset Description	Critical Asset Sub-components	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Fairview Pump Station	Steel Casing[4]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	Electrical	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	Motor Control Panel	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	HVAC	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	Pump #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -
Fairview Pump Station	Pump #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -
Fairview Pump Station	Pump Motor #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -
Fairview Pump Station	Pump Motor #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -
Fairview Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fairview Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Guide Rails	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Pump #1 (6 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,000	$ -
Willow Street Pump Station	Pump #2 (6 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,000	$ -
Willow Street Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Willow Street Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Pump Building - Fiberglass	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Electrical	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Generator and Transfer Switch	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Pump #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Pump #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Pump Motor #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Pump Motor #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Elm Street Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Pump Building - Fiberglass	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Generator and Transfer Switch [5]	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Pump #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Pump #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Pump Motor #1 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Pump Motor #2 (5 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Crescent Point Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Valve Vault	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Valve Vault - HVAC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Motor Control Panel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Generator and Transfer Switch	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Pump #1 (10 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -
Sewall Road Pump Station	Pump #2 (10 hp)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -
Sewall Road Pump Station	Valves and Piping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Alarm/Detection System	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sewall Road Pump Station	Odor Control Unit[6]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -
Sewall Road Pump Station	Guide Rails	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Notes:		$ 855,000	$ 100,000	$ 10,000	$ 350,000	$ 215,000	$ 235,000	$ -	$ 150,000	$ 70,000	$ 20,000

(1) Original wet well at Mill St. pump station appears to be in poor condition.
(2) One-time event in lieu of regular replacement.
(3) Wet well at Lehner St. appears to be in poor condition. Access is also an issue.
(4) I&I enters at point where steel casing meets concrete wet well.
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(6) Odor control unit inoperable.
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		COST OF ASSET REPLACEMENTS - NEXT 100 YEARS										
PUMP STATION REPLACEMENTS DATA TABLE		**0 to 10**	**10 to 20**	**20 to 30**	**30 to 40**	**40 to 50**	**50 to 60**	**60 to 70**	**70 to 80**	**80 to 90**	**90 to 100**	**0 to 100**
Critcal Asset Description	**Critical Asset Sub-components**	**2017-2026**	**2027-2036**	**2037-2046**	**2047-2056**	**2057-2066**	**2067-2076**	**2077-2086**	**2087-2096**	**2097-2106**	**2107-2116**	**2017-2116**
Fairview Pump Station	Steel Casing[4]	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000	**$ 150,000**
Fairview Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Fairview Pump Station	Electrical	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	**$ 200,000**
Fairview Pump Station	Motor Control Panel	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Fairview Pump Station	HVAC	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	$ -	$ -	$ 20,000	**$ 80,000**
Fairview Pump Station	Pump #1 (5 hp)	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	**$ 100,000**
Fairview Pump Station	Pump #2 (5 hp)	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	**$ 100,000**
Fairview Pump Station	Pump Motor #1 (5 hp)	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	**$ 50,000**
Fairview Pump Station	Pump Motor #2 (5 hp)	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	**$ 50,000**
Fairview Pump Station	Valves and Piping	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	**$ 50,000**
Fairview Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Willow Street Pump Station	Guide Rails	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000	$ -	**$ 20,000**
Willow Street Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	**$ 100,000**
Willow Street Pump Station	Electrical	$ -	$ 40,000	$ -	$ -	$ 40,000	$ -	$ -	$ 40,000	$ -	$ -	**$ 120,000**
Willow Street Pump Station	Motor Control Panel	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	**$ 90,000**
Willow Street Pump Station	Pump #1 (6 hp)	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	**$ 75,000**
Willow Street Pump Station	Pump #2 (6 hp)	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	**$ 75,000**
Willow Street Pump Station	Valves and Piping	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	**$ 50,000**
Willow Street Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Elm Street Pump Station	Pump Building - Fiberglass	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	**$ 100,000**
Elm Street Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Elm Street Pump Station	Electrical	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	**$ 200,000**
Elm Street Pump Station	Motor Control Panel	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	**$ 120,000**
Elm Street Pump Station	Generator and Transfer Switch	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	**$ 400,000**
Elm Street Pump Station	Pump #1 (5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Elm Street Pump Station	Pump #2 (5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Elm Street Pump Station	Pump Motor #1 (5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Elm Street Pump Station	Pump Motor #2 (5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Elm Street Pump Station	Valves and Piping	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	$ -	**$ 50,000**
Elm Street Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Crescent Point Pump Station	Pump Building - Fiberglass	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	$ 25,000	$ -	$ -	**$ 75,000**
Crescent Point Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	**$ 100,000**
Crescent Point Pump Station	Electrical	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	**$ 150,000**
Crescent Point Pump Station	Motor Control Panel	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	**$ 90,000**
Crescent Point Pump Station	Generator and Transfer Switch[5]	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	**$ 400,000**
Crescent Point Pump Station	Pump #1 (5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Crescent Point Pump Station	Pump #2 (5 hp)	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	$ -	$ 20,000	**$ 100,000**
Crescent Point Pump Station	Pump Motor #1 (5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Crescent Point Pump Station	Pump Motor #2 (5 hp)	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	**$ 50,000**
Crescent Point Pump Station	Valves and Piping	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	**$ 50,000**
Crescent Point Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Sewall Road Pump Station	Wet Well	$ -	$ -	$ -	$ -	$ 100,000	$ -	$ -	$ -	$ -	$ -	**$ 100,000**
Sewall Road Pump Station	Valve Vault	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -	**$ 50,000**
Sewall Road Pump Station	Valve Vault - HVAC	$ -	$ 5,000	$ -	$ -	$ 5,000	$ -	$ -	$ 5,000	$ -	$ -	**$ 15,000**
Sewall Road Pump Station	Electrical	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	**$ 150,000**
Sewall Road Pump Station	Motor Control Panel	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	**$ 90,000**
Sewall Road Pump Station	Generator and Transfer Switch	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000	$ -	$ -	**$ 300,000**
Sewall Road Pump Station	Pump #1 (10 hp)	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	**$ 250,000**
Sewall Road Pump Station	Pump #2 (10 hp)	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ -	**$ 250,000**
Sewall Road Pump Station	Valves and Piping	$ -	$ -	$ -	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	$ -	**$ 50,000**
Sewall Road Pump Station	Alarm/Detection System	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	$ -	$ 15,000	**$ 75,000**
Sewall Road Pump Station	Odor Control Unit[6]	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	$ 10,000	$ -	**$ 50,000**
Sewall Road Pump Station	Guide Rails	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	$ 10,000	$ -	$ -	**$ 30,000**
Notes:		$ 2,005,000	$ 1,070,000	$ 660,000	$ 1,690,000	$ 1,215,000	$ 870,000	$ 1,550,000	$ 1,595,000	$ 595,000	$ 1,455,000	$ 12,705,000

(1) Original wet well at Mill St. pump station appears to be in poor condition.
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(6) Odor control unit inoperable.
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PUMP STATION TEN YEAR REPLACEMENT SUMMARY BY FACILITY

PUMP STATION	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Mill Street Pump Station	330,000	-	10,000	125,000	10,000	235,000	-	10,000	10,000	20,000	750,000
Lehner Street Pump Station	295,000	-	-	125,000	-	-	-	-	-	-	420,000
Clark Road Pump Station	80,000	-	-	100,000	-	-	-	-	-	-	180,000
Greenleaf Drive Pump Station	50,000	-	-	-	-	-	-	-	-	-	50,000
Fairview Pump Station	-	100,000	-	-	-	-	-	30,000	30,000	-	160,000
Willow Street Pump Station	-	-	-	-	-	-	-	-	30,000	-	30,000
Elm Street Pump Station	-	-	-	-	205,000	-	-	-	-	-	205,000
Crescent Point Pump Station	100,000	-	-	-	-	-	-	-	-	-	100,000
Sewall Road Pump Station	-	-	-	-	-	-	-	110,000	-	-	110,000
Grand Total	**855,000**	**100,000**	**10,000**	**350,000**	**215,000**	**235,000**	**-**	**150,000**	**70,000**	**20,000**	**2,005,000**

