

Map, Plan, and Report

FOR THE

Town of Boston Water System Improvements to Water Districts No. 1 & 2



**Town of Boston
8500 Boston State Rd
Boston, NY 14025**

**August 2020
Updated October 2021**



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I. Project Planning and Introduction

A. Introduction and Location

The Town of Boston's water system includes 3 Town operated water districts that supply water from the Erie County Water Authority (ECWA) to the residents of the Town. In the last 25 years, nearly 160 water main breaks have occurred in Water District No. 1 that have led both the Town and the ECWA to realize the importance of replacing some of the aging infrastructure in the Town. The purpose of this project will be to make water system improvements to the existing infrastructure, including valves, water mains and the Boston State Road pump station in order to ensure the Town continues to provide safe and reliable potable water to the members of its community.

The Town is centrally located within Erie County. The project area has been identified by the Town of Boston as specific locations within Water Districts No. 1 and 2. Water District 1 is located along Boston State Road extending from the northern Town boundary to the southern Town boundary. Water District 2 generally runs west of Water District 1. A map identifying each water district and the existing water main infrastructure can be found in Figure 1. Multiple locations within Water Districts 1 and 2 have been identified as priorities for water main replacement based on the age of water main and the history of water main breaks in the area, which will be explored later in this report. In addition, the Boston State Road pump station is nearing the end of its current useful life. Interior piping and the pumps have begun to show signs of wear and tear, and the architectural elements of the building have begun to deteriorate.

B. Environmental Resources Present

The project area is mostly contained within the Town of Boston. A protected class B stream, Eighteen Mile Creek, traverses the Town, and an existing water main crossing the creek will be abandoned. Construction will take place in existing roadway rights-of-way or easements that may be executed as part of the construction. Proper construction mitigation and restoration efforts will be implemented based on standard practices common to the industry.

An environmental resource study has been performed for the surrounding project area. Environmental resource information was collected using historical mapping and online mapping programs such as the NYSDEC Environmental Resource Mapper and US Fish and Wildlife Wetland Mapper. Maps depicting the location of environmental resources can be found in Appendix A.

C. Population Trends

Based on the United States Census data, the Town of Boston's population in 2000 was 7,897 and in 2010 had grown to 8,023. The percent growth in these 10 years was approximately 1.6%. The estimated 2019 population is 8,126, a percentage growth of 1.3%. Based on this data, the Town can expect that the population should remain relatively steady, with some gradual growth.

II. Existing Facilities

A. Location Map

The Town of Boston is split into three water districts and several water district extensions providing water to mostly residential customers, as well as some small commercial areas. Each district is served, operated and maintained by the Erie County Water Authority (ECWA); Water District No. 1 runs down the middle of the Town splitting the east and the west, Water District No. 2 covers the west side and Water District No. 3 covers the east side. In addition, there are three water storage tanks and one booster pump station. All of these pieces of infrastructure and water districts can be found in Figure 1.

B. Condition of Existing Facilities

Based on the population data for the Town, the demand in the area has remained relatively steady. Many of the existing facilities are beginning to reach the end of their useful life and are showing signs of deterioration and unreliability. The increase in water main breaks is a direct sign of the current status of the water main in water Districts No. 1 and 2.

Pressures throughout the Town vary based on the multiple pressure zones in the system. Much of the areas downstream of the Town of Boston pump station are between 90-110 psi for their normal operating pressure. On the suction side of the pump station, pressures range from approximately 40-80 psi depending on elevations in the pressure zone. The Town also has a third pressure zone on the west side that has pressures also varying between 70-100 psi. The locations with the lowest pressure in the Town tend to be the multiple dead ends throughout the water system. The Town has more than 15 long dead ends longer than 1,000 feet that require frequent flushing; some of these dead ends have pressures that are as low as 30-35 psi under normal operation.

The Town has approximately 61 miles of water main, split between 4 different pipe materials. The majority of the mains are PVC and cast iron, with some small areas of Ductile Iron and Asbestos Concrete. Most of the oldest water mains in the town are cast iron. Due to its tendency to become more brittle with age, much of the breaks in the system have occurred in sections of cast iron water mains. In addition, given that the system does not have any automatic air relief valves, air pockets can cause additional damage after a break is fixed and currently, ECWA personnel have to manually open hydrants to allow air to escape the system.

Inside the existing Town of Boston pump station, some improvements have been made in the past in order to try to provide more flow to the residents downstream of the station. One of the existing two pumps had a larger impeller installed along with a new 75 HP motor to replace the existing 50 HP. Due to this, there are now two different sized pumps in the station, with the ability to deliver two different volumes of flow. This provides operational difficulties for the pump station with a lack of flexibility to utilize either pump to deliver high flows. This could cause run times to be drastically different on these pumps, creating

significantly different service lives for the pumps. Photos of the pump station can be found in Appendix B.

In addition, most of the interior piping and appurtenances (isolation valves, air release valves, pressure gauges) have begun showing signs of wear and tear. The existing roof and doors have also begun to deteriorate.

III. Need for Project

A. Health and Safety

The Town is currently under a lease management contract with the ECWA to operate and maintain the water infrastructure. Working concurrently, both are committed to provide safe and reliable potable water to the residents of the Town of Boston. In order to do this, it is important to keep up with maintenance in the water system. When water mains become aged and are more likely to leak or break, it is important to keep up on replacement of water mains to ensure a reliable source of potable water to their residents. In addition, as pump stations within the system become aged and less efficient, the equipment needs to be upgraded in order to ensure reliable system performance.

ECWA has monitored and recorded the water main breaks and leaks in the area that have affected the Town since the early 1990s. The list of water main breaks occurring in order of priority based on ECWA's assessment can be found in the following table. Based on the data collected on these streets, the average number of water main breaks in District No. 1 is approximately 6 per year, with some of these water main breaks resulting in significant failures. A letter of recommendation and breakdown of suggested work to be completed from the ECWA can be found in Appendix D.

