Town of Somerset Massachusetts

TOWN OF SOMERSET, MA

OCTOBER 2024

Lead Service Line Inventory and Replacement Plan

WRIGHT-PIERCE
Engineering a Better Environment

Lead Service Line Inventory and Replacement Plan

Town of Somerset, MA

October 2024

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List of Abbreviations

ALB	After lead ban
DBE	Disadvantaged Business Enterprise
LCR	Lead and Copper Rule
LCRR	Lead and Copper Rule Revisions
LSL	Lead Service Line
LSLI	Lead Service Line Inventory
LSLR	Lead Service Line Replacement
LSLRP	Lead Service Line Replacement Plan
MassDEP	Massachusetts Department of Environmental Protection
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
mg/L	Milligrams per Liter (ppm)
PLB	Pre-lead ban
ppb	Parts per Billion (ug/L)
PWS	Public Water System
SDE	SDE Civil + Environmental Engineering
ug/L	Micrograms per Liter (ppb)
ULSL	Unknown lead service line
USEPA	U.S. Environmental Protection Agency
WP	Wright-Pierce

Section 1 Introduction

The Lead and Copper Rule ("LCR"), first promulgated in 1991, was enacted by the USEPA to protect public health and reduce exposure to lead and copper in drinking water. The LCR requirements are applicable to community water systems, non-transient, non-community water systems and state and tribal agencies which are responsible for instituting drinking water regulations. In January 2021, the USEPA published the Lead and Copper Rule Revisions ("LCRR"), the first major overhaul of the LCR since its publication.

The LCRR aims to better protect children at elementary schools and childcare facilities, get the lead out of the nation's drinking water, and empower communities through information. Through the LCRR, the USEPA has instructed the nation to develop a Lead Service Line Inventory (LSLI) and a Lead Service Line Replacement (LSLR) plan. The LSLI and LSLR plan are intended to guide water utilities in the complete removal of lead products from drinking water systems. Water systems have until October 16, 2024, to develop and submit LSL inventories and replacement plans after which time LSL replacement will be required for lead service lines (LSL) and galvanized service lines that are downstream of LSLs. EPA is in the process of providing additional guidance through a new rule, Lead and Copper Rule Improvements (LCRI), which is expected to be issued prior to the October 2024 deadline.

Lead and copper containing plumbing can corrode and leach particulates into drinking water, which poses a threat to human health. The most common sources of lead in drinking water are lead pipes and brass or bronze faucets and fixtures. Lead containing pipes are most commonly water service lines that convey water from a publicly owned water main to an individual property. The LCRR requires that utilities create an inventory of the service lines in their water systems and identify which service lines contain lead. Subsequently, the LCRR requires utilities to develop an LSLR plan which details how the utility intends to remove identified lead containing service lines from their systems. The LCRR requires removal of the entire LSL, including both the portion of the service line on public property and the portion of the service line on the property owner's private property. In many cases LSLs may terminate at the water meter requiring entry into a private residence to remove the entirety of the line.

Section 2 Background

2.1 System Background

Somerset (the Town) maintains a water distribution system dating back to the 1920s consisting of approximately 95 miles of distribution mains. The system serves approximately 18,000 people in Somerset, along with a marginal additional amount in Dighton and Swansea. The system has 5,798 known service line connections as summarized in **Table 2-1**. 86 of the service connections are in Dighton and 12 are in Swansea

Table 2-1 System Overview

Oldest Water Main Age	Miles of Pipe in System	Population Served	Number of Towns Served	Customer Types	Total service line connections
1927	95.39	18,300	3	5*	5,798

* Customer types include residential, commercial, agricultural, industrial, and municipal.

2.2 Scope

To continue providing safe and reliable service to all customers and remain in compliance with the most recent Lead and Copper Rule Revisions, the Town recognizes the importance of creating and maintaining a Lead Service Line Inventory and developing a Lead Service Line Replacement Plan. To assist in these efforts, the Town commissioned Wright-Pierce (WP) to develop this LSLI and LSLRP. WP has worked with the Town according to the scope below, and this document represents the results of our partnership.

