REPORT
OCTOBER 2024

Service Line Replacement Plan

Prepared for:

Town of Milton, Massachusetts

CDM Smith

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Acronyms and Abbreviations

AL	Action Level
ALE	Action Level Exceedance
BIL	Bipartisan Infrastructure Law
CDBG	Community Development Block Grants
CCR	Consumer Confidence Reports
EPA, USEPA	United States Environmental Protection Agency
FAQ	Frequently Asked Questions
GIS	Geographic Information System
LCR	Lead And Copper Rule
LCRI	Lead and Copper Rule Improvements
LCRR	Lead And Copper Rule Revisions
LSL	Lead Service Lines
LSLRP	Lead Service Line Replacement Plan
LSLRs	Lead Service Line Replacements
MassDEP	Massachusetts Department Of Environmental Protection
MWRA	Massachusetts Water Resource Authority
NSF/ANSI	National Science Foundation/American National Standards Institute
ppb	Parts Per Billion
PWSID	Public Water System Identification
ROE	Right of Entry
SLI	Service Line Inventory
TIF	Tax Incremental Financing
TIDD	Tax Incremental Development District

1.0 Background

1.1 Utility Background

The Town of Milton Water Department (Town) receives water from the MWRA's Quabbin Reservoir, 65 miles west of Boston and the Wachusett Reservoir, 35 miles west of Boston. The Town has approximately 8,600 water service connections and serves approximately 28,000 customers.

The Town splits ownership of the service line at the curb stop or service valve. The Town is responsible for the portion of the service line between the water main and the curb stop or valve and the customer is responsible for the portion from the curb stop to the service connection inside the home.

Figure 1-1 illustrates a configuration with the water meter inside the home, which is the typical configuration in the system. If the water meter is located inside the home or building, the Town is responsible for the service line from the water main in the street to the curb stop (utility side), typically at the property line or in the sidewalk. The property owner is responsible for the service line from the curb stop to the meter inside the home (customer side).

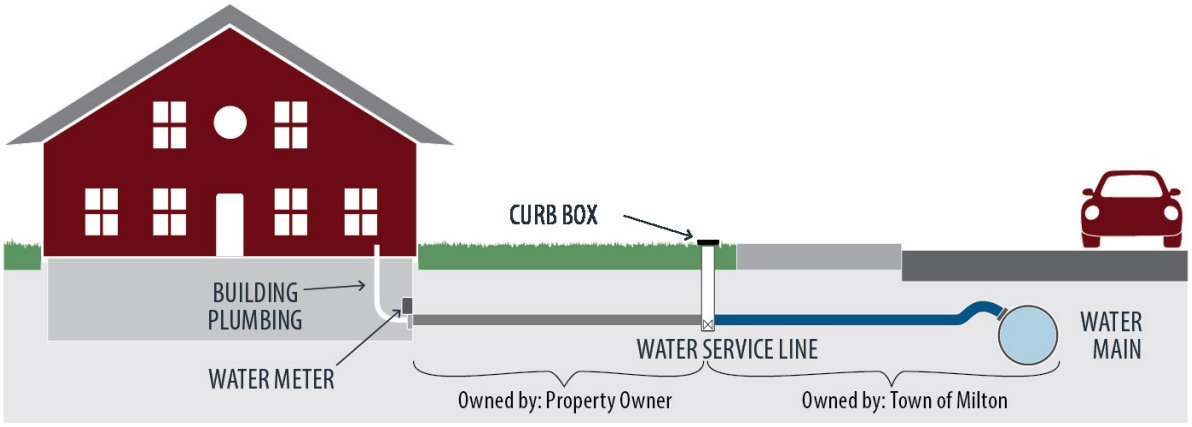

Figure 1-1 – Water Meter Inside Home

1.2 Regulatory Background

Massachusetts utilities must comply with both federal and state regulations. The following subsections detail regulatory requirements.