Priority	Location	Number of Breaks/Leaks
1	Heinrich Road (Rte. 219 to Zimmerman Rd)	20
2	Zimmerman Road (Heinrich Rd to Boston State Rd)	5
3	Boston State Road (Boston Cross Rd to Boston Colden Rd)	12
4	South Abbott Road (Herman Hill Rd to Orchard Park Town Line)	17
5	Back Creek Road (Zimmerman Dr to Cloverfield Dr)	12
6	Boston State Road (Lu Don Dr to Patchin Rd)	5
7	Boston Colden Rd & Lango Rd	21
8	Back Creek Road (Hillcroft Rd to Rice Rd)	8
9	Herman Hill Road (Boston State Rd to South Abbott Rd)	18
10	Boston State Road (Meadow Dr to Ripple Dr)	6
11	Valley Circle Lane	12
12	Old Orchard Drive (Back Creek Rd to Johns Terrace)	12

In recent years, due to the break history of the system, the Town has experienced the inability to provide its residents with reliable water, both for consumption and fire protection. At times, residents have reported cloudy water and air in their plumbing due to broken joints and debris entering the system. Eleven out of the twelve areas identified above are cast iron water main, which has a tendency to be brittle and more subject to breaking.

In addition to the unreliability of the drinking water, the Town has also experienced issues with the ability to provide fire flows because of the tendency of the water mains to break. In 2019, firefighters struggled to extinguish a house fire in North Boston. Two water mains had broken at the time, likely due to the pressure fluctuations in the system at the time of the fire. The fire chief cited that the water main breaks hampered the ability of the firefighters to put the fire out and did contribute to their inability to save the house. In an agricultural community like the Town of Boston, fire flows and reliability of the water system are crucial to the healthy and safety of the residents and local businesses.

B. System O & M

As pump stations and other short-term assets within the system become aged and less efficient, the Town should look to improve their equipment in order to reduce long term operational costs and increase reliability in the system. This includes the upgrades at the existing Town pump station on Boston State Road. As the system ages, electrical and controls components in the pump station also become outdated and less reliable and are in more need of maintenance or replacement.

IV. Alternatives Considered

A. Description

1. Alternative 1 – Null Alternative

This alternative proposes to “do nothing”. The residents in the Town’s Water District No. 1 area would continue to receive water from the ECWA. The existing infrastructure would continue to deteriorate, and the water supply would not be reliable or efficient to the residents.

2. Alternative 2 – Water Main Replacement

This option includes the replacement of approximately 28,000 linear feet of cast iron and PVC water main between the sizes of 6-inch, 8-inch and 12-inch in various locations throughout water District No. 1 with PVC and ductile iron pipe. Approximately 4100 LF of 8-inch ductile iron pipe on Back Creek Road in Water District 2 would be replaced with 8-inch PVC pipe. These locations have been identified by both the Town and ECWA as priorities to be replace based on their break history and the age of the existing water mains. The system will continue to operate identically to its existing process but would greatly improve the reliability and ease of operation of the system. In addition, 6 automatic air relief valves would be added in Water District 1 and 4 automatic air relief valves would be added in Water District 2.

At a section of water main that crosses Eighteen-mile Creek, the existing water main has been identified as being in poor condition. The Town of Boston currently has 4 additional creek crossing locations to feed the west side of the Town. Due to the age and condition of the of the pipe at Back Creek Road, the existing crossing will be abandoned, rather than replaced.

A map outlining the locations of these water mains to be replaced can be found in Figure 2.

3. Alternative 3 – Pump Station Improvements

The ECWA has recommended multiple improvements to the existing Town of Boston pump station that boosts pressure south into the Town. Currently, the existing building houses two pumps, a 50 HP and 75 HP pump, with different sized impellers to deliver the necessary flows to the system. This alternative would include the replacement of both pumps with two new identical pumps in order to be able to use either as a duty pump or backup pump and ensure equal run times and service lives for the equipment. The scope of the recommended work beyond the replacement of the pumps can be found below:

- Replace existing motor control centers and soft starts
- Replace pump suction and discharge branch piping
- Replace existing isolation gate valves with butterfly valves
- Replace suction and discharge pressure gauges
- Replace pump air release valves
- Replace existing shingle roof with metal roof
- Replace double man door
- Replace pump discharge control valves
- Blast and recoat basement piping
- Install culvert adjacent to the road

B. Design Criteria

The proposed water improvement project for the Town will be designed in accordance with New York State Department of Health standards and Ten State Standards to provide safe and potable water and fire protection to those whom the project services. The improvements to the system will be designed to provide proper flow, pressure and storage characteristics to meet current 10 States Standards for drinking water. The project will also be designed in accordance with ECWA standards.

C. Environmental Impacts

There are no anticipated environmental impacts due to any of the alternatives. Construction will be performed within the road right-of-way, existing easements, and Town of Boston owned properties. With some construction planned near the protect Class B Eighteenmile Creek, proper construction mitigation and restoration efforts will be implemented to ensure there are no adverse impacts from the project.

D. Land Requirements

All of the water main work is contained within existing road right of ways or permanent easements. The pump station is located on a parcel already owned by the Town of Boston.

E. Construction Problems

There are no known or anticipated construction problem for the proposed designs and water districts. During the design process, soil samples and environmental data will be collected to verify that additional work will not be required.

V. Proposed Project

The recommended alternatives are the combination of Alternative 2 and Alternative 3. Based on the recommendations of the water supplier and the desire of the Town to provide safe and reliable waster to the residents. The potential improvements to the Town's water mains are imperative to the reduction of O&M costs in the system, and also to provide a more dependable system. This project will help to ensure the health and safety of the community by providing more reliable water for resident consumption and fire protection. The upgrades to the pump station will increase the efficiency of the system as a whole and will continue to extend the service life of the system.