PUMP STATION TEN YEAR REPLACEMENTS BY CRITICALITY

PUMP STATION	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Highest Risk	**650,000**	**-**	**-**	**225,000**	**75,000**	**180,000**	**-**	**-**	**-**	**-**	**1,130,000**
Mill Street Pump Station	300,000	-	-	-	-	180,000	-	-	-	-	480,000
Lehner Street Pump Statio	270,000	-	-	125,000	-	-	-	-	-	-	395,000
Clark Road Pump Station	80,000	-	-	100,000	-	-	-	-	-	-	180,000
Elm Street Pump Station	-	-	-	-	75,000	-	-	-	-	-	75,000
Priority Renewal	**125,000**	**100,000**	**-**	**-**	**30,000**	**30,000**	**-**	**10,000**	**-**	**-**	**295,000**
Mill Street Pump Station	-	-	-	-	-	30,000	-	-	-	-	30,000
Lehner Street Pump Statio	25,000	-	-	-	-	-	-	-	-	-	25,000
Fairview Pump Station	-	100,000	-	-	-	-	-	-	-	-	100,000
Elm Street Pump Station	-	-	-	-	30,000	-	-	-	-	-	30,000
Crescent Point Pump Stati	100,000	-	-	-	-	-	-	-	-	-	100,000
Sewall Road Pump Station	-	-	-	-	-	-	-	10,000	-	-	10,000
Frequent Monitoring	**80,000**	**-**	**10,000**	**75,000**	**110,000**	**25,000**	**-**	**10,000**	**10,000**	**20,000**	**340,000**
Mill Street Pump Station	30,000	-	10,000	75,000	10,000	25,000	-	10,000	10,000	20,000	190,000
Lehner Street Pump Statio	-	-	-	-	-	-	-	-	-	-	-
Clark Road Pump Station	-	-	-	-	-	-	-	-	-	-	-
Greenleaf Drive Pump Stat	50,000	-	-	-	-	-	-	-	-	-	50,000
Elm Street Pump Station	-	-	-	-	100,000	-	-	-	-	-	100,000
Sewall Road Pump Station	-	-	-	-	-	-	-	-	-	-	-
Limited Monitoring	**-**	**-**	**-**	**50,000**	**-**	**-**	**-**	**130,000**	**60,000**	**-**	**240,000**
Mill Street Pump Station	-	-	-	50,000	-	-	-	-	-	-	50,000
Clark Road Pump Station	-	-	-	-	-	-	-	-	-	-	-
Greenleaf Drive Pump Stat	-	-	-	-	-	-	-	-	-	-	-
Fairview Pump Station	-	-	-	-	-	-	-	30,000	30,000	-	60,000
Willow Street Pump Statio	-	-	-	-	-	-	-	-	30,000	-	30,000
Elm Street Pump Station	-	-	-	-	-	-	-	-	-	-	-
Crescent Point Pump Stati	-	-	-	-	-	-	-	-	-	-	-
Sewall Road Pump Station	-	-	-	-	-	-	-	100,000	-	-	100,000
Grand Total	**855,000**	**100,000**	**10,000**	**350,000**	**215,000**	**235,000**	**-**	**150,000**	**70,000**	**20,000**	**2,005,000**

PUMP STATION 100-YEAR REPLACEMENT SUMMARY

PUMP STATION	2017-2026	2027-2036	2037-2046	2047-2056	2057-2066	2067-2076	2077-2086	2087-2096	2097-2106	2107-2116	Total
Mill Street Pump Station	750,000	265,000	210,000	590,000	120,000	285,000	395,000	565,000	110,000	490,000	3,780,000
Lehner Street Pump Station	420,000	75,000	140,000	145,000	-	240,000	70,000	275,000	140,000	145,000	1,650,000
Clark Road Pump Station	180,000	65,000	60,000	195,000	100,000	75,000	130,000	115,000	60,000	95,000	1,075,000
Greenleaf Drive Pump Station	50,000	50,000	-	75,000	125,000	25,000	100,000	25,000	-	75,000	525,000
Fairview Pump Station	160,000	65,000	85,000	115,000	160,000	65,000	160,000	40,000	60,000	165,000	1,075,000
Willow Street Pump Station	30,000	85,000	30,000	50,000	100,000	15,000	130,000	85,000	65,000	15,000	605,000
Elm Street Pump Station	205,000	75,000	25,000	280,000	100,000	75,000	205,000	100,000	-	280,000	1,345,000
Crescent Point Pump Station	100,000	180,000	-	200,000	105,000	75,000	200,000	180,000	25,000	175,000	1,240,000
Sewall Road Pump Station	110,000	210,000	110,000	40,000	405,000	15,000	160,000	210,000	135,000	15,000	1,410,000
Grand Total	**2,005,000**	**1,070,000**	**660,000**	**1,690,000**	**1,215,000**	**870,000**	**1,550,000**	**1,595,000**	**595,000**	**1,455,000**	**12,705,000**

PUMP STATION 100-YEAR REPLACEMENTS BY CRITICALITY

PUMP STATION	2017-2026	2027-2036	2037-2046	2047-2056	2057-2066	2067-2076	2077-2086	2087-2096	2097-2106	2107-2116	Total
Highest Risk	1,130,000	10,000	100,000	555,000	10,000	50,000	455,000	610,000	-	455,000	3,375,000
Priority Renewal	295,000	50,000	10,000	230,000	110,000	105,000	240,000	-	10,000	280,000	1,330,000
Frequent Monitoring	340,000	560,000	200,000	595,000	680,000	430,000	340,000	535,000	200,000	495,000	4,375,000
Limited Monitoring	240,000	450,000	350,000	310,000	415,000	285,000	515,000	450,000	385,000	225,000	3,625,000
Grand Total	**2,005,000**	**1,070,000**	**660,000**	**1,690,000**	**1,215,000**	**870,000**	**1,550,000**	**1,595,000**	**595,000**	**1,455,000**	**12,705,000**

PUMP STATIONS BY AVERAGE RISK SCORE

Pump Station	Average Impact of Failure	Average Probability of Failure	Average Risk Score
Mill Street Pump Station	4.0	2.6	10.4
Lehner Street Pump Station	3.4	2.8	9.8
Clark Road Pump Station	2.7	1.7	5.0
Sewall Road Pump Station	2.6	1.9	4.8
Elm Street Pump Station	2.6	1.6	4.5
Crescent Point Pump Station	1.9	2.1	4.1
Fairview Pump Station	1.5	2.3	3.8
Willow Street Pump Station	1.6	1.6	2.6
Greenleaf Drive Pump Station	2.1	1.0	2.1
Grand Total	**2.8**	**2.1**	**6.3**