1.2.1 Federal Regulations

The Lead and Copper Rule Revisions (LCRR), promulgated in December 2021, established updated regulations that build off the Lead and Copper Rule (LCR) which will go into effect on October 16, 2024. The LCRR contained the following major updates that utilities must comply with:

- Service Line Inventory – The utility-owned and privately-owned portion of every service line in the distribution system must be inventoried include a location identifier, unique identifier, and material designation.
- Lead Service Line Replacement Plan (LSLRP) – Utilities must prepare a LSLRP that identifies the plan for identifying service lines with unknown materials, prioritizing service lines for replacement, plans for customer communications, construction methods, and funding strategies for replacing services and assisting customer who cannot afford to replace their portion of the service line.
- Customer Communication – Customers must be notified about the material of their service line if it is unknown, galvanized requiring replacement, or lead within 30 days of the submission of the LCRR being in effect (November 15, 2024). Notifications include annual information to these locations with health risks of lead exposure and mitigation steps. Customers will also need to be notified about service line disturbances caused by verification, excavation around the line, or replacement.

In addition to the LCRR, the United States Environmental Protection Agency (USEPA, EPA) has proposed the Lead and Copper Improvements (LCRI) which are estimated to be finalized in October 2024 and would further modify the requirements and change the timeline for deliverables established by the LCRR. It is expected that the LCRI will go into effect in 2027. The EPA issued a guidance document providing information on the transition period between the LCRR implementation and finalization of the LCRI. Updates include:

- New Action Level – Reduction of the Action Level to 10 ppb and removal of the Trigger Level
- School and Childcare Sampling – Schools serving children up through 8th grade and licensed childcare locations must be sampled at a rate of 20% per year for the five years following the compliance deadline. Secondary schools are allowed to request sampling from the utility.
- Find-and-Fix Requirement – In the event that an individual location exceeds the Action Level, the utility must investigate at the site to determine the cause of the exceedance and a plan for addressing the lead source which must be approved by the State.
- Sampling Updates – All utilities will revert to a standard monitoring schedule following the compliance deadline. Compliance sampling will include both a 1st and 5th liter sample and the sampling tier designations will be updated to prioritize locations with lead service lines (LSLs).
- Identification and Replacement Requirement – All unknowns must be identified within 10 years of the LCRI effective date. All GRR and LSLs must be replaced within 10 years of the LCRI effective date.

1.2.2 State Regulations

In addition to the federal regulation, Massachusetts Department of Environmental Protection (MassDEP) additionally requires that in the event of an Action Level exceedance, replacement must take place at a rate of 7 percent of lead and unknown services per year. It was also recommended that utilities utilize MassDEP's service line inventory template for their inventory submission, which the Town has done.

2.0 Inventory

2.1 Inventory Status

As of September 2024 the Town has completed the development of a draft inventory through the review of historical records, field investigations, and customer submittals. A summary of the inventory designations is provided in **Table 2-1**. These designations are based on EPA guidance and that the whole service line designation is what drives the replacement requirements. Based on the records review and model findings, the system currently contains 52 lead services and approximately 80 (1 inactive) galvanized requiring replacement.

Table 2-1: Inventory Summary

Material Designation	Public Portion of the Service Line	Customer Portion of the Service Line	Whole Service Line Designation
Lead	3	50	52
Non-Lead	4,329	6,350	3,375
Galvanized Requiring Replacement	0	80	80
Unknown	4,268	2,120	4,693

2.2 Materials Identification

As described above, the draft inventory was developed utilizing historic records and customer submittals. **Table 2-2** provides an overview of data available from each source, which is also further in the following sub-sections.

Table 2-2: Records Sources

Information Source	Connector Material	Public Portion of the Service Line			Customer Portion of the Service Line		
		Material	Install Date	Diameter	Material	Install Date	Diameter
Water Cards	X	X	X	X	X	X	X
Water Meter Replacement Records					X		X
Watermain Replacement Inspections	X	X	X	X			
Customer Submittals					X	X	X
Door to Door Inspections					X	X	X

2.2.1 Records Review

The Town had water service tie cards, watermain replacement records, and water meter replacement records, which were reviewed to develop the initial inventory. Available watermain replacement records were utilized, which included the replacement of the public portion of the service line as was the common practice for the Town. Also, as part of the Town's water meter replacement program from 2018 through 2024, records indicating the private-side water service material and diameter were reviewed.

2.2.2 Customer Submittals

The Town utilized MassDEP's Mass Lead Service Line Identification (MA-LSLI) Web App program, to solicit customer feedback to aid in determining the service line material on the private side. The MA-LSLI Web App is a collection of Smartsheet forms, sheets, and workflow automations that allowed the Town's customers to submit photos of their service line for identification purposes. Starting in March 2024, the Town sent out a flyer to approximately 8,600 properties with their water and sewer invoice asking them to participate and submit to the MA-LSLI Web App. **Figure 2-1** is a screenshot of the mailing. To date, approximately 109 customers participated and submitted a form on the MA-LSLI Web App.