A. Project Design

1. Water Supply, Treatment and Storage

Water for the Town of Boston will continue to be provide from the same source via the ECWA. No changes will be made to the water supply or treatment in this project. The town wide storage will also remain the same, with the 3 existing tanks located throughout the Town remaining in service.

2. Pumping Stations

Significant improvements will be made at the Town of Boston's pump station on Boston State Road, that include new pumps and interior piping and valve modifications. In addition, upgrades will be made on site including a roof and door replacement on the existing building, as well as drainage improvements.

3. Distribution Layout

The distribution layout will remain unchanged in the Town for the most part., with nearly all of the work including direct replacement of existing water main. The construction will include replacement in kind for the segments of water main that have been identified as top priorities in the Town. One section of water main crossing Eighteenmile Creek will be abandoned in place but will not significantly alter the distribution system since there are three other creek crossing locations already existing in the system. Water system modeling will be utilized in order to confirm pipe sizes and proposed abandonment.

4. Services

The portion of the water service from the right-of-way to the main line will be replaced as necessary under this project for residents who are included in the affected areas. The new water services will run from the new main to the curb at the right of way, then be connected to the existing services located between the right of way and the home.

B. Cost Estimate

The proposed project will encompass properties in the Town of Boston’s Water District 1 and Water District 2 who will share in the expense of the project in their respective districts at the per unit costs and water rents below.

The average annual water cost was estimated based on an average of 60,000 gallons of water used per year.

The estimated project annual debt is based on financing through the New York State Environmental Facilities Corporation Drinking Water State Revolving Fund (DWSRF) at a 3.0% interest rate for a 30 year term. A detailed cost estimate for each Alternative can be found in Appendix C.

- 1. The estimated costs for the proposed project are detailed in Appendix C and summarized as follows:

Alternative 2 & 3: Water Main Replacement and Pump Station Improvements (Water District 1)

Total Estimated Capital Cost (WM and PS Improvements):	\$9,738,000.00
Annual Debt Service (30 years at 3.0%):	\$496,826.00
Estimated Debt Service/Unit (1,875 units):	\$264.97
Existing WD #1 Debt Service/Unit (1,875 units):	\$22.05
Estimated Water Usage Costs:	\$300.00
Total Estimated Unit Cost:	\$587.02

Alternative 2 & 3: Water Main Replacement (**Water District 2**)

Total Estimated Capital Cost (WM and PS Improvements):	\$1,320,000.00
Annual Debt Service (30 years at 3.0%):	\$67,346.00
Estimated Debt Service/Unit (466 units):	\$144.52
Existing WD #2 Debt Service/Unit (466 units):	\$63.83
Estimated Water Usage Costs:	\$300.00
Total Estimated Unit Cost:	\$508.35

VI. Potential Funding Sources

The following is a summary of various grant opportunities available for water infrastructure projects.

Water Infrastructure Improvement Act (WIIA)

The NYSEFC has allotted money to be provided as grants in order to assist municipalities in the improvement of their drinking water or wastewater infrastructure. The grants are awarded up to a maximum amount of \$3 million or 60% of the project costs for water quality improvements and are given directly to the approved applicant. The state allocated \$275 million for projects during the 2018-2019 state fiscal year.

All municipalities within New York State are eligible for a WIIA grant. The evaluation of projects to allocate funding will consider factors such as the water quality improvement, reduction in risk to public health, financial needs of the community, readiness to advance construction, and the level of demonstrated community support.

NYSEFC Drinking Water State Revolving Fund

The United States Environmental Protection Agency (EPA) allocates funds to New York State through the Environmental Facilities Corporation (NYSEFC) for the Drinking Water State Revolving Fund (DWSRF). The DWSRF allocates funds to all communities, giving no priority to any project based on the size of the community. The program provides financing for needed drinking water infrastructure improvements including work on water treatment plants, distribution systems, and tanks.

For a project to be eligible for funding under the DWSRF, the project must include construction or upgrading a water treatment plant or some part of the distribution network including water main and storage tanks. Funds are not provided for the maintenance or operation of facilities.

The DWSRF provides several different types of assistance including zero interest short term loans and low interest long term loans. Grants (in the form of principal forgiveness) and subsidized loans may be available for communities that can demonstrate financial hardship based on median household income (MHI).

The subsidized loans can have interest rates as low as 0% and are typically financed over a 30-year period. In order to be eligible for the loan, the project must serve residential populations and must be environmentally significant as determined by the commissioner of the New York State Department of Environmental Conservation (NYSDEC).

The Town of Boston should ensure that any project it undertakes meets the requirements of DWSRF. For example, the Town should ensure that the requirements for the Davis-Bacon Wage Rates and the Minority and Women in Business Enterprise/Equal Employment Opportunity (MWBE/EEO) requirements are met, even if financing for the project seems unlikely, in the event that funding becomes available in the immediate future.

USDA Rural Development

The USDA provides loans and grants to communities with no more than 10,000 people or to rural communities with no population limits. For the community to be eligible for these loans and/or grants it must:

- Be unable to commercially obtain a loan at reasonable rate/terms,
- Have the ability to repay the loan, and
- Maintain and operate the facilities; and the new facilities must be in compliance with all laws and standards.

The programs are administered on a national level by the Rural Utilities Service, a branch of the USDA, through state offices that distribute the funds to districts and municipalities. Funding is formulated based on rural population, poverty, and unemployment.

The program is implemented in order to provide rural communities with basic human amenities and to promote growth of these rural areas. The program allocates funds for installation, repair, maintenance, or expansion of current facilities.

Loan stipulations include the repayment of the loan within 40 years or by the end of the design life (the lesser of the two). Loans come directly from the USDA or are from commercial third-party lenders, in which case 90% is guaranteed by the USDA. The Town must own the facilities throughout the duration of the loan.