PUMPING STATION TEN YEAR REPLACEMENT DETAIL BY FACILITY

Pump Station	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Mill Street Pump Station											
Pump Building	100,000	-	-	-	-	-	-	-	-	-	100,000
Motor Control Panel	-	-	-	-	-	30,000	-	-	-	-	30,000
Generator and Transfer Switch	-	-	-	-	-	-	-	-	-	-	-
Flow Meter	10,000	-	-	-	-	-	-	-	-	-	10,000
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Pump Building Roof	-	-	-	-	-	25,000	-	-	-	-	25,000
Pump Building - Valves and Piping	50,000	-	-	-	-	-	-	-	-	-	50,000
Pump Building - Electrical	-	-	-	-	-	100,000	-	-	-	-	100,000
Pump Building - HVAC	-	-	-	-	-	30,000	-	-	-	-	30,000
Pump Building - Heating System	-	-	-	-	-	20,000	-	-	-	-	20,000
Pump #1 (40 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (40 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #1 (40 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #2 (40 hp)	-	-	-	-	-	-	-	-	-	-	-
Additional Wet Well Building	-	-	-	-	-	-	-	-	-	-	-
Additional Wet Well Building - Roof	10,000	-	-	-	-	-	-	-	-	-	10,000
Additional Wet Well	-	-	-	-	-	-	-	-	-	-	-
Additional Wet Well - Electrical	30,000	-	-	-	-	-	-	-	-	-	30,000
Additional Wet Well - HVAC	30,000	-	-	-	-	-	-	-	-	-	30,000
Pump Building Wet Well(1)	100,000	-	-	-	-	-	-	-	-	-	100,000
New Pump Building Wet Well Access(2)	-	-	-	75,000	-	-	-	-	-	-	75,000
Rebuild Pump #1	-	-	10,000	-	-	-	-	10,000	-	-	20,000
Rebuild Pump #2	-	-	-	-	10,000	-	-	-	-	10,000	20,000
Rebuild Pump Motor #1	-	-	-	-	-	-	-	-	10,000	-	10,000
Rebuild Pump Motor #2	-	-	-	-	-	-	-	-	-	10,000	10,000
New Grinder	-	-	-	50,000	-	-	-	-	-	-	50,000
Rebuild Grinder	-	-	-	-	-	-	-	-	-	-	-
Additional Wet Well - Misc. Metals	-	-	-	-	-	30,000	-	-	-	-	30,000
Mill Street Pump Station Total	**330,000**	**-**	**10,000**	**125,000**	**10,000**	**235,000**	**-**	**10,000**	**10,000**	**20,000**	**750,000**
Lehner Street Pump Station											
Pump Building	100,000	-	-	-	-	-	-	-	-	-	100,000
Motor Control Panel	-	-	-	-	-	-	-	-	-	-	-
Valves and Piping	25,000	-	-	-	-	-	-	-	-	-	25,000
Pump Building - Roof	-	-	-	-	-	-	-	-	-	-	-
Electrical	50,000	-	-	-	-	-	-	-	-	-	50,000
HVAC	20,000	-	-	-	-	-	-	-	-	-	20,000
Generator and Transfer Switch	-	-	-	-	-	-	-	-	-	-	-
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (7.5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (7.5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #1 (7.5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #2 (7.5 hp)	-	-	-	-	-	-	-	-	-	-	-
New Wet Well Access(2)	-	-	-	50,000	-	-	-	-	-	-	50,000
Relocate Electrical Outside(2)	-	-	-	75,000	-	-	-	-	-	-	75,000
Wet Well(3)	100,000	-	-	-	-	-	-	-	-	-	100,000
Lehner Street Pump Station Total	**295,000**	**-**	**-**	**125,000**	**-**	**-**	**-**	**-**	**-**	**-**	**420,000**

PUMPING STATION TEN YEAR REPLACEMENT DETAIL BY FACILITY

Pump Station	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Clark Road Pump Station											
Motor Control Panel	30,000	-	-	-	-	-	-	-	-	-	30,000
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	50,000	-	-	-	-	-	-	-	-	-	50,000
Generator and Transfer Switch	-	-	-	100,000	-	-	-	-	-	-	100,000
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Pump Building - Fiberglass	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (20 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (20 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #1 (20 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #2 (20 hp)	-	-	-	-	-	-	-	-	-	-	-
Clark Road Pump Station Total	**80,000**	**-**	**-**	**100,000**	**-**	**-**	**-**	**-**	**-**	**-**	**180,000**
Greenleaf Drive Pump Station											
Motor Control Panel	25,000	-	-	-	-	-	-	-	-	-	25,000
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	25,000	-	-	-	-	-	-	-	-	-	25,000
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Wet Well - addition/upgrade	-	-	-	-	-	-	-	-	-	-	-
Holding Tank	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (1 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (1 hp)	-	-	-	-	-	-	-	-	-	-	-
Greenleaf Drive Pump Station Total	**50,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**50,000**
Fairview Pump Station											
Motor Control Panel	-	30,000	-	-	-	-	-	-	-	-	30,000
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	-	50,000	-	-	-	-	-	-	-	-	50,000
HVAC	-	20,000	-	-	-	-	-	-	-	-	20,000
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (5 hp)	-	-	-	-	-	-	-	20,000	-	-	20,000
Pump #2 (5 hp)	-	-	-	-	-	-	-	-	20,000	-	20,000
Pump Motor #1 (5 hp)	-	-	-	-	-	-	-	10,000	-	-	10,000
Pump Motor #2 (5 hp)	-	-	-	-	-	-	-	-	10,000	-	10,000
Steel Casing(4)	-	-	-	-	-	-	-	-	-	-	-
Fairview Pump Station Total	**-**	**100,000**	**-**	**-**	**-**	**-**	**-**	**30,000**	**30,000**	**-**	**160,000**

PUMPING STATION TEN YEAR REPLACEMENT DETAIL BY FACILITY

Pump Station	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Willow Street Pump Station											
Motor Control Panel	-	-	-	-	-	-	-	-	-	-	-
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	-	-	-	-	-	-	-	-	-	-	-
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Guide Rails	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (6 hp)	-	-	-	-	-	-	-	-	15,000	-	15,000
Pump #2 (6 hp)	-	-	-	-	-	-	-	-	15,000	-	15,000
Willow Street Pump Station Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**30,000**	**-**	**30,000**
Elm Street Pump Station											
Motor Control Panel	-	-	-	-	30,000	-	-	-	-	-	30,000
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	-	-	-	-	50,000	-	-	-	-	-	50,000
Generator and Transfer Switch	-	-	-	-	100,000	-	-	-	-	-	100,000
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Pump Building - Fiberglass	-	-	-	-	25,000	-	-	-	-	-	25,000
Pump #1 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #1 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #2 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Elm Street Pump Station Total	**-**	**-**	**-**	**-**	**205,000**	**-**	**-**	**-**	**-**	**-**	**205,000**
Crescent Point Pump Station											
Motor Control Panel	-	-	-	-	-	-	-	-	-	-	-
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	-	-	-	-	-	-	-	-	-	-	-
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Pump Building - Fiberglass	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump #2 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #1 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Pump Motor #2 (5 hp)	-	-	-	-	-	-	-	-	-	-	-
Generator and Transfer Switch (5)	100,000	-	-	-	-	-	-	-	-	-	100,000
Crescent Point Pump Station Total	**100,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**100,000**
Sewall Road Pump Station											
Motor Control Panel	-	-	-	-	-	-	-	-	-	-	-
Valves and Piping	-	-	-	-	-	-	-	-	-	-	-
Electrical	-	-	-	-	-	-	-	-	-	-	-
Generator and Transfer Switch	-	-	-	-	-	-	-	-	-	-	-
Alarm/Detection System	-	-	-	-	-	-	-	-	-	-	-
Wet Well	-	-	-	-	-	-	-	-	-	-	-
Guide Rails	-	-	-	-	-	-	-	-	-	-	-
Valve Vault	-	-	-	-	-	-	-	-	-	-	-
Pump #1 (10 hp)	-	-	-	-	-	-	-	50,000	-	-	50,000
Pump #2 (10 hp)	-	-	-	-	-	-	-	50,000	-	-	50,000
Odor Control Unit(6)	-	-	-	-	-	-	-	10,000	-	-	10,000
Valve Vault - HVAC	-	-	-	-	-	-	-	-	-	-	-
Sewall Road Pump Station Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**110,000**	**-**	**-**	**110,000**
Grand Total	**855,000**	**100,000**	**10,000**	**350,000**	**215,000**	**235,000**	**-**	**150,000**	**70,000**	**20,000**	**2,005,000**