Figure 2-1 – MA-LSLI Web App Postcard

2.2.3 Door to Door Inspections

To further reduce the number of unknown service lines, CDM Smith and the Town conducted a door-to-door inspection program during the summer of 2024.

Field crews prioritized inspections in neighborhoods with the highest number of unknown service lines. Buildings with an unknown private side material and known public side material were also prioritized during the field program to reduce the potential number of test pits that may be required to determine service line materials in the future.

Inspection crews were composed of Town employees and CDM Smith staff, depending on availability. If a resident did not answer the door, a flyer with information on the LSL Inventory program and contact information for the field team was left. Residents could then schedule appointments for the field team to come perform inspections at a specific date and time. If a resident answered the door and agreed to

the inspection, the field team would enter, locate the service, and evaluate the material of the service line. The material information was updated in the inventory following each day's inspection activities. Residents were informed of the results of the test following completion. If a lead service line was discovered, residents were directed to lead in drinking water information provided on the MassDEP website. At the conclusion of the field program 252 service lines were inspected.

2.2.4 Future Verification Work

The inventory will continue to be updated on an annual basis by data collected during routine maintenance activities, water main replacements, targeted verification, and other methods. Material information collected in the field will be compared to information already in the inventory and updated as needed. If field verifications frequently contradict information from a specific record type, it is recommended that a more in-depth investigation is conducted into the accuracy of that record type to determine if the errors are confined to a certain time or geographic area.

2.2.4.1 Verifications During Routine Maintenance

The Town currently conducts regular maintenance activities that allow them to observe the service line material on both the public and customer-owned portion of the service line. Opportunities include leak repairs on the service line, meter installation and replacement work, and inspections following the installation or replacement of a new service. Staff should take advantage of these opportunities and collect data during these observations, including but not limited to, photos, material designation information, and diameter information.

2.2.4.2 Targeted Verification

Targeted verification may be required if a particular record type is consistently identified as being incorrect compared to field observations. MassDEP developed the "LCRR Service Line Identification Guidance" document, last updated May 28, 2024, that provides site specific guidance for varying configurations of service lines and building types on where to collect material information from and how to designate the service line materials.

In addition to traditional excavation or vacuum test hole methods of verification, MassDEP also allows in-pipe verification per the document "In-Pipe Testing Guidance for Verifying Unknown Service Lines", last updated June 13, 2024. Electrical Resistance Testing has been approved by MassDEP, and other in-pipe verification methods can be evaluated to determine if they are allowable. During any verification activity, data should be collected on the service line with documentation to support material designation findings including photographic evidence.

2.2.4.3 Predictive Modeling

Upon completion of the initial inventory, approximately 4,700 service lines still had at least one section designated as unknown. The Town could consider utilizing predictive modeling to target sites that are of unknown material and therefore potentially lead or GRR. A predictive model would designate locations as non-lead where the model shows that the risk of lead or a GRR is below an acceptable threshold. MassDEP issued the latest version of their guidance document, "Statistical and Predictive Modeling Guidance for Evaluating Unknown Service Lines" on May 1, 2024. The following subsections detail the requirements of the guidance.

Training the Model

Predictive modeling utilizes a model trained on known information about the distribution system to make a likelihood assessment of service lines with unknown designations. The model uses a training dataset made up of known data to train and test the accuracy of the assumptions that the model generates. The following steps will be utilized to complete the modeling:

1) Produce and train model based on a set of locations with verified materials that the model should be trained to identify
    a) 80% of sites from the pool of locations should be used in training the model and 20% of the pool should be used to test the accuracy of the model
    b) The training pool should all be sites that have been field verified within the last 10 years
2) Select a representative set of field verification locations from the pool of sites with unknown services
3) Perform field verifications and collect material information at selected sites
4) Utilize the model to predict designations at locations that are still designated material unknown within the distribution system

The utility will continue to perform field verifications at locations with the highest likelihood of being LSL/GRR and use this data to further train the model to improve predictive capability.

Utilizing Results in the Inventory

Training of the model should include sites that are representative of the entire pool of service lines. Including a larger quantity of service lines from certain geographic areas of the system or verifications from buildings from particular time periods can bias the model and create inaccuracies within predictions of service locations with different conditions.

