Instructions

This document is intended to provide summary guidance on the completion of your water system's initial Lead Service Line Inventory (LSLI) and includes a brief overview of the different portions of the LSLI template.

PWS Records Tab:

Historical Records Review (Part 1)

The Lead and Copper Rule Revisions (LCRR) require systems to review the following documents when completing their service line inventory:

- **Previous Materials Evaluation:** Systems must review information collected for the 1991 Lead and Copper Rule (LCR) when preparing their initial inventory.
- **Construction and Plumbing Codes and Records:** The "lead ban" of the Safe Drinking Water Act Amendments of 1986 took effect in Oklahoma on May 6, 1987. Systems should verify local plumbing requirements to determine when it became effective in their community. Building construction dates can usually be found in municipal tax records. Most lead service lines (LSLs) are 2 inches or less in diameter and serve single-family homes or small multi-family residences. This information can identify structures that would not be expected to have LSLs.
- **Water System Records:** Systems must review the following: distribution system maps, historical records on each service connection (e.g., tap cards), meter installation records, historical capital improvement plans or master plans, and standard operating procedures.
- **Distribution System Inspections and Records:** Historical records of inspections might indicate service line materials. Sources of information include responses to customer complaints, inspections to locate leaks, cross connection inspections, or inspections to investigate meter issues.

Identifying Service Line Material During Normal Operations (Part 2)

Inventory activities should be worked into the day-to-day activities of the system, and as information is collected regarding service line materials, the inventory must be updated. Routine opportunities for service line data collection include:

- Water meter reading
- Water meter repair or replacement
- Service line repair or replacement
- Water main repair or replacement
- Backflow prevention device inspection
- Other (*e.g.,* street repair or project with open cut excavations)

It is recommended that standard operating procedures (SOPs) be developed or modified to include the collection and update of inventory information by system staff and contractors. SOPs may be used to support obtaining permission for system personnel to access the home for line identification, or to educate customers about the importance of the service line inventory and ways they can self-identify their portion of the line.

Service Line Investigations (Part 3)

Field investigations are not required by LCRR but are recommended by EPA to verify historical records and to supply information where records do not exist. Before using field investigation methods, check with DEQ to verify that these methods will be acceptable. Investigative methods can include the following:

Visual Inspection

- A service line may be visible at the meter box and where it comes into the building.
- Plastic is a smooth pipe and is usually white.
- Lead is a soft metal that is a dull, silver-gray color. It is easily scratched with a coin or key, and the scratched areas will be shiny. It is non-magnetic, meaning a magnet will not stick to it.
- Copper is the color of a penny.
- Galvanized iron/steel is a dull, silver-gray color that is difficult to scratch and is magnetic.

Excavation

- Mechanical excavation involves using a backhoe or other mechanical excavator to dig a "pothole" or test pit to expose the service line. This is typically done near the meter.
- Vacuum excavation involves using a water jet or compressed air to create a small hole to access the service line. This method is faster, less intrusive, less likely to disrupt or damage the service line or other buried utilities, and often cheaper than mechanical excavation.
- If an LSL or a galvanized service line requiring replacement (GRR) is disturbed during excavation, EPA recommends alerting the customer that such disturbance can potentially cause temporarily elevated lead levels in drinking water. Systems should provide information about methods to reduce lead levels, such as flushing.

Other Methods

- Water quality sampling can be used together with other investigative methods. It can help determine the presence of LSLs or household plumbing containing lead; however, lead-containing materials are not always detected in water quality sampling.
- Predictive models look for patterns in a known dataset to make predictions about areas of unknown condition.

Inventory Summary Table (Part 4)

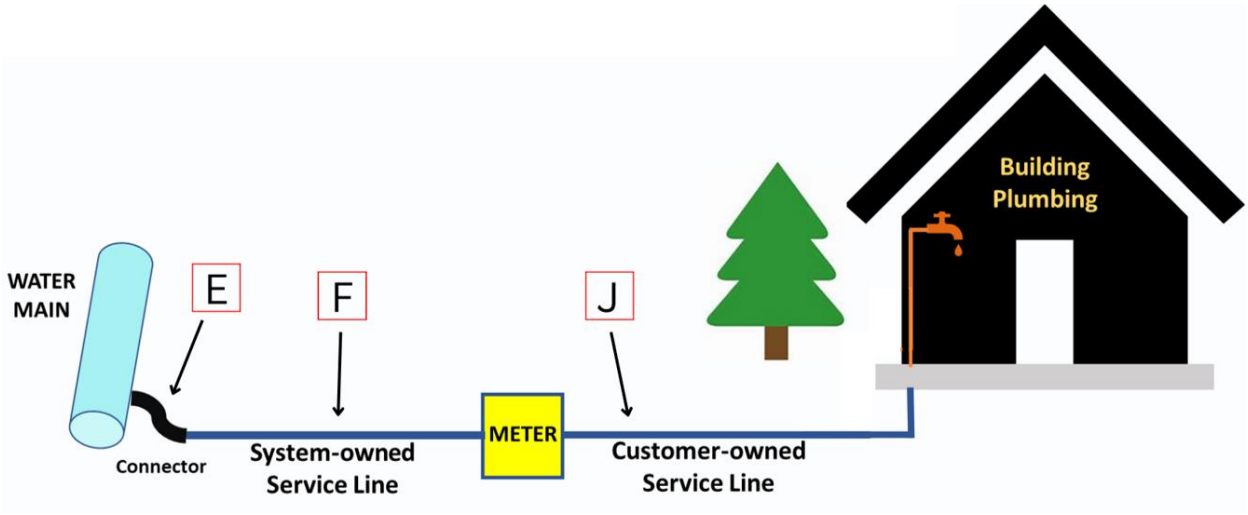
The Excel worksheet will calculate the required values as you provide information for each service line on the Service Line Information tab.