PUMP STATION 100-YEAR REPLACEMENT DETAIL

Pump Station	2017-2026	2027-2036	2037-2046	2047-2056	2057-2066	2067-2076	2077-2086	2087-2096	2097-2106	2107-2116	Total
Mill Street Pump Station											
Motor Control Panel	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Pump Building	100,000	-	-	-	-	-	-	100,000	-	-	200,000
Generator and Transfer Switch	-	-	100,000	-	-	-	-	100,000	-	-	200,000
Flow Meter	10,000	10,000	-	10,000	10,000	-	10,000	10,000	-	10,000	70,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Pump Building Roof	25,000	-	-	25,000	-	-	25,000	-	-	25,000	100,000
Pump Building - Valves and Piping	50,000	-	-	-	-	50,000	-	-	-	-	100,000
Pump Building - Electrical	100,000	-	-	100,000	-	-	100,000	-	-	100,000	400,000
Pump Building - HVAC	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Pump Building - Heating System	20,000	-	-	20,000	-	-	20,000	-	-	20,000	80,000
Pump #1 (40 hp)	-	50,000	-	50,000	-	50,000	-	50,000	-	50,000	250,000
Pump #2 (40 hp)	-	50,000	-	50,000	-	50,000	-	50,000	-	50,000	250,000
Pump Motor #1 (40 hp)	-	25,000	-	25,000	-	25,000	-	25,000	-	25,000	125,000
Pump Motor #2 (40 hp)	-	25,000	-	25,000	-	25,000	-	25,000	-	25,000	125,000
Additional Wet Well Building	-	50,000	-	-	-	-	-	50,000	-	-	100,000
Additional Wet Well Building - Roof	10,000	-	-	10,000	-	-	10,000	-	-	10,000	40,000
Additional Wet Well	-	-	-	100,000	-	-	-	-	-	-	100,000
Additional Wet Well - Electrical	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Additional Wet Well - HVAC	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Pump Building Wet Well(1)	100,000	-	-	-	-	-	-	100,000	-	-	200,000
New Pump Building Wet Well Access(2)	75,000	-	-	-	-	-	-	-	-	-	75,000
Rebuild Pump #1	20,000	10,000	20,000	10,000	20,000	10,000	20,000	10,000	20,000	10,000	150,000
Rebuild Pump #2	20,000	10,000	20,000	10,000	20,000	10,000	20,000	10,000	20,000	10,000	150,000
Rebuild Pump Motor #1	10,000	-	10,000	-	10,000	-	10,000	-	10,000	-	50,000
Rebuild Pump Motor #2	10,000	-	10,000	-	10,000	-	10,000	-	10,000	-	50,000
New Grinder	50,000	-	50,000	-	50,000	-	50,000	-	50,000	-	250,000
Rebuild Grinder	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Additional Wet Well - Misc. Metals	30,000	-	-	-	-	30,000	-	-	-	-	60,000
Mill Street Pump Station Total	**750,000**	**265,000**	**210,000**	**590,000**	**120,000**	**285,000**	**395,000**	**565,000**	**110,000**	**490,000**	**3,780,000**
Lehner Street Pump Station											
Motor Control Panel	-	-	30,000	-	-	30,000	-	-	30,000	-	90,000
Pump Building	100,000	-	-	-	-	-	-	100,000	-	-	200,000
Valves and Piping	25,000	-	-	-	-	25,000	-	-	-	-	50,000
Pump Building - Roof	-	-	10,000	-	-	10,000	-	-	10,000	-	30,000
Electrical	50,000	-	-	50,000	-	-	50,000	-	-	50,000	200,000
HVAC	20,000	-	-	20,000	-	-	20,000	-	-	20,000	80,000
Generator and Transfer Switch	-	-	100,000	-	-	100,000	-	-	100,000	-	300,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Pump #1 (7.5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump #2 (7.5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump Motor #1 (7.5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
Pump Motor #2 (7.5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
New Wet Well Access(2)	50,000	-	-	-	-	-	-	-	-	-	50,000
Relocate Electrical Outside(2)	75,000	-	-	-	-	-	-	-	-	-	75,000
Wet Well(3)	100,000	-	-	-	-	-	-	100,000	-	-	200,000
Lehner Street Pump Station Total	**420,000**	**75,000**	**140,000**	**145,000**	**-**	**240,000**	**70,000**	**275,000**	**140,000**	**145,000**	**1,650,000**

PUMP STATION 100-YEAR REPLACEMENT DETAIL

Pump Station	2017-2026	2027-2036	2037-2046	2047-2056	2057-2066	2067-2076	2077-2086	2087-2096	2097-2106	2107-2116	Total
Clark Road Pump Station											
Motor Control Panel	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Valves and Piping	-	25,000	-	-	-	-	25,000	-	-	-	50,000
Electrical	50,000	-	-	50,000	-	-	50,000	-	-	50,000	200,000
Generator and Transfer Switch	100,000	-	-	100,000	-	-	-	100,000	-	-	300,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	100,000	-	-	-	-	-	100,000
Pump Building - Fiberglass	-	25,000	-	-	-	-	25,000	-	-	-	50,000
Pump #1 (20 hp)	-	-	20,000	-	-	20,000	-	-	20,000	-	60,000
Pump #2 (20 hp)	-	-	20,000	-	-	20,000	-	-	20,000	-	60,000
Pump Motor #1 (20 hp)	-	-	10,000	-	-	10,000	-	-	10,000	-	30,000
Pump Motor #2 (20 hp)	-	-	10,000	-	-	10,000	-	-	10,000	-	30,000
Clark Road Pump Station Total	**180,000**	**65,000**	**60,000**	**195,000**	**100,000**	**75,000**	**130,000**	**115,000**	**60,000**	**95,000**	**1,075,000**
Greenleaf Drive Pump Station											
Motor Control Panel	25,000	-	-	25,000	-	-	25,000	-	-	25,000	100,000
Valves and Piping	-	25,000	-	-	-	-	25,000	-	-	-	50,000
Electrical	25,000	-	-	25,000	-	-	25,000	-	-	25,000	100,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	100,000	-	-	-	-	-	100,000
Wet Well - addition/upgrade	-	-	-	-	-	-	25,000	-	-	-	25,000
Holding Tank	-	-	-	-	25,000	-	-	-	-	-	25,000
Pump #1 (1 hp)	-	5,000	-	5,000	-	5,000	-	5,000	-	5,000	25,000
Pump #2 (1 hp)	-	5,000	-	5,000	-	5,000	-	5,000	-	5,000	25,000
Greenleaf Drive Pump Station Total	**50,000**	**50,000**	**-**	**75,000**	**125,000**	**25,000**	**100,000**	**25,000**	**-**	**75,000**	**525,000**
Fairview Pump Station											
Motor Control Panel	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Valves and Piping	-	-	25,000	-	-	-	-	25,000	-	-	50,000
Electrical	50,000	-	-	50,000	-	-	50,000	-	-	50,000	200,000
HVAC	20,000	-	-	20,000	-	-	20,000	-	-	20,000	80,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	100,000	-	-	-	-	-	100,000
Pump #1 (5 hp)	20,000	-	20,000	-	20,000	-	20,000	-	20,000	-	100,000
Pump #2 (5 hp)	20,000	-	20,000	-	20,000	-	20,000	-	20,000	-	100,000
Pump Motor #1 (5 hp)	10,000	-	10,000	-	10,000	-	10,000	-	10,000	-	50,000
Pump Motor #2 (5 hp)	10,000	-	10,000	-	10,000	-	10,000	-	10,000	-	50,000
Steel Casing(4)	-	50,000	-	-	-	50,000	-	-	-	50,000	150,000
Fairview Pump Station Total	**160,000**	**65,000**	**85,000**	**115,000**	**160,000**	**65,000**	**160,000**	**40,000**	**60,000**	**165,000**	**1,075,000**