The model should produce a percentage for each service line indicating the likelihood that the service line is the target material. The Massachusetts DEP guidance states that following designations can be utilized based on the likelihood results:

- 80% or higher likelihood designated by the model can be designated as the target material
- Less than 15% can be designated as “Unknown, definitely does not contain lead or galvanized” (UNK-NOLG).
- 16% to 79% must be categorized as “Unknown, may contain lead and/or galvanized” (UNK-LG)

Reporting Results

If predictive modeling results are used for an inventory submission, the utility must include the Service Line Inventory (SLI) certification form as part of the submittal. Locations that utilized predictive modeling as a method for material designation should have “Predictive Modeling” as the verification method in the inventory.

Notifying Customers

Disclaimers on the use of predictive modeling need to be included in both the general public communications as well as individual consumer notices to provide information on how predictive modeling was used to determine their material if the material remains unknown, LSL or GRR following the modeling effort. The following disclaimer must be included in the public inventory "This Service Line Inventory was created with the use of Predictive Modeling to predict and identify the material of unknown service lines."

Customer notifications distributed to individuals following the posting of the service line inventory must be provided to homes that are served by lead, GRR, or unknown material service lines. Locations determined to be a LSL or GRR based on predictive modeling must include a disclaimer in their notice that states "Your home is served by a [lead or galvanized requiring replacement] service line confirmed through the use of Predictive Modeling." Locations that remain unknown following the modeling effort must be provided the percentage likelihood with their notification. This percentage can be provided as the specific percentage or within a range as listed below:

- 20% to 30%
- 31% to 40%
- 41% to 50%
- 51% to 60%
- 61% to 70%
- 71% to 80%

Modeling Field Verification Requirements

Verification of service line materials identified through predictive modeling efforts is required as service lines are encountered in the field. Material information needs to be updated based on field verification results. If more than 5% of service line predictions are found to be inaccurate, all services designated using predictive modeling must be changed to unknown material status. Documentation of identification efforts can be requested by Mass DEP at any time and should be maintained throughout the lifetime of the inventory.

2.2.4.4 Statistical Modeling

The Town could utilize a statistical model to target sites that are of unknown material and therefore potentially lead or GRR. The statistical model uses a physical verification program to create a statistical significant model with a confidence level of 95 percent or greater to predict the material of unknown service lines. MassDEP has approved statistical models for utilities that have exhausted other service line material identification methods and issued the latest version of their guidance document, "Statistical and Predictive Modeling Guidance for Evaluating Unknown Service Lines" on May 1, 2024.

For a statistical model, pools of services can be grouped by three types: System Wide Level, Neighborhood Wide Level, and Water Main/block level. Once a pool of services are determined to be included in the model, a statistically significant number of the service materials must be verified at random. "Statistical and Predictive Modeling Guidance for Evaluating Unknown Service Lines" provides

guidance on the number of services required for physical verifications based on the number of properties to be included in the model. The guidance document also describes the process required to randomize the sampling pool. If these services are found to be non-lead, then the assumption can be applied to the remaining services. However, if 1% or more of the service lines are found to be lead or GRR at any point following submission of the SLI, all service lines included in the model but be reverted back to an unknown status.

Should a statistical model be developed to update unknown service line materials in the inventory, a report showing a map of the locations in the investigation pool must be submitted to MassDEP as well as a description of the statistical analysis used to come to the conclusion of the model. Additionally, a disclaimer is required on the public inventory stating “This Service Line Inventory was created with the use of Statistical/Predictive Modeling to predict and identify the material of unknown service lines.” The Town should also maintain identification records for the identified service line materials in the sampling pool as MassDEP may ask for these records to be submitted in the future. MassDEP may also require the Town to submit a long-term compliance plan to identify the material of service lines determined by the statistical model using a secondary material identification method, such as test pitting.

3.0 Replacement Program

The Draft Lead Service Line Replacement Plan (Plan, LSLRP) establishes how the Town intends to identify, manage and remove lines designated as LSL, unknown or GRR. Building off the identification approach described in **Section 2.2**, the Draft Plan summarizes how the Town intends to prioritize services for replacement, coordinate with customers, and complete the construction while considering legal and financial strategies to performing work on private property.

3.1 Replacement Prioritization and Schedule

At this time, the Town's service line replacement program will be a voluntary program. Recently, Milton has replead LSL and GRR services as they are located through other work. This has included replacement of the public and private side paid for entirely by the Town. The Town intends to continue paying for the replacement of both the public and private side replacement as feasible.