The USDA may award grants if the project is within a low to medium MHI range. Eligible projects must take place in a community where the population is not projected to decline below the designed project population. The grants are used to reduce costs to a reasonable level for the municipality and they can be used in conjunction with loans if the community is able to repay only part of the project cost.

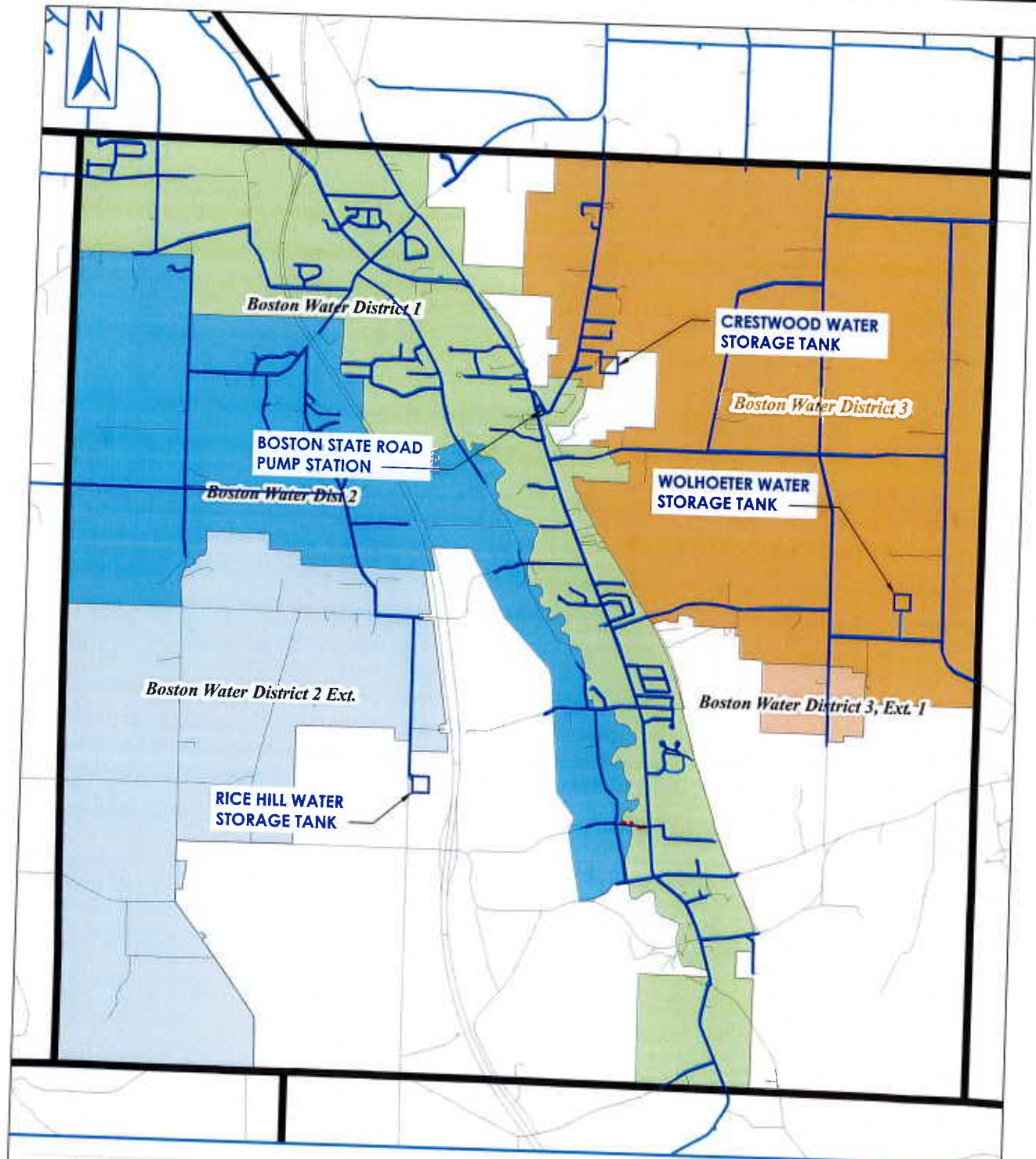
The USDA also provides grants to fund nonprofit organizations that provide technical support and training to rural communities with regard to water and waste disposal. There are several organizations operating throughout the country with offices in each state.

Conclusions and Recommendations

The Town of Boston is committed to providing safe and reliable potable water supply and fire protection to the residents in the project area. This project will be instrumental in maintaining the existing water system and achieving that goal. Due to the condition of the distribution systems aging infrastructure and input from both the Town and ECWA, seeking funding to proceed with the proposed project is recommended.

Figures

Referenced Drawings: None
 Drawing Name: S:\Projects\Boston_Town\Water Sys Rpt\3D Design\Reports\Boston Water\Figures\Boston Water.dwg
 Date last accessed: 3/26/2020 9:39 AM
 Date last plotted: 3/26/2020 10:00 AM
 Plotted By: Dan Irsina



Water Districts in the Town of Boston

- Legend**
- Boston Water District 1
 - Boston Water Dist 2
 - Boston Water District 2 Ext.
 - Boston Water District 3
 - Boston Water District 3, Ext. 1