PUMP STATION 100-YEAR REPLACEMENT DETAIL

Pump Station	2017-2026	2027-2036	2037-2046	2047-2056	2057-2066	2067-2076	2077-2086	2087-2096	2097-2106	2107-2116	Total
Willow Street Pump Station											
Motor Control Panel	-	30,000	-	-	30,000	-	-	30,000	-	-	90,000
Valves and Piping	-	-	-	25,000	-	-	-	-	25,000	-	50,000
Electrical	-	40,000	-	-	40,000	-	-	40,000	-	-	120,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	-	-	100,000	-	-	-	100,000
Guide Rails	-	-	-	10,000	-	-	-	-	10,000	-	20,000
Pump #1 (6 hp)	15,000	-	15,000	-	15,000	-	15,000	-	15,000	-	75,000
Pump #2 (6 hp)	15,000	-	15,000	-	15,000	-	15,000	-	15,000	-	75,000
Willow Street Pump Station Total	**30,000**	**85,000**	**30,000**	**50,000**	**100,000**	**15,000**	**130,000**	**85,000**	**65,000**	**15,000**	**605,000**
Elm Street Pump Station											
Motor Control Panel	30,000	-	-	30,000	-	-	30,000	-	-	30,000	120,000
Valves and Piping	-	-	25,000	-	-	-	-	25,000	-	-	50,000
Electrical	50,000	-	-	50,000	-	-	50,000	-	-	50,000	200,000
Generator and Transfer Switch	100,000	-	-	100,000	-	-	100,000	-	-	100,000	400,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	100,000	-	-	-	-	-	100,000
Pump Building - Fiberglass	25,000	-	-	25,000	-	-	25,000	-	-	25,000	100,000
Pump #1 (5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump #2 (5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump Motor #1 (5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
Pump Motor #2 (5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
Elm Street Pump Station Total	**205,000**	**75,000**	**25,000**	**280,000**	**100,000**	**75,000**	**205,000**	**100,000**	**-**	**280,000**	**1,345,000**
Crescent Point Pump Station											
Motor Control Panel	-	30,000	-	-	30,000	-	-	30,000	-	-	90,000
Valves and Piping	-	-	-	25,000	-	-	-	-	25,000	-	50,000
Electrical	-	50,000	-	-	50,000	-	-	50,000	-	-	150,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	-	-	100,000	-	-	-	100,000
Pump Building - Fiberglass	-	25,000	-	-	25,000	-	-	25,000	-	-	75,000
Pump #1 (5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump #2 (5 hp)	-	20,000	-	20,000	-	20,000	-	20,000	-	20,000	100,000
Pump Motor #1 (5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
Pump Motor #2 (5 hp)	-	10,000	-	10,000	-	10,000	-	10,000	-	10,000	50,000
Generator and Transfer Switch (5)	100,000	-	-	100,000	-	-	100,000	-	-	100,000	400,000
Crescent Point Pump Station Total	**100,000**	**180,000**	**-**	**200,000**	**105,000**	**75,000**	**200,000**	**180,000**	**25,000**	**175,000**	**1,240,000**
Sewall Road Pump Station											
Motor Control Panel	-	30,000	-	-	30,000	-	-	30,000	-	-	90,000
Valves and Piping	-	-	-	25,000	-	-	-	-	25,000	-	50,000
Electrical	-	50,000	-	-	50,000	-	-	50,000	-	-	150,000
Generator and Transfer Switch	-	100,000	-	-	100,000	-	-	100,000	-	-	300,000
Alarm/Detection System	-	15,000	-	15,000	-	15,000	-	15,000	-	15,000	75,000
Wet Well	-	-	-	-	100,000	-	-	-	-	-	100,000
Guide Rails	-	10,000	-	-	10,000	-	-	10,000	-	-	30,000
Valve Vault	-	-	-	-	-	-	50,000	-	-	-	50,000
Pump #1 (10 hp)	50,000	-	50,000	-	50,000	-	50,000	-	50,000	-	250,000
Pump #2 (10 hp)	50,000	-	50,000	-	50,000	-	50,000	-	50,000	-	250,000
Odor Control Unit(6)	10,000	-	10,000	-	10,000	-	10,000	-	10,000	-	50,000
Valve Vault - HVAC	-	5,000	-	-	5,000	-	-	5,000	-	-	15,000
Sewall Road Pump Station Total	**110,000**	**210,000**	**110,000**	**40,000**	**405,000**	**15,000**	**160,000**	**210,000**	**135,000**	**15,000**	**1,410,000**
Grand Total	**2,005,000**	**1,070,000**	**660,000**	**1,690,000**	**1,215,000**	**870,000**	**1,550,000**	**1,595,000**	**595,000**	**1,455,000**	**12,705,000**

APPENDIX D

FINANCIAL SCHEDULES AND GRAPHS

ASSET REPLACEMENTS FIRST TEN YEARS - RAW CALCULATION BASED ON ADJUSTED REMAINING USEFUL LIFE

	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	Year 6 2022	Year 7 2023	Year 8 2024	Year 9 2025	Year 10 2026	TOTAL
Pumping Stations	$855,000	$100,000	$10,000	$350,000	$215,000	$235,000	$0	$150,000	$70,000	$20,000	**$2,005,000**
Sewer Pipes	$0	$0	$0	$0	$0	$0	$0	$0	$298,563	$0	**$298,563**
Structures	$130,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$130,000**
Total	**$985,000**	**$100,000**	**$10,000**	**$350,000**	**$215,000**	**$235,000**	**$0**	**$150,000**	**$368,563**	**$20,000**	**$2,433,563**

Year	Pumping Stations	Sewer Pipes	Structures	Total
2017	$855,000	$0	$130,000	**$985,000**
2018	$100,000	$0	$0	**$100,000**
2019	$10,000	$0	$0	**$10,000**
2020	$350,000	$0	$0	**$350,000**
2021	$215,000	$0	$0	**$215,000**
2022	$235,000	$0	$0	**$235,000**
2023	$0	$0	$0	**$0**
2024	$150,000	$0	$0	**$150,000**
2025	$70,000	$298,563	$0	**$368,563**
2026	$20,000	$0	$0	**$20,000**
TOTAL	**$2,005,000**	**$298,563**	**$130,000**	**$2,433,563**