The inventory has approximately 132 locations that have confirmed or suspected LSL or GRR lines through field investigation and records review designations. Additionally, there are 4,693 service lines with at least one portion designated as material unknown. The draft LCRI requires that all services identified as GRR and LSLs are replaced by 2037, with unknown service materials included in the count. **Table 3-1** provides a summary of the number of service lines requiring replacement starting in 2027 based on the current inventory and the expected rate of identification and replacement to address these locations by 2037.

Table 3-1: Identification and Replacement Rates for Unknowns and GRRs

Material Designation	Service Line Quantity	Replacement/ Identification Rate[1]	Annual Service Lines
Lead	52	10%	6
Galvanized Requiring Replacement	80	10%	8
Unknown	4,693	10%	470
		Total	**484**

1. Replacement and identification work will be required to begin after 2027 and assumes 10% per year through 2037

The replacement rate shown in **Table 3-1** for LSLs and GRRs assumes that no additional GRRs or LSLs are identified during the material verification of unknowns. However, if LSLs or GRRs are identified, they will need to be included in the replacement program. Prioritization of the service lines for replacement considered the following conditions:

- Customers that request replacement
- Disadvantaged Community Status
- Sensitive Population Designation
- Opportunity to coordinate replacement with planned water main replacements

- Areas with greater density of service lines of unknown material and GRRs. If a lead service is found at a later date, these areas will also be prioritized.

Due to the need for customer coordination to complete replacements on the customer's side of the service line, customer engagement and buy-in to the program will provide the most opportunity to complete replacements. Beyond volunteers, disadvantaged communities and sensitive populations should be targeted for verification and replacement to reduce lead exposure risks for populations facing the greatest risks from lead exposure. For efficiency, locations where water mains are being replaced should be targeted for service line replacement to take advantage of sites where the service line is already exposed. Replacement work can also be targeted to geographic areas where the density of services requiring replacement is the highest so that the crews minimize time mobilizing between sites and in locations where paving work is scheduled. Additionally, collecting information on unknown service lines during other utility work (such as sewer, drain, and gas) is recommended when digging is in the vicinity of the service line location.

3.2 Customer Coordination

Public outreach is important to inform consumers about health effects of lead, sources of lead and ways to reduce lead exposure to lead from drinking water. This section includes a summary of the current and anticipated communication strategy and public outreach the Town implements for the LSLR program. This includes general public outreach to inform the public of the LCRR, the public outreach for identifying unknown materials for further inventory development, the public outreach for replacing the LSL and GRR services, and outreach to other city officials, such as building and plumbing departments. A copy of the Town's lead service line outreach information can be found on the Town's website here: https://www.townofmilton.org/237/Lead.

3.2.1 General Public Outreach

Upon completion and submittal of the service line inventory, the Town will have 30 days to send out notifications to anyone served by a lead, galvanized requiring replacement, or unknown material service line. These notifications are required to include information on where to access the inventory, health risks associated with lead exposure, and information on opportunities for replacement. In addition to the notification, information on the inventory and replacement program needs to be included in future annual water quality reports.

3.2.2 Targeted Customer Outreach

The utility is required to offer to replace the customer portion of the service line when the public portion of the service line is being replaced. To maximize customer participation and full-service line replacements, the Town shall perform a good faith effort to engage customers that already have documented LSL/GRRs and encourage participation and any attempts to contact the customer should be documented.

Additionally, locations with sensitive populations, include childcare and elementary schools, shall be prioritized for outreach to minimize the health risks posed by GRRs and LSLs. If these locations currently have unknown service line materials, they will be prioritized for identification and offered priority replacement in the event that an LSL or GRR is identified at the property.

Other locations that serve sensitive populations including hospitals, clinics, playgrounds, and parks shall also be prioritized for outreach similar to schools and childcare facilities. These locations shall be prioritized for identification in the event that the existing service line is unknown and prioritized for replacements if a LSL or GRR is identified onsite.

3.3 Legal Items and Necessary Approvals

This section provides a summary of anticipated legal items and approvals that will be considered and addressed for a service line replacement program for the Town, including access to private property for replacement of customer side service lines, possible ordinances to be considered, and rate change considerations.

3.3.1 Private Property Access

The Town will need to have a Right of Entry (ROE) and Replacement Agreement for contractors to access private properties and replace customer side service lines signed by the homeowner. This ROE will be used for future service line replacements.