2.2.1 Assumptions Regarding Somerset's System

In preparation of our proposal, we understand the following details about Somerset's water distribution system:

- There are approximately 6,949 water service connections in the distribution system.
- Service connections are publicly owned from the main to the curb stop and privately owned from the curb stop to the building.
- Most service tie cards are available in PDF format and will be provided by the Town.
- Town will make available water main record drawings and service cards for scanning and digitizing.
- The Town will provide available information of suspected lead and galvanized service materials.
- The Town will provide record information of water mains replaced over the past 30 or so years as applicable to service replacements.
- Historical lead sampling results are available and will be provided.
- The Town will provide a billing database of existing customers in either Excel, Access or GIS format.
- The Town will provide available meter and service line repair/replacement records as applicable.

2.2.2 Proposed Scope of Work

The following scope outlines the tasks to identify LSLs throughout the system and reduce the number of unknown lead service lines (ULSL). It is our understanding that the Town will be receiving funding assistance from the CWSRF. The Town intends to inventory lead service lines from the municipal water system to the water meter in compliance with MassDEP inventory spreadsheet and reporting file requirements. The purpose of this project and

program is to identify the location and prioritize replacement of known lead service lines which could be contributing to lead concentrations in the distribution system.

2.2.3 Task 1 – SRF Loan Application and Coordination

Prepare and assist with filing "Clean Water Planning Drinking Water Lead Service Line Inventories and Replacement Plans Grant" application and facilitate payment requests and grant requirements.

2.2.4 Task 2 – Data Collection and Development of a Lead Service Line Inventory

The purpose of Task 2 is to identify the locations of known lead service lines and reduce the number of suspect lead service lines or service lines with an unknown status. It is assumed that all service tie cards are available in electronic format. Our efforts under Task 2 will include:

- Virtual project kickoff meeting.
- Review the electronic tie cards (in PDF or TIFF format) provided by the Town and create an Excel database for use in subsequent tasks using the MassDEP required database format.
- Review customer billing database in Excel, comma delimited, or Access database format as provided by the Town.
- Review MassGIS parcel database to identify properties built after key lead service line dates to reduce potential buildings for follow up inspections. Key dates include 1940 and 1986, which is when lead pipes and then lead solder stopped being used in Massachusetts, respectively. Other local plumbing codes if available may identify additional key dates.
- If available, collect and review record files and work orders related to the repair or replacement of lead service lines.
- Develop Screening Criteria.
- Inventory Development & Ranking
    - Map sensitive populations and overlay with the following items:
    - Collect existing GIS housing data from the Town (if available) consisting of building type and year of construction.
    - Review water main installation, housing, and service line data to see if a correlation between housing type and year of construction relates to LSLs.
    - Using the data above, identify potential homes that could have LSLs and homes that are unlikely to have LSLs.
    - Provide guidance and recommendations to update the Town's hydrant data collection form as administered by the Fire Department to identify key features to be collected in the future by Town staff.

2.2.5 Task 3 – Water Meter Replacement Records Review

Task 3 is meant to further populate the database of known, suspect, and unknown lead services identified in Task 2 by conducting a review of available private water service materials using available data and photos from the most recent water meter replacement program.

- Review approximately 5,000 water meter installation records from work completed by Mass Installation who developed a spreadsheet identifying service line material identified during meter replacement. It is assumed that a spreadsheet is available in either PDF, Excel, or Access database format and is easily readable.
- Review approximately 1,500 photos and records for water meters installed by the Town to identify service material based on the information provided. (This item to be performed by a DBE subconsultant SDE Civil + Environmental Engineering, Lawrence, MA (SDE) to meet SRF funding requirements).

- Update the MassDEP lead service inventory database to include known homeowner service materials.

2.2.6 Task 4 – Evaluation and Prioritization

Based on the data collected in the prior Tasks, develop a service line replacement priority list and Capital Improvement Plan (CIP). It is anticipated that only a limited number of lead services (less than 50) will be identified and recommendations will be general in nature.

- Development of LSLR prioritization list. Prioritization criteria may include:
  - Lead and Copper Rule Revision's site selection criteria tiers.
  - Ability to replace entire LSL (customer buy-in/approval to remove portion of LSL on customer's property).
  - Prioritization of any LSL that may impact a childcare facility.
  - LSLs in areas of the highest rate of children under 18.
  - LSLs in areas with the highest density of LSLs.
  - Difficulty of replacement.
  - Cost of replacement.
  - Customer desire to replace LSL.
  - Compatibility of LSLR project with other planned local or state infrastructure projects which may interface with the LSLR program.
- Submittal of a draft prioritization and CIP to the Town for review and comment. Incorporate comments and prepare a final plan.
- Development of general procedure for replacing LSLs, including:
  - Property owner/resident notification, outreach, and education.
  - Scoping of replacement of LSL for a property.
  - General service line replacement procedure.
  - Providing pitcher filters or cartridge filters to customers for 6 months post-replacement (including instructions for use). Pitcher and/or cartridge filters will be provided by the Town.
  - Action plan if post-replacement tap sample is above trigger level.