ASSET REPLACEMENTS OVER 100 YEARS - RAW CALCULATION BASED ON ADJUSTED REMAINING USEFUL LIFE

	0 to 10 2017-2026	10 to 20 2027-2036	20 to 30 2037-2046	30 to 40 2047-2056	40 to 50 2057-2066	50 to 60 2067-2076	60 to 70 2077-2086	70 to 80 2087-2096	80 to 90 2097-2106	90 to 100 2107-2116	Unknown	TOTAL
Pumping Stations	$2,005,000	$1,070,000	$660,000	$1,690,000	$1,215,000	$870,000	$1,550,000	$1,595,000	$595,000	$1,455,000	$0	**$12,705,000**
Sewer Pipes	$298,563	$388,807	$477,342	$1,703,703	$209,616	$6,860,052	$4,565,906	$7,498,570	$3,300,421	$601,820	$3,472,721	**$29,377,522**
Structures	$130,000	$140,000	$20,000	$1,420,000	$670,000	$330,000	$290,000	$130,000	$140,000	$0	$420,000	**$3,690,000**
Total	**$2,433,563**	**$1,598,807**	**$1,157,342**	**$4,813,703**	**$2,094,616**	**$8,060,052**	**$6,405,906**	**$9,223,570**	**$4,035,421**	**$2,056,820**	**$3,892,721**	**$45,772,522**
Average $/Year	**$243,356**	**$159,881**	**$115,734**	**$481,370**	**$209,462**	**$806,005**	**$640,591**	**$922,357**	**$403,542**	**$205,682**	**$389,272**	**$457,725**

*Structures due for replacement before 2041 will have to be replaced again within the 100-year time period.

Beyond 100 years	Total
94,235.08	$29,471,757

Decade	Pumping Stations	Sewer Pipes	Manholes	Total
2017-2026	$2,005,000	$298,563	$130,000	**$2,433,563**
2027-2036	$1,070,000	$388,807	$140,000	**$1,598,807**
2037-2046	$660,000	$477,342	$20,000	**$1,157,342**
2047-2056	$1,690,000	$1,703,703	$1,420,000	**$4,813,703**
2057-2066	$1,215,000	$209,616	$670,000	**$2,094,616**
2067-2076	$870,000	$6,860,052	$330,000	**$8,060,052**
2077-2086	$1,550,000	$4,565,906	$290,000	**$6,405,906**
2087-2096	$1,595,000	$7,498,570	$130,000	**$9,223,570**
2097-2106	$595,000	$3,300,421	$140,000	**$4,035,421**
2107-2116	$1,455,000	$601,820	$0	**$2,056,820**
Unknown	$0	$3,472,721	$420,000	**$3,892,721**
TOTAL	**$12,705,000**	**$29,377,522**	**$3,690,000**	**$45,772,522**

	0 to 50 2017-2066	50 to 100 2067-2116	Unknown	Total 2017-2116
Pumping Stations	$6,640,000	$6,065,000	$0	**$12,705,000**
Sewer Pipes	$3,078,031	$22,826,770	$3,472,721	**$29,377,522**
Structures	$2,380,000	$890,000	$420,000	**$3,690,000**
Total	**$12,098,031**	**$29,781,770**	**$3,892,721**	**$45,772,522**
Average $/Year	**$241,961**	**$595,635**	**$38,927**	**$457,725**

Figure 4.

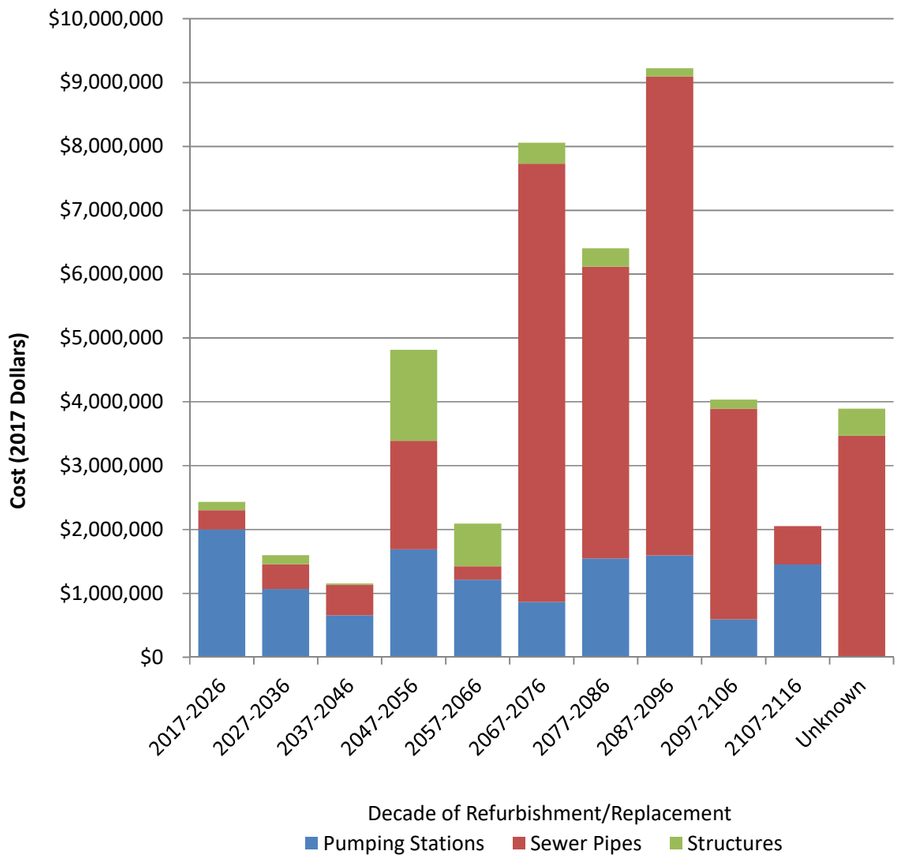
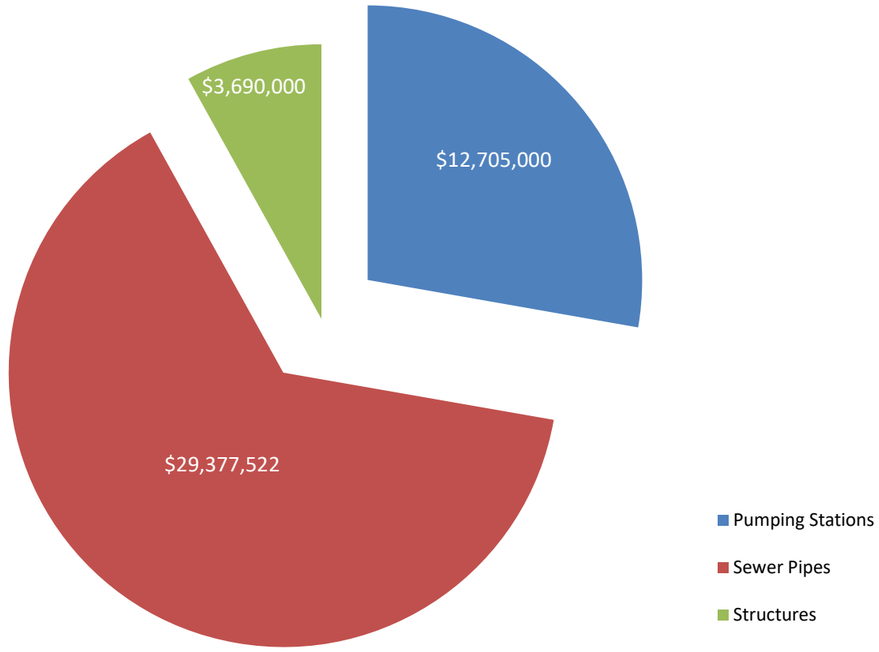


Figure 5.