LOCATION OF EXISTING WATERLINE

FIGURE #1

EXISTING WATER DISTRICT MAP

TOWN OF BOSTON WATER SYSTEM IMPROVEMENTS

BOSTON, NEW YORK

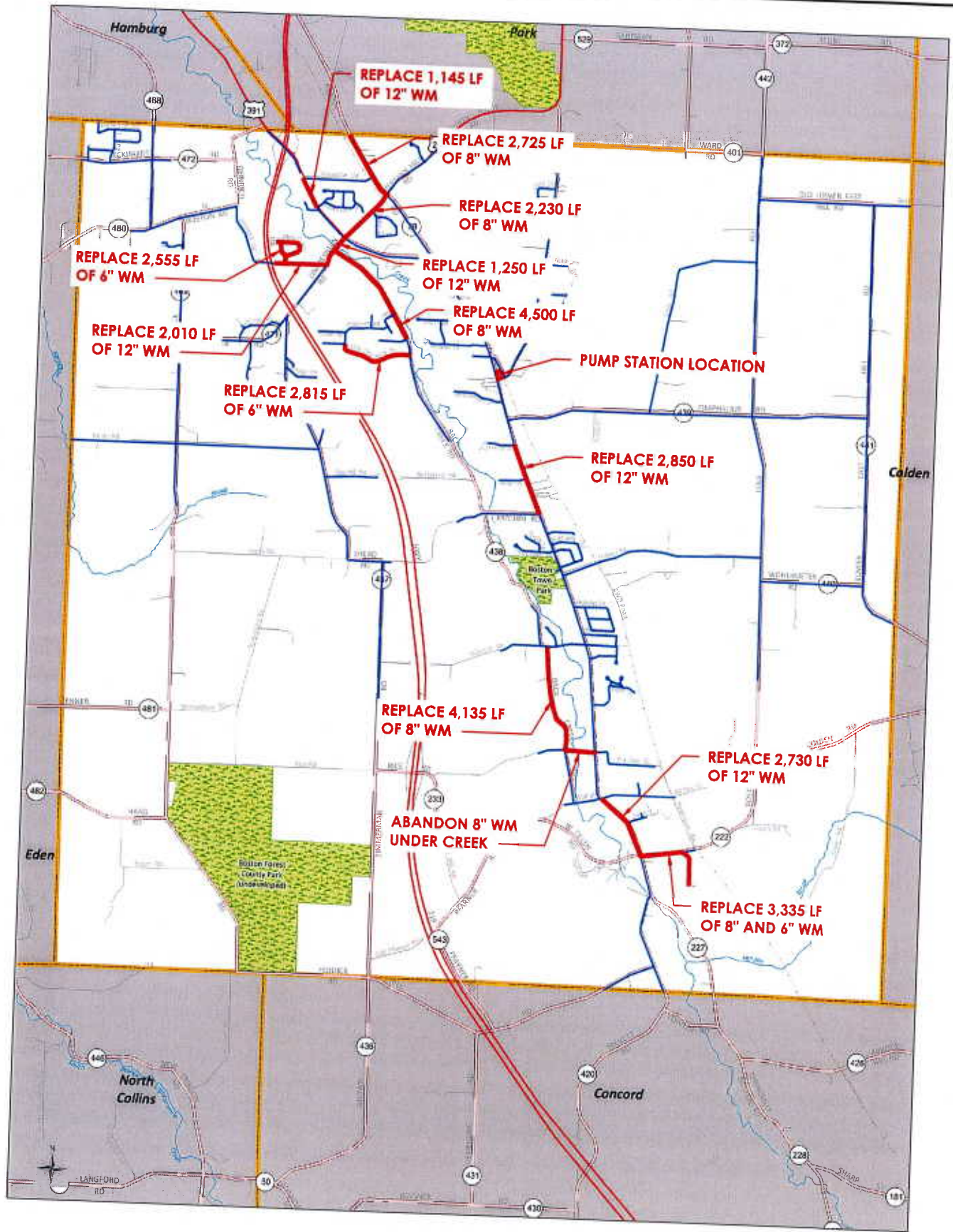


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DATE: 2/19/2020
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CHECKED: DGI
SCALE: N.T.S.
PROJ. #: XXXX.XX



— LOCATION OF EXISTING WATERLINE
 — LOCATION OF WATERLINE REPLACEMENT

FIGURE #2

RECOMMENDED IMPROVEMENT LOCATIONS
TOWN OF BOSTON WATER SYSTEM IMPROVEMENTS
 BOSTON, NEW YORK

Referenced Drawings: None
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 Date last plotted: 8/17/2020 2:19 PM