Services materials that are unable to be identified following this effort will be labeled as unknown. Future efforts to determine these unknown service materials will be determined at a later time and be included as an amendment or a separate agreement.

Section 3 Lead and Copper Rule

3.1 Existing Conditions under the Previous Lead and Copper Rule Revisions

The EPA created the original Lead and Copper Rule in 1991 to limit the volume of the two contaminants found in drinking water. The rule sets the Maximum Contaminant Level Goal (MCLG) for lead to non-detection and an action level for lead of 0.015 mg/L and 1.3 mg/L for copper. For a system to be in compliance, the concentration of lead and copper must be less than or equal to the action level in at least 90% of the samples (90th percentile sample). The number of samples taken is dependent on the size of the water system and samples are taken every six months. The sampling sites are chosen to be locations with higher likelihood of lead or copper detections. The number of samples taken can be reduced by half and the frequency can be reduced to annual, triennial, or every nine years if the criteria below is met.

Criteria to reduce to annual sampling:

- The system services under 50,000 people, and
- The lead and copper sample results are less than the action level for two consecutive 6-month monitoring periods; or
- The PWS meets optimal water quality parameters and lead sample results are less than the action level for two consecutive 6-month monitoring periods.

Criteria to reduce to triennial sampling:

- The Town must serve less than 50,000 people and the lead and copper action levels have not been exceeded in three years, or
- The lead concentration has been below the action level and the pH, alkalinity, calcium, and orthophosphate/silica have met their optimal water quality standard for the last three years of sampling, or
- Systems with 90th percentile concentrations of lead below 0.005 mg/L and copper below 0.65 mg/L for two consecutive 6-month sampling periods.

Criteria for sampling every nine years:

- N/A for Somerset since one of the requirements is that the system serves less than 3,300 people.

For exceedances of the action levels, the water supplier must then take samples within six months of the exceedance to determine the contribution of lead or copper from the source water. The water supplier has two years from the initial exceedance to implement source water treatment which may include corrosion control treatment. The state will set a maximum permissible level for the compound based on the concentration of the detected contaminant in the source water. Upon a lead exceedance a public education campaign must begin. This includes mailers sent to each bill paying customer, and a notice with each water bill. The system must also work with local agencies to target and reach out to at risk populations like the elderly and youth.

If lead exceedances continue after the implementation of source water and corrosion control treatment, lead service line replacements will be required to remove lead from the distribution system. The lead service line replacement will be required until the lead samples taken are below the action level for two consecutive 6-month samples. Seven percent of the lead service lines are expected to be replaced annually.

3.1.1 Sampling Requirements

The Town has been sampling for lead and copper since 1991 and has been on a standard monitoring plan since February 2021, which requires 60 samples total throughout two sampling periods per year. In this time, they have not exceeded the five 'allowable' hits above the MCL that would put them into non-compliance.

3.1.2 Recent Results

The results of the most recent lead samples are shown in **Table 3-1**.

Table 3-1 Recent Lead Sampling

Year	Monitoring Period	Number of Samples	Minimum (mg/L)	Maximum (mg/L)	Lead 90th Percentile
2024	June 1 – September 30	30	ND	0.012	0.003

Results show that all thirty samples had a lead concentration below the action level of 0.015 mg/L. No exceedance requirements were triggered.

Furthermore, in fifteen out of twenty-four sampling locations, lead was ND (non-detect). Each sampling location also tested below the copper action level of 1.3 mg/L.

3.2 Lead and Copper Rule Revisions

The Lead and Copper Rule Revisions (LCRR) changed several key components of the Lead and Copper Rule (LCR). Significant updates include:

- Defining a lead trigger level that initiates additional planning, monitoring, and treatment requirements.
- The original 90th percentile (P90) level above the action level requires more action than previously.
- Reprioritizes tap monitoring samples to focus more on LSLs and changes the tiering criteria. Also changes procedure for additional actions if individual samples exceed the trigger level.
- Changes collection procedure to fifth liter sampling.
- Changes monitoring frequency and corrosion control requirements for lead.
- Added a requirement to review sanitary surveys.
- Added requirements for the lead service line inventory, replacement plan, and outreach.
- Allows systems falling into certain categories to select their approach to address lead with primacy agency approval.