Total Need over the next 100 years	$45,772,522
Annual amount to set aside for capital reserves - 100 years	$457,725
Number of service connections	980
Annual contribution per account	$467

Pump Stations

Decade of Scheduled Replacement		Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
0 to 10	2017-2026	**$1,130,000**	**$295,000**	**$340,000**	**$240,000**	**$2,005,000**
10 to 20	2027-2036	**$10,000**	**$50,000**	**$560,000**	**$450,000**	**$1,070,000**
20 to 30	2037-2046	**$100,000**	**$10,000**	**$200,000**	**$350,000**	**$660,000**
30 to 40	2047-2056	**$555,000**	**$230,000**	**$595,000**	**$310,000**	**$1,690,000**
40 to 50	2057-2066	**$10,000**	**$110,000**	**$680,000**	**$415,000**	**$1,215,000**
50 to 60	2067-2076	**$50,000**	**$105,000**	**$430,000**	**$285,000**	**$870,000**
60 to 70	2077-2086	**$455,000**	**$240,000**	**$340,000**	**$515,000**	**$1,550,000**
70 to 80	2087-2096	**$610,000**	**$0**	**$535,000**	**$450,000**	**$1,595,000**
80 to 90	2097-2106	**$0**	**$10,000**	**$200,000**	**$385,000**	**$595,000**
90 to 100	2107-2116	**$455,000**	**$280,000**	**$495,000**	**$225,000**	**$1,455,000**
	Unknown	**$0**	**$0**	**$0**	**$0**	**$0**
	TOTAL	**$3,375,000**	**$1,330,000**	**$4,375,000**	**$3,625,000**	**$12,705,000**

Sewer Pipes

Decade of Scheduled Replacement		Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
0 to 10	2017-2026	**$298,563**	**$0**	**$0**	**$0**	**$298,563**
10 to 20	2027-2036	**$353,865**	**$34,942**	**$0**	**$0**	**$388,807**
20 to 30	2037-2046	**$0**	**$477,342**	**$0**	**$0**	**$477,342**
30 to 40	2047-2056	**$0**	**$0**	**$1,205,901**	**$497,801**	**$1,703,703**
40 to 50	2057-2066	**$0**	**$0**	**$0**	**$209,616**	**$209,616**
50 to 60	2067-2076	**$0**	**$0**	**$3,607,644**	**$3,252,409**	**$6,860,052**
60 to 70	2077-2086	**$0**	**$0**	**$2,998,611**	**$1,567,296**	**$4,565,906**
70 to 80	2087-2096	**$0**	**$0**	**$1,973,375**	**$5,525,196**	**$7,498,570**
80 to 90	2097-2106	**$0**	**$0**	**$748,963**	**$2,551,458**	**$3,300,421**
90 to 100	2107-2116	**$0**	**$0**	**$573,308**	**$28,512**	**$601,820**
	Unknown	**$133,351**	**$3,318,853**	**$20,517**	**$0**	**$3,472,721**
	Grand Total	**$785,779**	**$3,831,137**	**$11,128,318**	**$13,632,287**	**$29,377,522**

Structures

		Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
0 to 10	2017-2026	**$90,000**	**$40,000**	**$0**	**$0**	**$130,000**
10 to 20	2027-2036	**$90,000**	**$50,000**	**$0**	**$0**	**$140,000**
20 to 30	2037-2046	**$20,000**	**$0**	**$0**	**$0**	**$20,000**
30 to 40	2047-2056	**$0**	**$0**	**$680,000**	**$740,000**	**$1,420,000**
40 to 50	2057-2066	**$0**	**$0**	**$190,000**	**$480,000**	**$670,000**
50 to 60	2067-2076	**$0**	**$0**	**$70,000**	**$260,000**	**$330,000**
60 to 70	2077-2086	**$0**	**$0**	**$70,000**	**$220,000**	**$290,000**
70 to 80	2087-2096	**$90,000**	**$40,000**	**$0**	**$0**	**$130,000**
80 to 90	2097-2106	**$90,000**	**$50,000**	**$0**	**$0**	**$140,000**
90 to 100	2107-2116	**$0**	**$0**	**$0**	**$0**	**$0**
	Unknown	**$50,000**	**$370,000**	**$0**	**$0**	**$420,000**
	Grand Total	**$430,000**	**$550,000**	**$1,010,000**	**$1,700,000**	**$3,690,000**

Total

Decade of Scheduled Replacement		Highest Risk	Priority Renewal	Frequent Monitoring	Limited Monitoring	Total
0 to 10	2017-2026	**$1,518,563**	**$335,000**	**$340,000**	**$240,000**	**$2,433,563**
10 to 20	2027-2036	**$453,865**	**$134,942**	**$560,000**	**$450,000**	**$1,598,807**
20 to 30	2037-2046	**$120,000**	**$487,342**	**$200,000**	**$350,000**	**$1,157,342**
30 to 40	2047-2056	**$555,000**	**$230,000**	**$2,480,901**	**$1,547,801**	**$4,813,703**
40 to 50	2057-2066	**$10,000**	**$110,000**	**$870,000**	**$1,104,616**	**$2,094,616**
50 to 60	2067-2076	**$50,000**	**$105,000**	**$4,107,644**	**$3,797,409**	**$8,060,052**
60 to 70	2077-2086	**$455,000**	**$240,000**	**$3,408,611**	**$2,302,296**	**$6,405,906**
70 to 80	2087-2096	**$700,000**	**$40,000**	**$2,508,375**	**$5,975,196**	**$9,223,570**
80 to 90	2097-2106	**$90,000**	**$60,000**	**$948,963**	**$2,936,458**	**$4,035,421**
90 to 100	2107-2116	**$455,000**	**$280,000**	**$1,068,308**	**$253,512**	**$2,056,820**
0	Unknown	**$183,351**	**$3,688,853**	**$20,517**	**$0**	**$3,892,721**
	Grand Total	**$4,590,779**	**$5,711,137**	**$16,513,318**	**$18,957,287**	**$45,772,522**

APPENDIX E

SEWER PIPE AND SEWER MANHOLE AMP RATING

Sewer Pipe and Sewer Manhole AMP Rating

The Town of Wolfeboro, NH is currently in the process of creating an Asset Management Plan (AMP) for its wastewater collection system. In order to generate a baseline assessment of the condition of the existing system, Wolfeboro is working to get 100% of the collection system TV inspected and 100% of sewer manholes inspected with logs for each of these assets generated documenting the condition of the asset. These logs will then be imported into the Town's GIS system so that staff and operators will have immediate access to key information as pertains to each asset.

With regard to Asset Management, the Town has requested that Underwood generate an overall rating for each asset that can be utilized by the Town to prioritize maintenance needs of the system. In sticking with standard AMP practices, Underwood proposes to utilize a scoring system of 1 to 5 to rate each asset, with the numbers representing the following conditions:

1 Asset is in excellent condition

2 Asset is in good condition

3 Asset has minor defects, should be addressed/reassessed within a 5-year window

4 Asset has significant defects, should be addressed within one (1) year

5 Asset has major defects, requires immediate attention

Given that multiple assessment units comprise the overall rating of a given asset, Underwood proposes that the asset condition rating be linked to the most severe observed defect utilizing the following scoring system when creating an overall rating for a given asset, and that a description of the most severe defect used to score the asset be included for quick reference. When remedial work has been performed, the quick reference should be changed to reflect the next most severe defect remaining for the asset.