3.3.2 Rate Change

The Town will use grant and loan funding where possible to complete replacement work. If necessary, the Town will review if a rate change would be required to complete the replacements.

3.4 Logistics and Procedures

This section includes anticipated logistics and procedures for the service line replacement program for the Town including how the data will be managed during the service line replacements, a general construction procedure for a service line replacement, how the service line replacements will be coordinated with paving and other utility work, requirements for licenses plumbers, post replacement procedures, and how partial replacements will be handled.

3.4.1 Data Management

The final LSLI will be the central location for all data collected during service line replacements and updated based on continuing work. Upon completion of the inventory and submittal to the state, a GIS based interactive inventory will be uploaded to the Town's website per LCRR requirements.

3.4.2 Construction Procedures

Based on a review of the Town's records, typically residential LSLs/GRRs are sized between 5/8-inch and 2-inch diameter. The replacement service lines for the LSLs/GRRs will consist of copper tubing of the same size. Ownership of the service line is shared between the Town and property owners, as described in **Section 1.1** of this report.

The replacement work can be broadly classified into the following two separate categories, which differ within each category depending on the water meter location, as discussed in **Section 1.1**:

1) Full replacement of the service line from the existing water main to the existing water meter located inside the home.
2) Replacement of the service line from the curb stop to the existing water meter.

The service line replacements will be performed by trenchless installation methods when feasible based on the service line material and individual site conditions. Where necessary, open cut methods will be utilized to expose the service line for replacement. Every effort will be made to locate the new service lines near the existing service lines to minimize the excavation area. The replacement work will involve the following general steps:

1) Installation of traffic control measures.
2) Installation of environmental protection features including erosion and sedimentation control.
3) When necessary, performing test pits or digging small holes (vacuum excavation) where the customer service line begins to determine if the customer-owned service line is lead or galvanized requiring replacement.
4) Excavation of pits, removal of existing LSLs or GRR, and disposal in accordance with all local, state, and federal requirements.
5) Extraction and removal of existing curb stop and associated service box (for full replacements).
6) Installation of new service line from the existing water main to the plumbing inside the home and installation of a new curb stop along with a service box.
7) Connection of the new line to the plumbing inside the home performed by a licensed plumber.
8) Cleaning and disinfection of the new copper service line.
9) Backfilling and compaction.
10) The Town or its representative will be on-site to inspect service line construction and installation work. Inspections completed will be of the exterior of the buried service line and/or inside the premises to document interior work and installation.
11) Ensure requirements for plumbing permit closeout are met.
12) Final site restoration including pavement repair, final paving, loaming, seeding, landscaping, and hardscaping.
13) Post replacement procedures including flushing, filters, and post replacement sampling, as described in more detail in **Section 3.4.4.**

3.4.3 Coordination with Paving and Other On-Going Utility Work

Coordination with the Department of Public Works regarding paving and other ongoing work will be an efficient and cost-effective way to plan service line replacement work. The coordination of work is highly dependent on the accessibility and reliability of available paving information.

Road opening permits will also be coordinated with the various state agencies (for example, the Massachusetts Department of Transportation) as needed for work outside of the Town's right-of-way.

3.4.4 Post-Replacement Procedures

The LCRR has requirements for post-replacement procedures including flushing, filter distribution, and follow-up sampling which are discussed in the following subsections.

3.4.4.1 Flushing Procedure

Immediately following a LSLR, the construction crew is required to perform a 10-minute-high velocity flush of the exterior service line and piping with cold water through the meter bypass to remove any lead particles that may have been disturbed during construction. Aerator screens on all plumbing fixtures are also replaced.

When the first service line replacement program is initiated, following the flushing by the contractor, flushing instructions will be left with the residents in accordance with AWWA C810-17 (Replacement and Flushing of Lead Service Lines) for additional flushing inside of the house. This first flushing should be completed immediately after the service line replacement. The goal of this is to run high velocity water through the plumbing to remove any loose particles. To perform this flush, all aerators should be removed from faucets, and the faucets should be turned fully open and to cold water, starting from the bottom of the house and moving to the top floor. Once the top floor faucets are open, the thirty- minute flush begins. At the end of the thirty minutes, the faucets should be turned off in the reverse order, starting with the top floor and working down to the bottom floor.