More information about these changes can be found at (https://www.epa.gov/sites/default/files/2020-12/documents/reference_guide_for_pwss_12.21.20.pdf).

3.3 Massachusetts Requirements

MassDEP follows the EPA LCRR requirements. MassDEP has also developed the MA Lead Service Line Identification (MA-LSLI) Web App to help survey water customers on the material of their service line. The app conducts a survey which asks homeowners to provide information about their address, the year their home was built, what material

they believe they have as their water service line and asks them to attach a picture of the service line at the meter. More information about the homeowner assessment app can be found in **Section 5**.

MassDEP has also developed a variety of guidance regarding the LCRR and the LSLI. These include infographics, brochures, and outreach, as well as a unique template for the inventory. Additionally, MassDEP has made funding available for the service line inventory and the preparation of the lead service line replacement program.

Section 4 Inventory

4.1 Methods

Wright-Pierce worked with the Town to create a thorough inventory of their service lines. The methods of data collection, including the types of data used, their sources, and how data was organized, are summarized below.

4.1.1 Data Collection

Several methods were used to collect data to create the most thorough, accurate inventory with the data available. These different methods are described below.

4.1.1.1 Town Ordinances or Statutes

The Town was asked if they had any historical ordinances, statutes, or codes in place from prior to the lead ban describing the service line material that was Town practice to install, if any. However, the Town did not have any historical ordinances or statutes in place to this effect.

4.1.1.2 Billing Data

WP obtained data for the inventory through customer billing data, provided by the Town. The Town utilizes VADAR for their record keeping information. Billing data provided account numbers, addresses, some service line material, parcel information, and owner information. This data was used to populate the site ID, locational identifier, and public and private service line material columns A, B, F/J, respectively in the inventory spreadsheet. It was also used to cross-check addresses and account numbers from the tie cards and to obtain a complete list of customers who are connected to water mains (as opposed to private wells). This information was input into the inventory as a record review.

4.1.1.3 Meter Replacement Program

Another useful method of data collection was through the records of recent meter replacements conducted from 2018-2023 by the Town and Mass Installation, Inc. Mass Installation, Inc. replaced approximately 5,000 meters during a meter replacement program. These records included photos of meters, account numbers, addresses, private side service line material, size, and photos, stored in DoForms. An additional 1,000-1,500 meters were replaced by the Town; this was stored in H20Analytics and included photos of the old meter, new meter, and meter location, but did not include data of the private side material. Information from the meter replacement program was input into the inventory as a field inspection.

4.1.1.4 Geographic Information System (GIS) and Town Assessor

WP analyzed the Town's GIS data in order to obtain water main ages. In 1986 Congress amended the Safe Drinking Water Act, banning the use of pipes, solder or flux which were not "lead free" in PWS of plumbing for drinking water use. "Lead free" was defined at the time as solder or flux with no more than 0.2% lead and pipes with no more than 8% lead. Therefore, if GIS suggests that water mains have been repaired or replaced at any time from 1987 to now, it is assumed that the public side of the service line was likewise replaced at the same time as the connecting water main and is considered "lead free", as was Town practice to do. Similarly, the Town Assessor provides building construction data, and any structures built after the lead ban are deemed as having non-lead services. This information was input to the inventory as a record review.

4.1.1.5 Lead and Copper Sampling

Lead and copper sampling data from the Town provided up-to-date information of laboratory hits of lead throughout the system. Information from the sampling data was used to populate column C in the inventory. Lead sampling results were used to identify neighborhoods with concentrations of lead hits where lead pipes may still remain. This information was used to inform the prioritization in Section 6.

4.1.1.6 General Records Review

The Town was able to provide general records such as water main repairs and replacements, as well as tie cards. Recent water main repair or replacement information (post-lead ban date) was used to update public side service line information, as water main repairs and replacement included main to curbstop replacement of the service line. Tie cards were used to populate service line material and installation date where records indicated.