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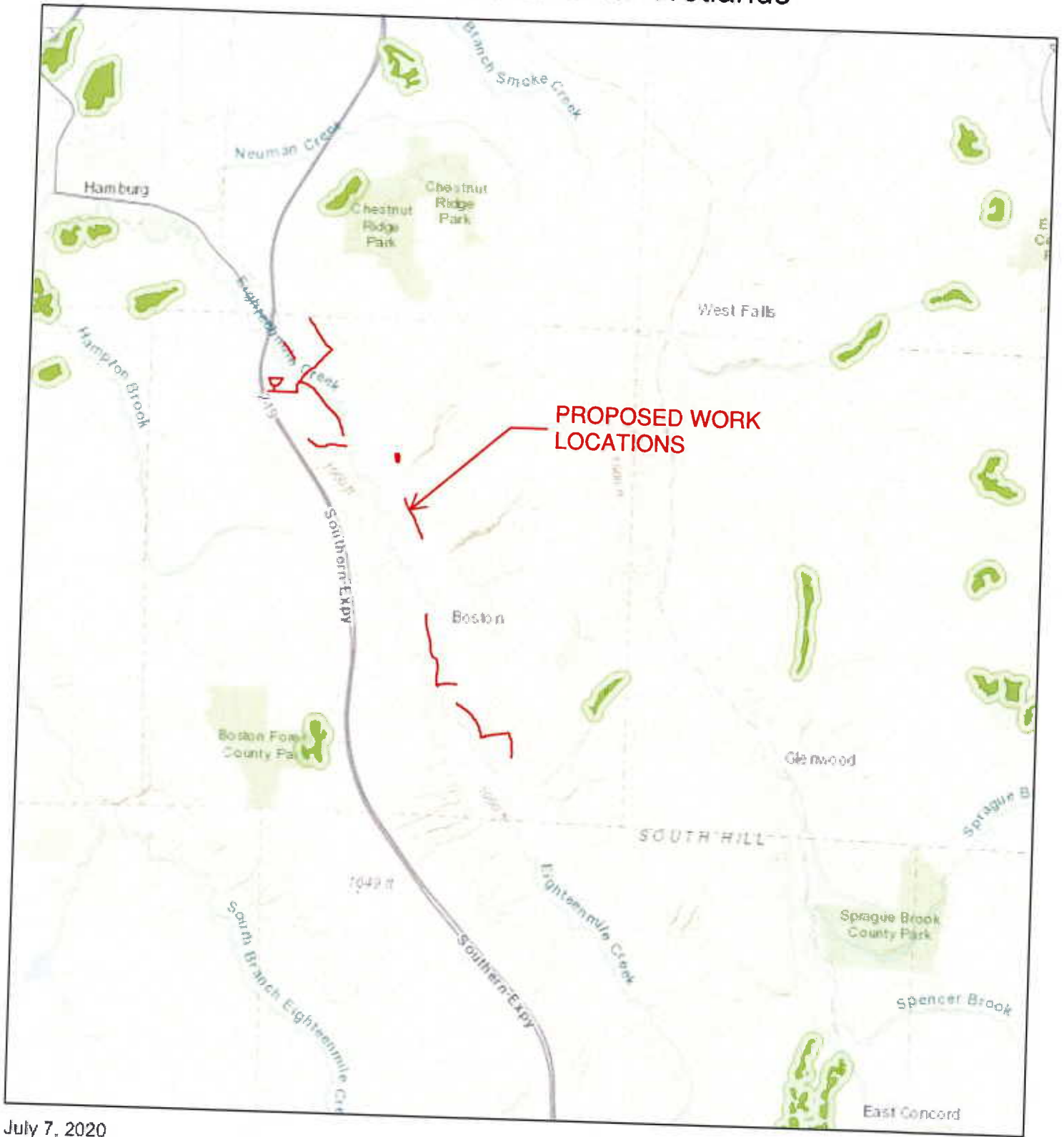
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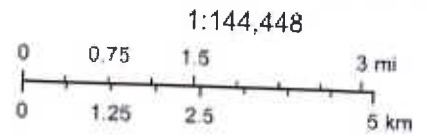
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Appendix A
Environmental Resource Maps

Town of Boston State Wetlands



July 7, 2020



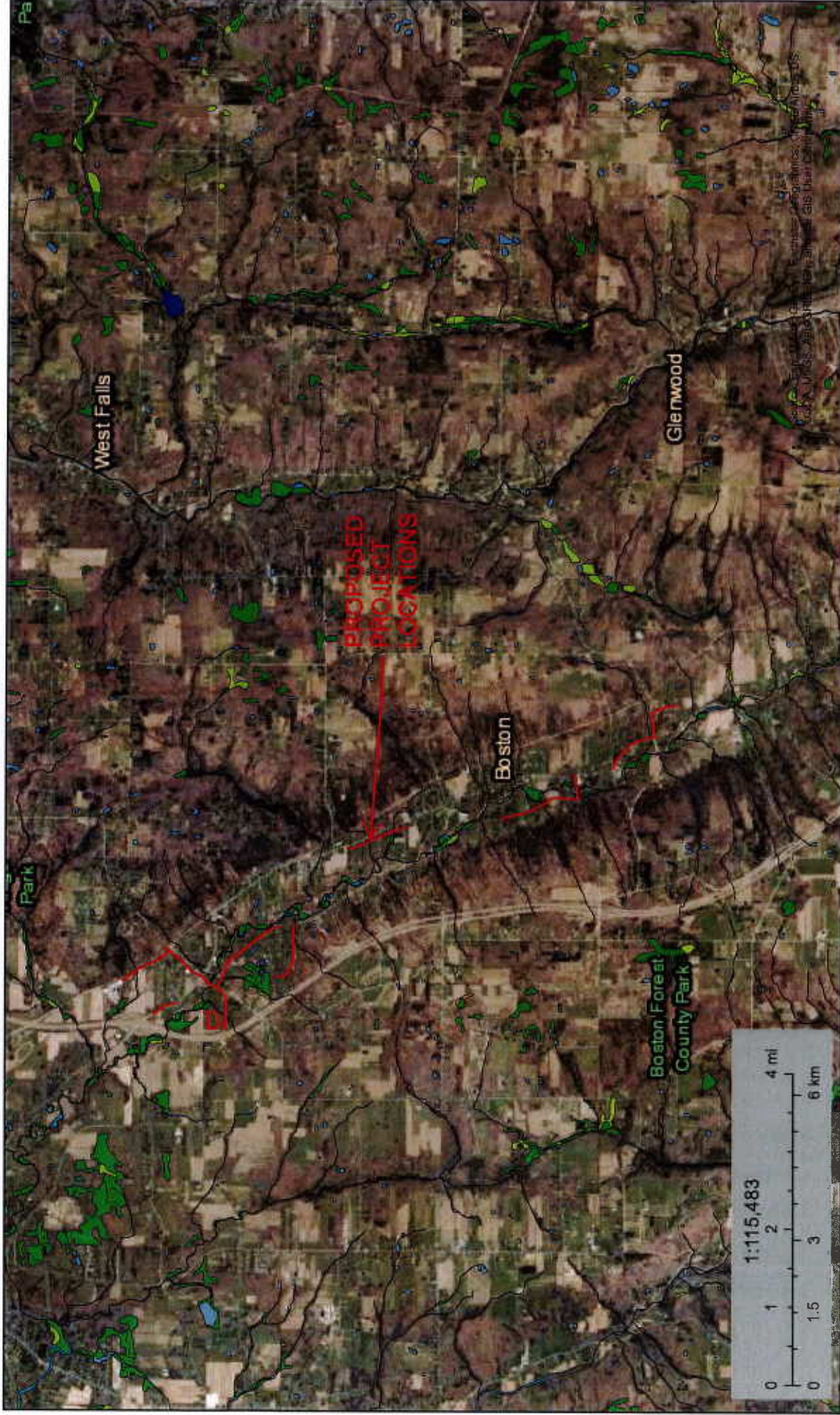
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



