

Lead and Copper Rule Revisions

Lead Service Line Inventory Instructions

1. Introduction

The purpose of this template is to help water systems comply with the federal Lead and Copper Rule Revisions (LCRR) initial inventory requirements. This template provides fillable forms that water systems can use to document their methods and organize their data. Note that the State Water Resources Control Board Division of Drinking Water (DDW) strongly recommends but does not require water systems to use the DDW template. However, the alternative inventory spreadsheet must contain the required information detailed in Section 3 of this guide. The alternative spreadsheet should also have the same allowed entries (drop-down options) as the DDW template.

1.1. Template Organization

There are **five** tabs or worksheets to complete in this template:

1. PWS Information,
2. Inventory Methods,
3. Detailed Inventory,
4. Inventory Summary, and
5. Public Accessibility Documentation.

Water systems that choose to use an alternative inventory spreadsheet will still need to provide the information in worksheets 1, 2, 4, and 5 (i.e., all other worksheets except the Detailed Inventory) to DDW.

Sections 2 through 5 of this document will provide detailed instructions for the Inventory Methods, Detailed Inventory, Inventory Summary, and Public Accessibility Documentation tabs in the spreadsheet.

All community (CWS) and non-transient noncommunity water systems (NTNC) must complete and submit their inventory by October 16, 2024.

The LSLI inventory intake portal is now live. Submit completed LCRR initial inventories [here](#). Please refer to the LSLI intake portal [User Guidance](#) document for more information.

Water systems may submit their completed LCRR initial inventories before October 16, 2024. Pursuant to 40 CFR 141.85(e), water systems must provide public notification to customers served by lead, galvanized requiring replacement, and/or lead status unknown service lines within 30 days after DDW's approval of the completed inventory. DDW will notify water systems by email when their inventory submission is approved.

2. Inventory Methods Worksheet

This worksheet is for water systems to document the methods and resources used to develop their inventory.

2.1 Historical Records Review

The LCRR requires review of historical records. More examples are provided in the [LCRR Lead Service Line Inventory FAQ](#) (LCRR FAQ). If no relevant records that indicate the system-owned or customer-owned service line materials are available, please indicate so in the spreadsheet. More example descriptions of historical records reviewed are linked [here](#).

2.2 Identifying Service Line Material During Normal Operations

Check each box for activities during which service line material information is collected. If "Other," explain.

2.3 Service Line Investigations

If a water system chooses an investigation method not specified under 40 CFR §141.84(a)(3)(iv), state approval is required. Please refer to the LCRR FAQ and the [LCRR Inventory Lead Service Line Inventory Methods presentation](#) for approved identification methods and methods approved on a case-by-case basis (e.g., statistical analysis or interpolation). A work plan describing how the case-by-case approved method will be used to develop the inventory must be submitted to DDW. These investigation methods can be used by systems to assess the accuracy of historical records and gather information when the service line material is unknown. **Note that "Interviews" cannot be used as the sole source of information for the basis of material classification.** Field verification will be needed to validate the interviews.

If "Other" or "Emerging Methods" are checked, explain. If "Predictive Modeling" or "Interpolation," describe the model and inputs used. Finally, include a brief explanation on how locations for service line materials investigations were prioritized.

Click [here](#) for 15 minute video tutorial on how to start developing the customer-owned portion of the inventory.

3. Detailed Inventory Worksheet

This section provides instructions for water systems that elect to use the inventory template. All fields are required, unless otherwise indicated. Water systems using an alternative format will need to include the required information below. All service lines, including those classified as non-lead, must be included in the inventory.

When filing out the **Detailed Inventory** tab, please make sure to delete the examples so they are not counted in the **Inventory Summary** tab.

Click [here](#) for 13 minute video tutorial on how to use the DDW inventory template

3.1 Location Information

- **Unique Service Line ID:** This field is optional.
- **Street Address or Other Locational Identifier:** Enter a street address or another, non-address locational identifier (e.g., block, intersection, or GPS coordinates) for each service line. DDW encourages water systems to use street addresses as their locational identifier where possible, especially for lead and galvanized requiring replacement service lines, and for service lines with lead goosenecks or fittings.

3.2 Tracking Materials

- **Service Line Material Classification:** Options include
 - Lead,
 - Galvanized,
 - Galvanized Requiring Replacement,
 - Non-Lead Copper, Non-Lead – Plastic, Non-Lead – Other, and
 - Lead Status Unknown.

Note: Water systems are encouraged, but not required to specify the material of the non-lead service line. The inventory template provides the option of “Non-Lead – Copper” and “Non-Lead – Plastic” for systems to use where applicable. Water systems that choose to not specify the material of the non-lead service line may select “Non-Lead – Other.”

- **Lead Connector Present?** This information will be collected in the **Inventory Summary** tab. Options are “Yes,” “No, Was Present in the Past,” “No,” and “Don’t Know.”
 - Select the option “No, Was Present in the Past” if lead connector was present in the past but has been removed.
 - Select the option “No” if a lead connector was never present.

Please make sure to fill out this column, selecting one of the four options. Otherwise, the entire service line classification (Column W) will output a “Missing Information” message.