4.1.2 Data Organization

To organize the data collected, WP filled out the Service Line Inventory Excel Workbook as provided by MassDEP. The workbook was downloaded from the Mass.gov website and the start-up instructions were followed to characterize the system with its PWS ID # and the threshold number of multi-family residences in the PWS. The workbook is macro-enabled with dropdown options for many of its columns. WP was able to transfer information the Town provided directly into the inventory, then revise the data to follow MassDEP's guidelines. Any work that SDE performed for the project was able to be merged directly into one inventory, since WP provided them with a copy of the MassDEP workbook and instructions on how to import data. When all data was inventoried, WP used the Inventory Validation feature to ensure all inputs were valid. Finally, the workbook was exported through the workbook's export feature according to the directions. A summary of the results is shown in Table 4-1 and assumptions made are described below.

4.1.3 Assumptions

While filling out the inventory, WP made a few assumptions in order to create the most thorough and complete inventory possible. A summary of these assumptions are noted below.

- When the Town replaces a water main, they also replace all the services on that water main from main to curb. If a water main was replaced ALB (after lead ban), the public side services were therefore assumed to have been replaced ALB and therefore are non-lead.
- If a tie card had only one material and one date on it, the material and date were assumed to be for both the public and private side unless otherwise noted.
- The building-built year was obtained from the Town Assessor and was used for the house plumbing install date. If the building was built ALB, the services were assumed to have been installed ALB and therefore be non-lead unless other information had been presented in the tie card. Likewise, if the building was built PLB (pre-lead ban), the services were assumed to have been installed PLB and therefore could potentially contain lead unless otherwise noted.
- Where no evidence of there being a previous lead line was found, the site was marked as having never had a lead line previously.
- Where the public side material was copper, plastic, or unknown non-lead, the site was marked as not having a gooseneck.

4.2 Results

The complete Lead Service Line Inventory can be found in **Appendix A**. **Table 4-1** below summarizes the findings.

Table 4-1 Inventory Results

Total Inventoried Services: 5,758	Public Side	Private Side
Plastic	58	1,640
Copper	8	232
Galvanized	32	2,587
Cast Iron	9	6
Brass	0	47
Unknown – not lead	1,486	210
Unknown – potentially lead	4,165	1,036
Lead	0	0

Section 5 Replacement Plan

5.1 Verification of Remaining Unknowns

The Town will take steps to verify the remaining unknown service line materials. These steps may include but are not limited to:

- Survey of water customers on their private side material
- Test pits / hydroexcavation
- Water quality sampling
- Probe-based measurement of electrical resistance to verify material, i.e. ElectroScan
- Machine learning or predictive modeling
- Homeowner basement/meter pit inspections
- Identification and documentation during normal operations, such as:
    - Water meter reading, repair, or replacement
    - Service line repair or replacement
    - Water main repair or replacement
    - Backflow prevention inspections
    - Any other capital improvement project or street repair project with excavation

These methods will be utilized based on funding availability and utility capacity.

5.2 Prioritization

Replacement of lead service lines will be prioritized in areas of the community with higher concentrations of the most vulnerable populations. According to the EPA, states must prioritize schools and child care programs in low-income areas (i.e. schools with at least 50% of the children receiving free and reduced lunch and Head Start facilities), elementary and childcare programs that primarily care for children 6 years and under, older facilities that are more likely to contain lead plumbing, and schools and childcare facilities built before 1988 that are more likely to have lead pipes, fixtures, and solder. Also recommended as a priority are elderly care facilities, hospitals, and youth centers, as lead in drinking water affects the elderly and children under 6 years of age the most. Other vulnerable populations, such as people living at or below the poverty line and historically BIPOC communities should be prioritized as well.

The Town contains several of the aforementioned facilities that will be targeted for lead service line replacement first. Also prioritized will be neighborhoods that were shown to have at least one elevated sample of lead during the Town's lead and copper sampling.

5.3 Procedure

The Town's lead service line removal plan incorporates the MassDEP goal of protecting public health by planning to remove all lead service lines in 10 years. Unknown materials will be documented during routine service line replacements, repairs, and meter replacements and readings. Identification of services that do not have a scheduled service line replacement, repair, or meter replacement will begin with physical basement inspections to verify unknown services on the curb stop to meter portion and vacuum excavations to verify material on the main to curb stop portion. Basement inspections will be completed by PWS staff and vacuum excavations will be subcontracted out until all unknowns are verified.