U.S. Fish and Wildlife Service

National Wetlands Inventory

Boston Fed Wetlands



July 7, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

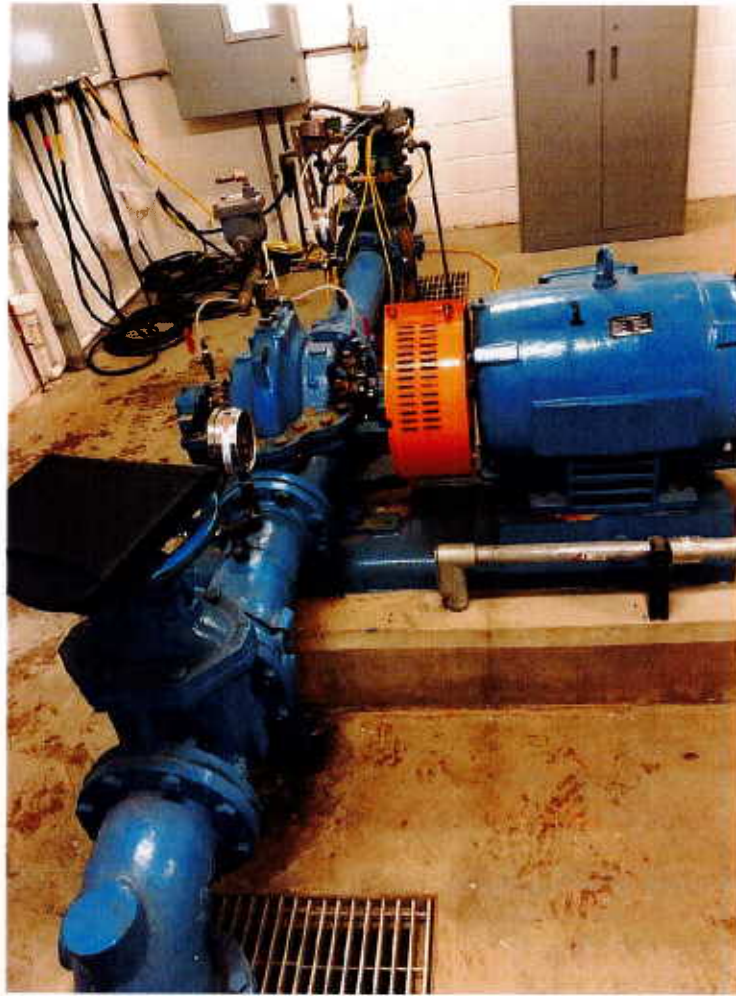
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix B
Photos of Boston Pump Station

PHOTO #1



Location: Pump #1

PHOTO #2



Location: Electrical and Control Panels

PHOTO #3



Location: Pump #2

Appendix C

Cost Estimates

TOWN OF BOSTON
Water District 1 - Watermain Replacement Projects
10/7/2021



ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED TOTAL
1	Mobilization (2% of Construction Costs)	LS	1	\$ 134,750.00	\$ 134,750.00
2	Replace Existing 6" Water Main, Valve and Appurtenances with 8-inch	LF	6,770	\$ 225.00	\$ 1,523,250.00
3	Replace Existing 8" Water Main, Valve and Appurtenances	LF	11,390	\$ 225.00	\$ 2,562,750.00
4	Replace Existing 12" Water Main, Valve and Appurtenances	LF	9,985	\$ 250.00	\$ 2,496,250.00
5	Connection To Existing Water Main	EA	20	\$ 5,000.00	\$ 100,000.00
6	Abandon Existing 8" Water Main Under Eighteen Mile Creek	LS	1	\$ 50,000.00	\$ 50,000.00
7	Replace Existing Valve 1G	LS	1	\$ 5,000.00	\$ 5,000.00
8	Maintenance and Protection of Traffic (3%)	LS	1	\$ 202,120.00	\$ 202,120.00
9	New Automatic Air Relief Valves	LS	6	\$ 8,000.00	\$ 48,000.00

Subtotal = \$ 7,122,120.00
 Contingency (10%) = \$ 712,220.00
 Legal, Engineering, Administration (20%) = \$ 1,424,430.00
Total Estimated Capital Cost (rounded)= \$ 9,259,000.00

TOWN OF BOSTON
Water District 1 - Pump Station Improvements
10/7/2021



ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED TOTAL
1	Mobilization (2% of Construction Costs)	LS	1	\$ 7,220.00	\$ 7,220.00
2	Install New 75 HP Pumps	EA	2	\$ 115,000.00	\$ 230,000.00
3	Interior Piping Modifications	LS	1	\$ 45,000.00	\$ 45,000.00
4	Metal Roof Replacement	SF	750	\$ 40.00	\$ 30,000.00
5	Man Door Replacement	LS	1	\$ 6,000.00	\$ 6,000.00
6	Site Drainage Improvements	LS	1	\$ 50,000.00	\$ 50,000.00

Subtotal = \$ 368,220.00
 Contingency (10%) = \$ 36,822.00
 Legal, Engineering, Administration (20%) = \$ 73,644.00
Total Estimated Capital Cost (rounded)= \$ 479,000.00

TOWN OF BOSTON
Water District 2 - Watermain Replacement Project
10/7/2021



ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED TOTAL
1	Mobilization (2% of Construction Costs)	LS	1	\$ 19,350.00	\$ 19,350.00
2	Replace Existing 8" Water Main, Valve and Appurtenances	LF	4,135	\$ 225.00	\$ 930,375.00
3	Connection To Existing Water Main	EA	1	\$ 5,000.00	\$ 5,000.00
4	New Automatic Air Relief Valves	LS	4	\$ 8,000.00	\$ 32,000.00
5	Maintenance and Protection of Traffic (3%)	LS	1	\$ 29,030.00	\$ 29,030.00