In addition, instructions for a daily flush will be provided to the residents. It is recommended that the daily flush is performed for six months after the replacement whenever the water has been stagnating for more than six hours. The goal with this flushing procedure is to change out the water that has stagnated in the interior plumbing with fresh water from the water main. In this instance, flushing only the tap that will provide water for consumption as necessary and five minutes is typically sufficient to bring in water from the water main. The exact time will vary based on the length of the plumbing, but one indication is when the water temperature drops, this means that the water is coming fresh from the water main.

3.4.4.2 Filters

After LSL or GRR replacements, the Town will provide homes with a pitcher filter certified to National Science Foundation/American National Standards Institute (NSF/ANSI) 53 and 42 standards to reduce lead, six months of replacement cartridges, and instructions for use before the replaced service line is returned to service following replacement of a LSL or GRR.

3.4.4.3 Post Replacement Sampling

In addition to flushing, follow-up water sampling is required to ensure that the lead concentrations have decreased following the replacement. In 2024, the LCRR will require that utilities offer homeowners and residents follow-up lead testing three to six months after replacement. The Town will offer consumers post replacement tap sampling for lead to be conducted three to six months after the service replacement is complete.

3.4.5 Handling Partial Replacements

In some situations, the public side of the service is lead while the private side is of non-lead material. Replacement of the customer's LSL/GRR service line would constitute a full replacement. However, if some portion of the private service line needs to be left in place due to accessibility of the building or other unexpected barrier this would be a partial replacement and will be conducted as a last resort only. Prior to any work, the Town will notify customers of the work and advise customers to determine the

material of their services lines. The Town will make a good faith effort to connect with properties where services are found to be LSL/GRR as discussed in **Section 3.2.2**.

Customers who do not opt into having their LSLs/GRRs removed will receive annual notifications until the service line is replaced. In addition, customers who continue to have LSLs/GRRs will be requested to participate in the lead and copper sampling pool.

3.5 Funding Strategy

The Town will use available loans and grants to fund utility and customer-side service line replacements.

3.5.1 Estimated Costs

In 2023, approximate construction costs for a service line replacement was $4,000. Typical associated program management costs for service line replacements, including full time inspection costs, are estimated to be ~12% of construction costs and The Town's internal administration costs are estimated to be ~3% of construction costs.

3.5.2 Funding Sources

Grant and loan sources will be utilized where possible to conduct service line replacements. Federal and state drinking water loan and grant programs are available to assist with service line replacement, however, the focus of funding is anticipated to shift towards primarily LSL replacement following the compliance deadline in October 2024. The Town should review the allowable funding uses for each grant and loan program at the time of application to ensure that the funds can be used for LSL and GRR replacements and that funding can be used to perform partial replacements of customer service lines.

3.5.2.1 Community Development Block Grants (CDBG)

CDBG funding is grant funding targeted specifically for low- and moderate-income properties. These funds can be used for LSL replacement and watermain replacement projects and are distributed on an annual basis. Funding awarded must be utilized within a year or the funds must be reapplied for the following year. For projects like watermain replacements benefitting multiple properties, 51% of the area must be low or moderate income. For replacement work conducted at individual properties, each property receiving work must submit documentation showing low-income status. Projects that would be most applicable for this funding would be watermain replacements in areas known to have a significant quantity of lead goosenecks or individual LSL/GRR replacements.

3.5.2.2 Bipartisan Infrastructure Law (BIL) Funding

BIL funding has allocated $15 billion over five years to lead service line replacements. This funding will be administered through the Drinking Water State Revolving Funds (DWSRF). States are required to use 49% of these funds as principal forgiveness grants. Principal forgiveness for these funds is targeted towards disadvantaged communities, which is delineated by per capita income by MassDEP. Projects must complete the replacement of a full LSL either as a standalone project or as part of a larger infrastructure project such as a watermain replacement. Depending on the utility's intended use of the funding, applicability of this funding source should be checked.

3.5.2.3 Tax Incremental Financing (TIF)

TIF is a financing option that allows a municipality (town, village, or city) to fund infrastructure and other improvements, through property tax revenue on newly developed property. A municipality identifies an area, the Tax Incremental Development District (TIDD), as appropriate for a certain type of development. The municipality identifies projects to encourage and facilitate the desired development. Then as property values rise, the municipality uses the property tax paid on that development to pay for the projects. After the project costs are paid, the municipality closes the TIDD. Overall, service line replacement that fall within TIF zones should review the TIF finances when evaluating funding sources for these replacements.