Lead service line replacements will commence during or after verification of remaining unknowns. If lead or galvanized requiring replacement service lines are found during basement inspections or vacuum excavations, the Town will replace the service line at the same time. Town is responsible for replacing service lines with any amount of lead line or galvanized requiring replacement from main to meter with 1" PVC pipe or copper. Lead goosenecks will be replaced if found.

Also, although not required by the LCR, it is recommended that Somerset create a replacement plan for all galvanized services. Galvanized pipe, after decades of use, is prone to corrosion and rusting which can lead to discolored water, leaks and head loss.

5.4 Funding

The Bipartisan Infrastructure Law presents a historic opportunity to address lead challenges in communities across America. The Bipartisan Infrastructure Law provides $15 billion through EPA's Drinking Water State Revolving Fund (DWSRF) in the form of grants and loans to water systems for lead service line replacement (LSLR). Forty-nine percent of this funding must be provided to disadvantaged communities as grants or principal forgiveness loans—which can provide a pathway for underserved communities that might not otherwise have access to funding for water infrastructure upgrades. Eligibility requirements and DWSRF application instructions can be found on the Mass.gov website.

Going through the Division of Municipal Services (DMS) and the Massachusetts Clean Water Trust (CWA) can take upwards of two years to acquire the funds needed to begin the work for LSLR projects. As such, it is recommended that the Town stay proactive as opposed to reactive and apply for DWSRF assistance before LSLR becomes the town's top priority.

While the DWSRF is seen as the primary source of funding for LSLR related work, it is possible for municipalities to use money from other sources to pay for any LSLR projects. Private bank loans and using the town's general fund are other options for payment, but these methods do not provide grant money or reduced interest rates that are given by DWSRF funds. It is highly recommended that all communities, particularly those that are identified as disadvantaged, take advantage of DWSRF funding where applicable.

The Town is a Tier 2 community and is considered a disadvantaged community, which may give it access to more funding opportunities.

Section 6 Lead Sampling Requirements

The Lead and Copper Rule Revisions (LCRR) were published by the EPA in December of 2021. The goal of the revisions is to begin a proactive approach for lead removal from drinking water. Lead in any concentration is known to have a negative effect on those exposed. The goal of the regulation is to remove all lead from drinking water before an exceedance of lead is discovered. Under the old LCR, only an exceedance of 15 ug/L or greater requires replacement of any lead pipe. Under the new LCRR, if a trigger level of 10 ug/L is exceeded, the system must replace a goal % of service lines annually. This goal is set by the state and the system. If the action level of 15 ug/L is exceeded, 3% of lines are required to be fully replaced annually, and 20% of schools and childcare facilities must be tested annually. Additional Lead and Copper Rule Improvements (LCRI) are planned to be finalized by October 16, 2024.

The LCRR requires water distributors to create Lead Service Line Inventories (LSLI) that can then be used to create a Lead Service Line Replacement Plan (LSLRP) by October 16, 2024, for removal and replacement of any lead services within the distribution system, prioritizing those that affect at risk communities such as the elderly and children.

The proposed LCRI is expected to require five liters of samples to be taken with lead testing being done on the first and fifth sample, with the higher of the two being used in the 90th percentile calculation. Additionally, samples are expected to be required in schools and childcare facilities. The sampling requirements are expected to be finalized before the October 16, 2024, deadline along with the LCLRP requirements so that distributors have time to prepare their replacement and sampling plans.

Section 7 Customer Notification

7.1 Education and Outreach

Within 30 days after submitting the service line inventories to MassDEP in 2024, the Town is required to inform all persons with a lead or unknown service line status that their service line may potentially contain lead. This notification must be repeated every year until there is no longer any lead, galvanized requiring replacement, or lead status unknown service line in the PWS distribution system. The notice must include:

- A statement that the service line material is unknown but may be lead
- An explanation of the health effects of lead (this will meet requirements of section 141.85 (a)(1)(ii))
- Steps a person at the service connection can take to reduce exposure to lead in drinking water
- Information about the opportunities to verify the material of their service line

The Town will certify that they have delivered the initial and annual consumer notifications and lead service line informational materials to consumers that have a lead status unknown service line to MassDEP and provide a copy of the notification and informational materials by July 1st for the previous calendar year.