Subtotal = \$ 1,015,755.00
 Contingency (10%) = \$ 101,580.00
 Legal, Engineering, Administration (20%) = \$ 203,160.00
Total Estimated Capital Cost (rounded)= \$ 1,320,000.00

TOWN OF BOSTON
Water District 1 - Debt Service Summary
10/7/2021



DESCRIPTION	ESTIMATED TOTAL
Water Main Replacements	\$ 9,259,000.00
Pump Station Improvements	\$ 479,000.00

Alternate 2 and 3 Total Capital Cost = \$ 9,738,000.00

Estimated Debt Services (3.0% for 30 Years)=	\$	496,826.00
Number of EDUs=		1875
Estimated Debt Service/Unit/Year=	\$	264.97
Estimated Annual Water Cost=	\$	300.00
Existing Annual Debt=	\$	22.05
Total Estimated Unit Cost=	\$	587.02

TOWN OF BOSTON
Water District 2 - Debt Service Summary
10/7/2021



DESCRIPTION	ESTIMATED TOTAL
Water Main Replacements	\$ 1,320,000.00

Alternate 2 and 3 Total Capital Cost = \$ 1,320,000.00

Estimated Debt Services (3.0% for 30 Years)=	\$	67,346.00
Number of EDUs=		466
Estimated Debt Service/Unit/Year=	\$	144.52
Estimated Annual Water Cost=	\$	300.00
Existing Annual Debt=	\$	63.83
Total Estimated Unit Cost=	\$	508.35

Appendix D
Erie County Water Authority
Recommendation Letter



ERIE COUNTY WATER AUTHORITY

3030 Union Road • Buffalo, New York 14227
716-684-1510 • FAX 716-684-3937

June 16, 2020

The Honorable Jason Keding
Supervisor of Town of Boston
8500 Boston State Rd.
Boston, NY 14025

RE: 2021 Construction Projects
ECWA Project No.: 199300453

Dear Supervisor Keding:

In an effort to provide continual safe and affordable water to all of the citizens within your municipality, and as you prepare for your 2021 annual budget, we urge you to secure funding for capital improvement projects to your water system. We have suggested projects we believe would provide the most benefit to your water system.

We have attached a list of recommended improvement to the system which are based upon watermain break and leak history and the age and size of existing water lines and in some cases the capacity of the existing mains. As shown on the attached list, these recommended improvements have been prioritized into three categories (high, medium and low). These priorities serve as our recommendation as to the order in which we feel the projects should be completed. In general these priorities are based on the level of risk we feel is posed by the failure of a given line including the number of properties impacted, the type of property impacted (e.g.; hospitals or other health care facilities or large commercial or industrial facility) as well as the complexity of the emergency repair that would be necessary should the line fail.

You should review the list with your Engineering Department or outside consultant to determine how to proceed with implementing these important capital improvement projects and feel free to contact ECWA if you would like to discuss further. We feel that that main replacement programs are imperative to help limit interruptions of service, to maintain quality fire protection, to avoid property damage and limit the overall risk to your residents posed by unplanned failures of this critical infrastructure.

Attached to this letter is a map that depicts the Town's distribution system and shows the locations of the recommended projects. Each project has been numbered to coincide with the attached list and we have also provided the number of breaks/leaks associated with that project.

We recognize that some of these projects may already be planned and if so please advise us of these projects so that we may update our records.

The Honorable Jason Keding
June 16, 2020
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We appreciate your continued cooperation as we share in the delivery of quality water to all Town of Boston residents. If you have any questions or require additional information concerning these recommendations, please contact me at 716-685-8220.

Sincerely,

ERIE COUNTY WATER AUTHORITY



Leonard F. Kowalski, PE
Executive Engineer

LFK*Imb
Attachment
cc: R. Stoll
M. Quinn
S. Denzler
J. Catanzaro
M. McAuley
BOTN-326-9302-F

TOWN OF BOSTON

ECWA PROPOSED CAPITAL IMPROVEMENT PLAN
FOR TOWN WATER DISTRICTS
FOR 2020/2021

	Priority	Location	Recommendation	Initial Year of Recommendation
H	1.	<u>Heinrich Road</u> From Rt. 219 to Zimmerman Road	Replace 2,010 LF of 12" main	2019
	2.	<u>Zimmerman Rd.</u> Heinrich Road to Boston State Road	Replace 1,250 LF of 12" main	2012
	3.	<u>Boston State Road</u> Boston Cross Road to Boston Colden Road	Replace 2,730 LF of 12" main	2020
	4.	<u>South Abbott Road</u> Herman Hill Road to Orchard Park Town Line	Replace 2,725 LF of 8" main	2013
M	5.	<u>Back Creek Road</u> Zimmerman Road to Cloverfield Drive	Replace 4,500 LF of 8" main	2020
	6.	<u>Boston State Road</u> Ludon Drive to Patchin Road	Replace 2,850 LF of 12" main	2016
	7.	<u>Boston Colden Road & Lango Road</u>	Replace 3,335 LF of 8" & 6" main	2016
I	8.	<u>Back Creek Road</u> Hillcroft Road to Rice Road	Replace 4,135 LF of 8" main	2020
	9.	<u>Herman Hill Road</u> Boston State Road to South Abbott Road	Replace 2,230 LF of 8" main	2008
U	10.	<u>Boston State Road</u> Meadow Drive to Ripple Drive	Replace 1,145 LF of 12" main	2016
	11.	<u>Valley Circle Lane</u>	Replace 2,555 LF of 6" main	2019
O	12.	<u>Old Orchard Drive</u> Back Creek Road to Johns Terrace	Replace 2,815 LF of 6" main	2020
	13.	<u>Eighteen Mile Creek Crossing</u> From Boston State Road & Aspen Drive to Back Creek Road at Rice Road	Abandon 8" watermain under creek	2008