

Lead Service Line Replacement Plan

Town of Essex

WSID:5065

October 7, 2024

GENERAL INFORMATION:

The Town has completed the initial lead-copper service line inventory prior to the required submittal date of 16 October 2024. A copy of the inventory and supporting data has been submitted to the Vermont Agency of Natural Resources. The findings of the inventory are summarized as follows:

1. The inventory spreadsheet contains a list of 3738 entries. This list includes entries for new service lines approved and under construction prior to 16 October 2024.
2. No lead service lines were identified during the conduct of the inventory. However, some service lines, mainly the municipal portion from the water main to the curb stop, on older lines built as early as 1890, have been classified as unknown. While there is evidence from some lines recently excavated, as part of building renovations, that the municipal portions of these service lines are not lead, there is insufficient evidence to classify them as lead-free. There are 149 “unknown” municipal service lines, and 44 galvanized pipes requiring replacement.

SECTION 1: THE STRATEGY FOR DETERMINING THE COMPOSITION OF LEAD STATUS IN UNKNOWN SERVICE LINES IS AS FOLLOWS:

1. Service Line sampling will not be used. Champlain Water District adds a corrosive inhibitor – an orthophosphate – which provides a thin coating on all piping to help prevent the release of lead into the drinking water supply. This coating when continuously applied to the drinking water prevents the release of lead from the piping. Therefore, chemical testing of water service lines in the CWD system would provide no useful results.
2. Mechanical Excavation will be used. It should be noted that all of the “unknowns” are located within Fort Ethan Allen, built starting in 1890 and continuing under military construction for the next 50 +/- years. The army has always constructed its facilities on bases using a common standard and many of the buildings are duplicates of other buildings at the Fort. It is highly likely that excavations at a limited number of representative sites will identify the common standard to the

degree that will confirm the presence or absence of lead services at the “unknowns” throughout the Fort.

SECTION 2: THE PROCEDURE FOR CONDUCTING FULL LEAD SERVICE LINE REPLACEMENT IS:

1. All service lines, whether on the municipal or customer portion of the service, shall be replaced from the water main to the interior meter, if lead piping was used in any portion of the existing service line. The timing of replacements shall be set to comply with State and Federal compliance requirements.
2. It is the plan of the Town to replace all the existing water mains in Fort Ethan Allen, owned by the Town, that have not already been replaced, over time. Most of the water mains date from the 1890's and already have had a life span of over 134 years. The mains are cast iron, with evidence of tuberculation in the lines. When the lines are replaced, new services will be provided at a minimum to the curb stop (in the case of existing copper or PVC lines from the curb stop to the meter) and to the meter where the service lines are not PVC or copper. This is a significant undertaking due to the costs involved. The construction costs are estimated at \$5.2 million and the total project costs at \$7 million. The project is planned for construction in 3 phases. It will require bonding to authorize the work and grants will be sought to offset the cost. It is estimated that the process may take up to 15 years to complete, depending on availability of funding.

SECTION 3: THE STRATEGY FOR INFORMING CUSTOMERS BEFORE A SERVICE REPLACEMENT WILL OCCUR IS:

1. Provide the following information to the user and owner (if the user is a renter):
 - a. Information regarding the water system's lead service line replacement program and the requirements to remove lead service lines
 - b. The status of the specific service line connection
 - c. Notification of any replacement will occur at least 45 days before any scheduled replacement
 - d. There will be no cost to the customer
 - e. There will be drinking water provided to the customer during the time frame of actual service line replacement.
2. The methods identified below will be used for informing the customer of a service line replacement include but may not be limited to:
 - a. Door-to door conversations
 - b. Door hangers
 - c. Mailings (certified)
 - d. Town web page notices

- e. Public notices at the town office

SECTION 4: LEAD SERVICE LINE REPLACEMENT RATE:

The Water System serves 10,000 or fewer persons and is not required to provide a replacement goal at the time of this plan’s submission. See also Section 2 comments.

SECTION 5: PRIORITY FACTORS

The following table provides the Town’s estimate of priority points as set forth in the Department of Environmental Conservation’s guidelines:

Priority Points	Prioritization Factor	LCRR Requirement
0	Known Lead Service Line	Required
10	The Fort Ethan Allen waterlines and services serves day care and school facilities. The Fort Ethan Area serves homes with Children and/or people who are or may become pregnant.	Required
10	Fort Ethan Allen water system serves a significant disadvantaged community with many living in Champlain Housing Facilities.	Required
8	A significant portion of the service lines have galvanized piping that is over 150 years old and has tuberculation in the ¾ inch to 2-inch size service lines with lead potentially in the caulking for the cast iron water mains. Lead may be present in the tuberculated service lines. While the presence of corrosion inhibitors in the system may prevent the release of any lead, it is the Town’s position that the galvanized serves need to be removed and replace with copper.	Required
5	Both medical facilities and a nursing home are located within the Fort.	Required

5	The companion project of water line and service line replacement will enhance the system and improve overall water quality; it will serve multiple homes and businesses, medical facilities and a nursing home.	Not Required
5	Service lines will be relaced during each of three phases and each phase serves a compact area.	Not Required
3	Concurrently replacing long lengths of water mains and accompanying service lines qualifies this project for these points.	Not Required
0	Other factors listed in ANSI/AWWA C810-17 paragraph IIA.	Not Required
1	Replacement of Water Lines and Services with an age in excess of 150 years.	Not required
47	Total Points	

SUMMARY:

Based up the findings of the lead-copper inventory of the Town of Essex Water System, The Selectboard of the Town of Essex approves the Lead Service Line Replacement Plan as presented.

Dated the 7 of October, 2024.

Tracey A Delphia
Tracey A Delphia (Oct 11, 2024 13:44 EDT)

Tracey Delphia, Chair

Andy Watts

Andy Watts, Vice-Chair

Dawn Hill-Fleury

Kendall Chamberlin
Kendall Chamberlin (Oct 12, 2024 11:00 EDT)

Kendall Chamberlin, Clerk

Ethan Lawrence

Ethan Lawrence