If the Town causes disturbance to a lead, galvanized requiring replacement, or lead status unknown service line that results in the water to an individual service line being shut off or bypassed, such as operating a valve on a service line or meter setter, and without conducting a partial or full lead service line replacement, the Town must provide the persons served by the water system at the service connection with information about the potential for elevated lead levels in drinking water as a result of the disturbance as well as instructions for a flushing procedure to remove particulate lead. The water system must comply with these requirements before the affected service line is returned to service.

If the disturbance of a lead, galvanized requiring replacement, or lead status unknown service line results from the replacement of an inline water meter, a water meter setter, or gooseneck, pigtail, or connector, the water system must provide the person served by the water system at the service connection with:

1. Information about the potential for elevated lead levels in drinking water as a result of the disturbance,

2. Public education materials that meet the content requirements for lead Public Education (141.85(a)).

3. A pitcher filter or point-of-use device certified by an American National Standards Institute accredited certifier to reduce lead, instructions to use the filter, and six months of filter replacement cartridges.

The water system must comply with these requirements before the affected service line is returned to service.

7.2 Procedures

Following the award and allocation of funds from the DWSRF or other sources to update the system's service lines, the replacement of lead and unknown service lines does not happen overnight. While it is possible that water traveling through these outdated lines is not contaminated, customers with service lines marked for replacement should be alerted so they can take preventative measures to ensure the purity of their drinking water. The easiest steps that can be taken to reduce lead in drinking water include:

- If service line material is unknown, customers can contact the water utility to have their water tested. This will not reduce lead levels in drinking water, but it will give an indication if further lead prevention measures need to be taken.
- Flush the home water system by doing laundry, washing the dishes, taking a shower, or other water intensive activities prior to water consumption.
- Regularly clean aerators in homes to prevent the buildup of sediment, debris, and lead on its screen. If left dirty, this particle build up can be responsible for clogging faucets and depositing lead into drinking water.
- Install a properly graded filter to remove lead from drinking water sources. This includes ensuring that any cartridge that comes with the filter is installed properly and replaced when required.

These preventative steps are recommended for customers of the system that have been identified as living in a residence with lead or unknown service line status to reduce the negative health impacts associated with lead consumption. It is important to note that these steps are temporary solutions for the customer prior to the replacement of their service lines.

Section 8 Sampling and Reporting Requirements

Once the funds are acquired and lead service line replacement begins, the Town will continually update its lead line service inventory (LSLI). The Town will provide MassDEP with updated versions of the inventory within 30 days of the end of each tap sampling monitoring period until the Town has no remaining lead status unknown service lines. As stated in the introduction, each PWS must update their inventory by October 16, 2024. PWS's are free to submit their LSLI prior to this date. If any lead, galvanized requiring replacement (GRR), or unknown service lines are identified within the LSLI, the PWS is required by the EPA to send out a notification to the impacted customers informing them of their service line status. This notification must be sent to the customer within 30 days following the completion of the LSLI, per EPA guidelines.

MassDEP is developing a tool to help PWSs share their inventories with the public in an online GIS map. This tool will be available after the inventory is submitted by October 16, 2024. Once this statewide program is complete, all PWSs must upload the latest version of their inventory to the specified location. The LSLI is considered public knowledge, and the system should have it accessible to the public on their PWS website or other means that can be accessed by the public. PWSs who serve over 50,000 customers are required to host the LSLI online. The Town does not fall under this requirement.

The Town will begin LCRR monitoring by January 2025 as required. If the Town exceeds the 90th percentile for lead or the lead trigger level they will conduct a full lead service line replacement program or a goal-based full lead service line replacement program at a rate approved by MassDEP. Notice will be sent to customers within 30 days of the end of the sampling period when the action level exceedance occurred. The notification will be repeated annually until the material of all the unknowns are verified and the LSL and galvanized requiring replacement are replaced.

Section 9 Anticipated Schedule

The schedule below follows standards set forth by both the EPA and MassDEP to ensure the health and safety of the public regarding service lines requiring replacement.

Milestone	Required Completion Date
Submit completed LSLI and LSLRP	10/16/2024
Notification of service lines requiring replacement	30 days after upload of LSLI
Compliance with LCRI	2027
Unknown service material identification	Ongoing through 2037
Finish LSL replacements	Ongoing through 2037

Appendix A
Lead Service Line Inventory (LSLI)

(Submitted Separately)

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