Public Accessibility (Part 5)

Under the LCRR, systems are required to make their inventories publicly accessible.

- Provide the public with a location identifier associated with each service line classified as Lead or GRR. Systems are encouraged to include a location identifier for all service lines including those that are "non-lead" and unknown.
- Systems are encouraged to list the actual service line material for lines classified as "non-lead."
- Inform all persons served by a service connection with an LSL, GRR, or unknown service line of their service line material within 30 days following completion of the initial inventory.
- Water systems that serve more than 50,000 people are required by the LCRR to provide their inventory online for public access.
- Water systems that have demonstrated they have NO lead, GRR, or unknown service lines in their inventory may, in lieu of publishing their inventory, provide a written statement that there are no LSLs along with a general description of the sources used to make that demonstration. These water systems are still required to submit their completed inventory to DEQ.

Service Line Information Tab:



	COLUMN	DESCRIPTION
A	**Unique Service Line ID**	Can be an existing customer ID, meter number, etc.
B	**Street Address**	Street location of the service line. Use 911 address when possible.
C/D	**Latitude and Longitude**	GPS coordinates are recommended.
E	**Is there a Lead Connector?**	A lead connector is a short section of piping, typically not exceeding two feet, which can be bent and used for connections between rigid service piping. Commonly known as gooseneck or pigtail.
F	**System-Owned Service Line Material**	The material or composition of service line owned by the public water system. This portion of the service line is between the water main and the water meter.
G/K	**Basis of Material Classification**	Describe the resources and methods used to identify the service line material. Not required for Unknown Materials.
H/L	**Service Line Installation Date**	Date, year, or estimated date range when the service line was installed or replaced. Not required for Unknown Materials. If no reasonable guess is available, leave this column blank.
I	**Was Service Line Material Ever Lead?**	Was the portion of the service line owned by the public water system ever lead? Important for determining if downstream/customer-owned galvanized service line requires replacement.
J	**Customer-Owned Service Line Material**	The material or composition of service line owned by the customer. This portion of the service line is after the water meter and continues to the building plumbing.
M	**Material Classification for the Entire Service Line**	No action needed. This is automatically determined based on the information you provide for each service line.
N	**Comments**	This is a space to record any additional information.

Latitude and Longitude (Column C and D)

For information on how to find GPS coordinates, please see the "Collecting GPS Coordinates" document on the DEQ website https://www.deq.ok.gov/wp-content/uploads/water-division/How-to-Collect-GPS-Coordinates-1.pdf.

Material Type Definitions (Column F and J)

- **Lead:** A service line made of lead.
- **Non-Lead Copper**: A service line made of copper.
- **Galvanized Iron/Steel**: An iron or steel service line that is 'galvanized' or coated with zinc.
- **Non-Lead Plastic:** A service line made of plastic materials, such as, PVC, CPVC, PEX.
- **Non-Lead Other:** A service line that is NOT-Lead, but is not copper, plastic, or galvanized iron/steel. The specific material may be identified in the Comments column (N).
- **Non-Lead Specific Material Unknown:** A service line that is NOT Lead, but the specific material is unknown.
- **Unknown**: A service line of completely unknown material(s).

Basis of Material Classification (Column G and K)

A drop-down list is provided for each of the columns, G and K. Select from this list the resource or method used to identify the service line material(s) on both the system and customer owned portions of the service line, respectively. This is not required for unknown materials. If "Other" is selected, please describe the resource or method in the Comments in Column N. The drop-down list includes:

- Building/Plumbing Codes
- Construction Drawings/Maps
- Installation Date after Lead Ban
- Installation Record (for example, tap card)
- Service Line Repair/Replacement Record
- Service Line Diameter Greater Than 2 inches
- Visual Inspection Record (for example, meter installation record)
- Service Line Excavation
- Other (Describe in Comments in Column N.)

Service Line Installation Date (Column H and L)

The year in which a service line was installed provides information regarding the possible types of service line materials used at that time and can help categorize whole sections of service areas which were installed at similar dates. The system should use as exact a date as possible; example answers are provided in order of preference:

- 1975 (Year)
- 1970-1976 (Year Range)
- 1970s (Decade)
- 1950s-1970s (Decade Range)
- <1950 (Sometime before 1950)
- >1986 (Sometime after 1986)
- If no reasonable guess is available, leave this column blank

Was Service Line Material Ever Lead? (Column I)

Determining whether a system-owned service line had ever been lead in the past is important in categorizing whether a customer-owned galvanized iron/steel service line should be categorized as a "galvanized requiring replacement" or as a "non-lead" line for purposes of the LCRR. This is because lead lines located upstream of galvanized lines can "seed" the internal pipe scaling of downstream galvanized lines with lead, causing the galvanized lines to be a significant source of lead release long after the upstream lead lines have been replaced.

- If the material classification of the system-owned service line is currently or has ever been lead, select "Yes."
- If the system is certain that the system-owned service line is not lead, and has never been lead, select "No.
- If the system does not know the system-owned service line material or does not know if there has ever been a lead line, select "Unknown."

More information can be found in EPA's "Guidance for Developing and Maintaining a Service Line Inventory" available online (www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule)**.**