<u>Wastewater Sewer Pipe</u>

The following shall constitute an overall rating of **5**:

- Blockage of flow
- Collapsed pipe
- Severe hinge fractures
- Severe sag in pipe (camera underwater)
- Broken pipe or holes with soil/voids visible
- Root ball in mainline
- Significant grease or debris accumulation (>30% blockage)
- Intrusions/services into line (>30% blockage)
- Infiltration gusher

The following shall constitute an overall rating of **4**:

- Multiple fractures
- Significant sag in pipe (>50%)
- Infiltration runner
- Moderate grease or debris in line (20-30% blockage)
- Moderate roots in line
- Root ball in lateral connection
- Alignment issues (>20 degree)
- Intrusions/services into line (20-30% blockage)
- Minor hole in pipe

The following shall constitute an overall rating of **3**:

- Sewer material type of vitrified clay
- Sewer size of less than 8" diameter
- Moderate sag in line (<50%)
- Multiple cracks
- Longitudinal or spiral fractures
- Offset or separated joints
- Infiltration weeper, dripper, or signs of previous leakage
- Break-in service connection
- Intrusions/services into line (<20%)
- Minor grease or debris in line (<20% blockage)
- Minor alignment issues (<20%)

The following shall constitute an overall rating of **2**:

- Ductile iron pipe in good condition
- AC pipe in good condition

The following shall constitute an overall rating of **1**:

- PVC pipe in good condition

Sewer Manhole Ratings

The following shall constitute an overall rating of **5**:

- Portion of manhole wall missing
- Portion of manhole table missing
- Precast manhole with reinforcing visible
- No bottom to manhole
- Cracked manhole cover
- Significant debris in manhole (>30%)
- Sinkhole at manhole

- Manhole surcharged
- Infiltration gusher

The following shall constitute an overall rating of **4**:

- Manhole under water
- Precast manhole with aggregate missing
- Infiltration runner or leaking pipe connection
- Moderate grease or debris (20-30%)

The following shall constitute an overall rating of **3**:

- Brick manhole
- Block manhole
- Precast manhole with aggregate visible/projecting
- Infiltration weeper, dripper, or signs of previous leakage
- Pipe entering above table with no drop structure
- Cracked or broken corbel
- Offset frame
- Rim greater than 1” below grade
- Manhole buried/paved over

The following shall constitute an overall rating of **2**:

- Lined manhole in good condition
- Rehabilitated manhole in good condition

The following shall constitute an overall rating of **1**:

- Precast concrete manhole in good condition

APPENDIX F

ASSET MANAGEMENT BROCHURE

LEVEL OF SERVICE

Level of Service (LOS) Statement

How do we want the system to perform in the long run?

Quality

- Regulatory compliance.
- Reduce/eliminate unauthorized discharges.
- Identify sources of Inflow and Infiltration and repair quickly.

Capacity

- Ensure that the system has enough capacity to meet planned growth.

Reliability

- Notify customers 48 hours prior to planned shutdowns.
- Repair unplanned shutdowns and leaks within 36 hrs where feasible.
    - 95% for commercial and institutional customers.
    - 85% for low density residential.

ASSET MANAGEMENT STRATEGIES

Keys to Successful AM

Keep it simple
Form a living document
Bring everyone on board

The following techniques are used to help keep Asset Management a successful on-going process.

- Continually updating the asset inventory and condition of assets over time.
- Update the Level of Service over time. Keep consistent with desired performance and customer expectations.
- Repair or replace assets that have a high probability of failure and high consequence of failure.
    - These will have the largest impacts on the system.

Brochure produced by:

UNDERWOOD engineers

October 2017

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Wolfeboro, NH

SANITARY SEWER COLLECTION SYSTEM ASSET MANAGEMENT

INFO YOU SHOULD KNOW

What is Asset Management?

Asset Management (AM) planning is a decision -making tool that helps managers determine how to operate and maintain their systems at the lowest cost while maintaining the desired level of service. It consists of the following:

Asset Inventory - What the system owns.
Level of Service - How the system performs.
Critical Assets - Identifying the most important risks and assets.
Life Cycle Costing - Costs of maintaining the system.
Long-Term Funding Strategy - How the system will pay the costs.

How does it help?

Safe and reliable collection and treatment of wastewater is critical to public health and quality of life in our communities. Significant investments have been made to build sanitary sewer infrastructure, but these systems are aging. Utilities will soon be faced with excessive costs to maintain service.

AM helps to better understand the condition of the sewer system, current and future deficiencies and needs, and the financial resources necessary to rehabilitate and replace assets when necessary.

THE WOLFEBORO WASTEWATER COLLECTION SYSTEM

Pumping Stations

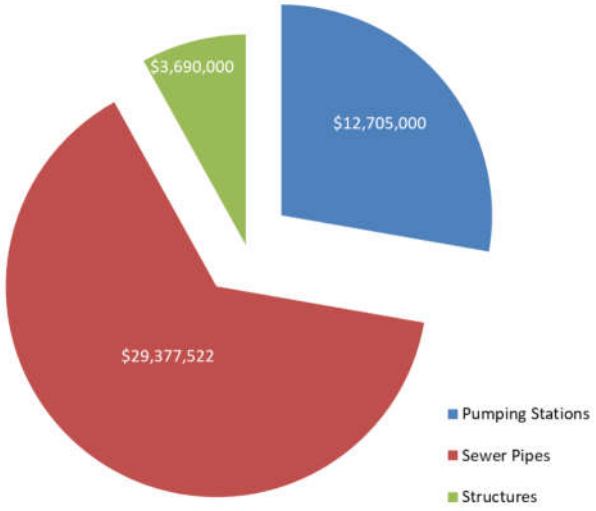
- Nine pumping stations, including two that were built in the 1930s.
- The Mill Street Pumping Station collects wastewater from the other eight pumping stations and transmits it to the wastewater treatment facility.

Collection System Pipe

- There is over84,000 feet of pipe within the collection system. That includes...
  - Almost 24,000 feet of force main and low pressure main.
  - About 59,000 feet of gravity collection main.
  - Four (4) siphons which convey wastewater across waterbodies within the service area.

Sanitary Sewer Structures

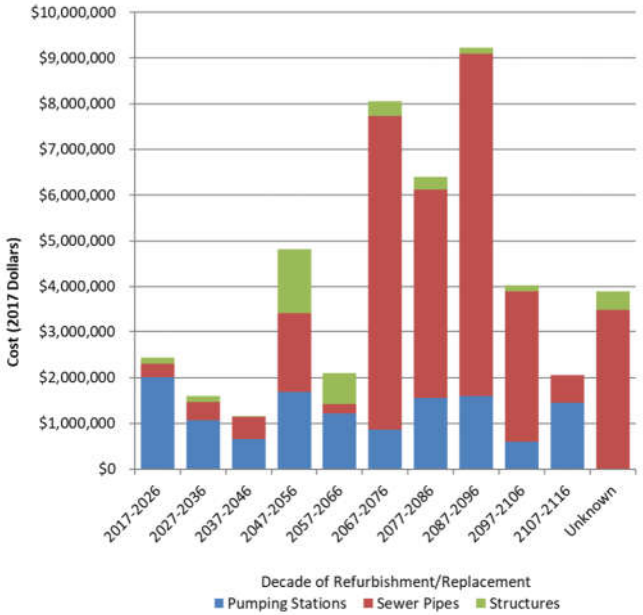
- The Town is responsible for maintaining 342 sanitary sewer structures, including...
  - 325 manholes
  - Fifteen force main clean-outs



LIFECYCLE COSTS

Cost Estimates

Underwood Engineers estimated costs over the next 100 years based on expected life span of assets. Costs included both major refurbishments and replacement of assets.



LONG TERM FUNDING PLAN

Project Funding

- Replacement projects will be prioritized based on asset history and level of consequence during the CIP process.
- AM projects could be combined with other capital improvement projects to reduce costs.
- Near term projects could be funded as the fall off of debt continues within the Sewer budget.
- Major projects could be delayed or bonded.