- **If Material Anything Other Than “Lead” in Column “E”, Was Material Ever Previously Lead?** Options are “Yes,” “No,” and “Don’t know.” This is for determining whether a downstream or customer-owned galvanized service line would be considered galvanized requiring replacement. Leave this column blank if system-owned portion of the service line is “Lead.”
 - If “Yes” or “Don’t know” and if the customer-owned or downstream service line is a galvanized line, select “Galvanized Requiring Replacement” as the material classification in Column “O”.
 - If “No” and if customer-owned or downstream service line is a galvanized line, select “Galvanized” as the service line material in Column “O”. The text

color of this column will turn red if the service line material is not correctly labeled.

- **Service Line Installation Date:** Enter the installation date if the basis for material classification is “Installation date is after state or local lead ban.” If a water system uses a local ordinance that banned the use of lead other than the California lead ban effective January 1, 1986, provide in the **Notes** column the effective date of the local lead ban. If using a different basis for service line material classification, this field is optional.
- **Service Line Size:** Enter the service line size in inches if the basis for classification is “Service line diameter 4 inches or greater.” If using a different basis for service line material classification, this field is optional.
- **Basis of Material Classification:** Select the method used for material classification. Options include
 - Historical records (See Note on next page),
 - Installation date is after state (January 1, 1986) or local lead ban (i.e., Pipe Dating),
 - Service line diameter 4 inches or greater,
 - Service line repair or replacement records,
 - Statistical analysis or predictive models,
 - Interpolation,
 - Field inspection,
 - Water sampling, and
 - Other or Emerging Methods.

If the service line material is “Unknown,” you may leave the **Basis of Material Classification** column blank.

Please refer to the LCRR FAQ for approved identification methods, and methods approved on a case-by-case basis. If the method used is not listed or if more than one method is used, select “Other or Emerging Methods” and describe the method(s) in the **Notes** column.

Historical records include:

- All permits and existing construction records or other documentation which indicate the service line materials used to connect structures to the distribution system;
- All water system records, including distribution system maps and drawings, historical records on each service connection, meter installation records,

- historical capital improvement or master plans, and standard operating procedures; and
- All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system.
 - **Was the Service Line Material Field Verified?** If “Yes,” describe the field verification method and enter the date of field verification. If the **Basis of Material Classification** column is listed as “Field inspection,” column “K” must be marked “Yes” and the other related columns (L and M) must be completed. DDW encourages water systems to field verify service line materials where possible. Possible acceptable options for field verification method include:
 - Visual inspection at meter pit,
 - Customer self-identification,
 - CCTV Inspection at Curb Box – Internal,
 - CCTV Inspection at Curb Box – External,
 - Water Quality Sampling – Flushed,
 - Water Quality Sampling – Sequential,
 - Water Quality Sampling – Other,
 - Mechanical Excavation at 1 location,
 - Mechanical Excavation at multiple locations, and
 - Other.
 - If “Other,” explain in the “N” column labeled **“Notes.”** As noted in the LCRR FAQ, water systems that choose to use water quality sampling for field verification or as a basis for material classification will need to pilot the sampling protocol on a known lead service line and a known non-lead service line. More information is provided in the FAQ.
 - **Notes:** Provide any additional information as needed, such as basis of material classifications not listed in dropdown menu or information indicating that the service lines are in an interpolation group.

3.3 Entire Service Line Material Classification

Under the LCRR, each service line or portion of the service line where ownership is split must be categorized as one of the following:

- Lead,
- Galvanized Requiring Replacement,
- Non-Lead, or
- Lead Status Unknown.

A split ownership service line means that a system and the customer each own a portion of the service line. A single classification per service line is also required by the LCRR to support other LCRR requirements, such as lead service line replacement (LSLR) plans, tap sampling, and risk mitigation. Table 1 from Exhibit 2-3 of U.S. EPA's Guidance for Developing and Maintaining a Service Line Inventory (listed on the next page) shows how to classify the material classification for the entire service line when ownership is split.

Note: if your system does not have split ownership, to use this template:

- Copy and paste over information in fields under System-Owned Portion to fields under Customer-Owned Portion to calculate the Entire Service Line Material Classification.

