

MEMORANDUM

Public Works Department



City of Bothell™

DATE: October 16, 2024

TO: Lead Service Line Report File

CC: Erin Leonhart, Public Works Director
Jaclynn Brandenburg, Deputy Director-Operations
Steven Morikawa, Deputy Director-City Engineer

FROM: Dan Peddy, Water and Sewer Operations Manager
Cameron Ogard, Utility Engineer
Boyd E Benson, Utilities & Development Services Manager

SUBJECT: Background Information for 2024 Lead Service Line Inventory Annual Report

This memorandum summarizes background information for the 2024 City of Bothell Water Utility Lead Service Line (LSL) Inventory project. This information was used as a basis for on-line submittal of required LSL reporting in October 2024.

Regulatory Background

On January 15, 2021, the U.S. Environmental Protection Agency (EPA) issued Lead and Copper Rule Revisions (LCRR) that went into effect on December 16, 2021. The rule requires all community and non-transient non-community (NTNC) Group A water systems to submit service line inventories to the state by October 16, 2024. This requires water system to dedicate efforts to review historic records and determine appropriate identification methods to obtain both private and utility owned service line information. The Washington State Department of Health (Health) promulgates LSL regulations for Washington State Group A water systems.

Bothell LSL Inventory Overview

LSL investigation and reporting requirements and resources are summarized at the Health website (<https://doh.wa.gov/community-and-environment/drinking-water/contaminants/lead/lead-and-copper-rule-revisions>). These resources include a reporting template titled “EPA Inventory Template Edited for Washington Small Public Water Systems”. The City of Bothell Water utility is considered a small/medium water system and used this reporting template.

Bothell’s LSL inventory approach complies with Health guidance and included the following activities:

1. Records Review:
 - a. Reviewed LSL guidance Documents and reporting templates.
 - b. Reviewed Bothell Plumbing Code history to determine when lead service lines were not an approved material.
 - i. November 3, 1952: City of Bothell Plumbing Ordinance 168 discusses service lines and water piping but is silent on allowed material types.
 - ii. March 21, 1966: City of Bothell Plumbing Ordinance 478 adopted King County Plumbing Code (King County Resolution 22873). The March 21, 1966, plumbing code does not include lead as an

Public Works
18415 101st Ave NE
Bothell, WA 98011
425.806-6100
www.ci.bothell.wa.us

approved service line or water pipe material. However, there is no record of lead service lines ever being used within the city prior to adoption of Plumbing Ordinance 478.

- iii. Work permitted prior to March 21, 1966, may not have been installed immediately. Therefore, the City used January 1, 1967, as the effective date for non-lead service lines.
- iv. The City of Bothell concluded that service lines installed on or after January 1, 1967, can be considered “Non Lead” and service lines installed up to and including December 31, 1966, can be considered “Lead Status Unknown”.
- c. Geographic Information System (GIS) evaluation of available county records to determine which structures/properties were developed prior to January 1, 1967, and therefore have “Lead Status Unknown” service line materials.
 - i. The City of Bothell worked with Gray and Osborne, a consultant that specializes in municipal water system, to complete this evaluation in fall of 2023. The results of the evaluation are presented in the January 2024 “Lead Service Line Data Analysis, Workflow Documentation” (attached).
 - ii. A total of approximately 4,748 service lines were considered as part of the 2023 Gray and Osborne evaluation and it was determined that approximately 753 properties may contain service lines installed prior to January 1, 1967. Therefore, the service lines at the 753 identified properties were classified as “Lead Status Unknown” and required additional investigation and service line material identification.
 - iii. The total number of evaluated services does not include services that are 4-inch diameter or greater, and these are considered “Non Lead,” in accordance with Health Guidance.
 - iv. A total of 5,182 service lines are mapped by the City GIS Department as of October 16, 2024. The difference between the October 16, 2024, service line count and the Gray and Osborne count is due to the addition of new, “Non Lead” service lines since 2023 as well as multiple post-1966 service lines connected to a single meter.
2. Service line material identification: The City of Bothell used a Statistical Method for service line material identification completed in accordance with “Statistical Guidance for Group A PWS Evaluation of Unknown Service Lines” <https://doh.wa.gov/sites/default/files/2023-05/331-723.pdf> . This approach allows “Lead Status unknown” service lines to be classified based on a random 20 percent sample group.
 - a. A random 20 percent sample of the 753 properties with “Lead Status Unknown” service lines was created using a random number generator.
 - b. The 20 percent sample included 151 properties. The City of Bothell expanded this list to a total of approximately 200 “Lead Status Unknown” service lines for further investigations.
 - c. City of Bothell staff completed additional office investigations, Construction Inspector interviews, customer questioning, and review of documentation from 2023-2024 water main replacement projects. These additional investigations reduced the total “Lead Status Unknown” list to a total of approximately 120 properties.
 - d. City staff completed field investigations at the remaining 120 “Lead Status Unknown” locations. The field investigations included excavation, inspection, and classification of System-Owned and Customer-Owned service lines using vacuum excavation to minimize disturbance. All excavations were restored to original condition upon completion of the work.
 - e. No lead service lines were encountered and, based on the statistical guidance documents, all service lines classified as “Lead Status Unknown” were reclassified as “Non-Lead Other”. The results of the investigation work were recorded and added to the GIS database for the LSL project.
 - f. Additional evaluation of the “Non-Lead Galvanized” service lines was completed to identify any “Galvanized Requiring Replacement” service lines. However, no “Galvanized Requiring Replacement” were discovered.
3. Results: No “Lead” or “Galvanized Requiring Replacement” service lines were identified. The city plans to complete future investigation work to confirm service line material for the remaining former “Lead Status Unknown” properties not included in the 20% statistical sample. The results are summarized below:

Service Line Material Classification	Definition	Total Number of Service Lines (REQUIRED to be reported under the LCRR)
Lead	Any portion of the service line is known to be made of lead. ²	0
Galvanized Requiring Replacement (GRR)	The service line is not made of lead, but a portion is galvanized and the system is unable to demonstrate that the galvanized line was never downstream of a lead service line.	0
Non-Lead	All portions of the service line are known NOT to be lead or GRR through an evidence-based record, method, or technique.	5,182
Lead Status Unknown	The service line material is not known to be lead or GRR. For the entire service line or a portion of it (in cases of split ownership), there is not enough evidence to support material classification.	0
TOTAL		5,182

4. Reporting: The results of the evaluation were submitted to the Health LSLI reporting portal on October 16, 2024, using the “EPA Inventory Template Edited for Washington Small Public Water Systems” (see attached).
5. Public Outreach: Public outreach is required as part of the 2024 evaluation.
 - a. Any service lines classified as “Lead”, “Galvanized Requiring Replacement”, or “Lead Status Unknown” require customer notification with 30 days. None such service lines were discovered and therefore no notifications were made.
 - b. The Customer Confidence Report will include information on how to access the results of the service line inventory including a link to the updated City of Bothell “Lead Service Line Inventory” website. The website includes:
 - i. A link to the public-facing COBMap interactive GIS portal and service line mapping, known materials, and classification.
 - ii. This memorandum and the attached submitted “EPA Inventory Template Edited for Washington Small Public Water Systems”.

Public Accessibility Documentation

PWS Name: City of Bothell Water Utility

PWSID: 07900L

Enter Date Last Updated:

10/16/24

Purpose of this worksheet: For systems to provide documentation to states on how they met the public accessibility requirements of the LCRR.

1. Select the location identifiers that you use for your service line inventory. Check all that apply.

- ☒ Address
- ☒ Street
- ☐ Block
- ☐ Intersection
- ☐ Landmark
- ☐ GPS Coordinates
- ☒ Other

If "Other", please describe:

Unique Geographic Information System (GIS) identification numbers for each service line

2. Does **every service line** have a location identifier?

Select "Yes" or "No"

If "No", explain. Remember that location identifiers are required for service lines that are lead and galvanized requiring replacement.

YES

3. How are you making your inventory publicly accessible? Check all that apply. Remember that if your system serves > 50,000 people, you **must** provide the inventory online.

- ☐ Interactive online map
- ☐ Static online map
- ☒ Online spreadsheet
- ☐ Printed service line map
- ☐ Printed tabular data
- ☒ Information on water utility mailings or newsletter
- ☐ Hard copy information available in water system office
- ☒ Other

If "Other", please describe:

Customer Confidence Report, City webpage with explanatory memorandum and submitted "EPA Inventory Template Edited for Washington Small Public Water Systems".