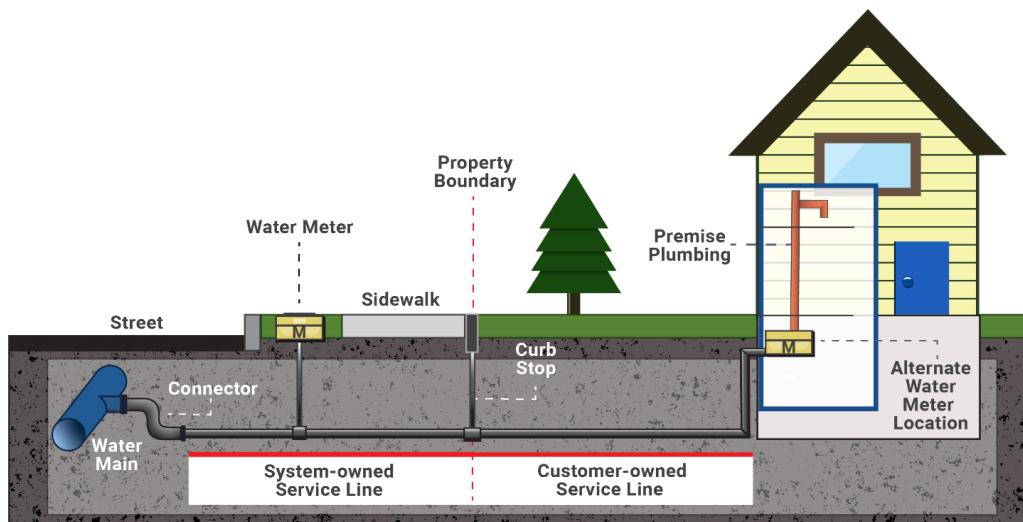


Figure 1. Example of Service Line Ownership Distinctions. Source: (Exhibit 2-2 of Guidance for Developing and Maintaining a Service Line Inventory (USEPA, 2022).

The **Detailed Inventory** worksheet will auto-populate the entire service line material classification based on responses from Columns "E," "G," and "O." If using this worksheet for inventory tracking, make sure those columns are correctly filled and not missing any information. If an error appears, the responses in Columns "E," "G," and "O" may not be valid. Check if material classification in "Customer-Owned Portion" should be "Galvanized" or "Galvanized Requiring Replacement."

If Entire Service Line Classification column outputs the "Missing Information" message, please make sure that Columns "C" (Street Address) or "D" (Other Locational Identifier), Column "F" (Lead Connector Present?), Column "G" (Was Ever Previously Lead?), and Columns "J" and "R" (Basis for Material Classification) are filled out. Note that the basis for material classification does not need to be filled out if the system-owned or customer-owned material is "Unknown."

Lead Service Line Inventory Instructions

Updated March 2024

If a #NAME error occurs, consider using the modified DDW template on the [DDW Lead and Copper Rule webpage](#) that uses functions compatible with Excel versions prior to Excel Version 2021.

System-Owned Portion	Customer-Owned Portion	Entire Service Line Classification
Lead	Lead	Lead
Lead	Galvanized Requiring Replacement	Lead
Lead	Non-lead	Lead
Lead	Lead Status Unknown	Lead
Non-lead	Lead	Lead
Non-lead and never previously lead	Non-lead, specifically galvanized pipe material	Non-lead
Non-lead	Non-lead, material other than galvanized	Non-lead
Non-lead	Lead Status Unknown	Lead Status Unknown
Non-lead, but system is unable to demonstrate it was not previously Lead	Galvanized Requiring Replacement	Galvanized Requiring Replacement
Lead Status Unknown	Lead	Lead
Lead Status Unknown	Galvanized Requiring Replacement	Galvanized Requiring Replacement
Lead Status Unknown	Non-lead	Lead Status Unknown
Lead Status Unknown	Lead Status Unknown	Lead Status Unknown

Table 1: Classification of the Entire Service Line When Ownership is Split. Source: Exhibit 2-3 of Guidance for Developing and Maintaining a Service Line Inventory (USEPA, 2022).

4. Inventory Summary Worksheet

Complete Parts 1-3. If a local lead ban was used as the material classification basis for the system-owned or customer-owned portion of the service line, water systems must provide reference to the local lead ban.

If a water system opts to use the Detailed Inventory worksheet, the totals will auto-populate in Table 3.1 Inventory Summary by Ownership and Table 3.2 Inventory Summary Total. DDW will also collect the number of lead goosenecks, fittings, and connectors.

5. Public Accessibility Documentation Worksheet

The purpose of this worksheet is to document how water systems will comply with the LCRR initial inventory public accessibility requirement (40 CFR 141.84(a)(8)).

For Question 2, the LCRR requires water systems to use a locational identifier for service lines that are lead or galvanized requiring replacement. For Question 3, indicate how the inventory will be made publicly accessible. All water systems serving more than 50,000 people must provide the inventory online.

6. Document Organization and Submission

Submit completed initial inventories using the [LSI Intake Portal](#). Please refer to the LSI intake portal [User Guidance](#) document for more information.

6.1 Water Systems Using DDW Inventory Template

Fill out worksheets 1-5. DDW will post information (including the street address or locational identifier) on lead service lines, galvanized requiring replacement service lines, and service lines with lead goosenecks, fittings, or connectors online. DDW will not post information on unknown or non-lead service lines but will post a summary total for all systems.

6.2 Water Systems Using Alternative Inventory Format

Provide the information required in worksheets 1, 2, 4, and 5 (all other worksheets except the Detailed Inventory) using the fillable forms. Larger water systems with more than 10,000 service connections have been contacted separately by ddw-lsreports@waterboards.ca.gov for a slightly modified submission process.

DDW will post information on lead service lines, galvanized requiring replacement service lines, and service lines with lead goosenecks, fittings, or connectors online.

7. Contact

Please send LCRR inventory questions and workplans to ddw-lsreports@waterboards.ca.gov.