



# Lead Survey Line Inventory Frequently Asked Questions

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These FAQs, along with the [Lead Service Line Inventory Guidance 331-711 \(PDF\)](#), help water systems comply with the service line inventory requirements of EPA's Lead and Copper Rule Revisions (LCRR).

## What requirements in EPA's Lead and Copper Rule Revision (LCRR) rule do water systems need to comply with?

All community and non-transient non-community (NTNC) water systems must develop an initial inventory of service lines that meets LCRR requirements, including service line materials classification and information sources, **for both the public and private portions** of every service line, and submit their lead service line inventories to the state by October 16, 2024.

On December 17, 2021, following U.S. Environmental Protection Agency (EPA) engagement activities, EPA published Docket No. EPA-HQ-OW-2021-0255 in the federal register. Within the Docket, EPA committed to propose and revise the LCRR by October 2024, with the Lead and Copper Rule Improvements (LCRI). The LCRI is expected to delay the implementation of portions of the LCRR beyond the October 16, 2024, compliance date; however, EPA maintains the October 16, 2024, compliance date for the lead service line inventories.

Water systems are to keep their current tap sampling plans at this time. For updates on the LCRI, visit EPA's [Lead and Copper webpage](#).

## Are consecutive systems required to do a lead service line inventory?

Yes. Each community and non-transient non-community water system is responsible for the completion of a lead service line inventory.

## What is the LCRR definition of a lead service line, gooseneck, and galvanized line?

**Lead service line** means a portion of pipe that is made of lead, which connects the water main to the building inlet. A lead service line may be owned by the water system, owned by the property owner, or both. A galvanized service line is considered a lead service line, or a "galvanized requiring replacement" (GRR) line if it ever was or is currently downstream of any lead service line or service line of unknown material. If the only lead piping serving the home is a lead gooseneck, pigtail, or connector, and it is not a galvanized service line that is considered a lead service line, then the service line is not a lead service line.

**Gooseneck, pigtail, fitting, or connector** is a short section of piping, typically not exceeding two feet, which can be bent and used for connections between rigid service piping. Lead

goosenecks, pigtails, fittings, and connectors are not considered to be lead service lines. The LCRR does not require lead goosenecks, pigtails, fittings, and connectors to be inventoried. Yet, water systems should remove these items that contain lead as part of a lead service line replacement plan and impact appropriate sample locations.

**Galvanized service line** means iron or steel piping that was dipped in zinc to prevent corrosion and rusting. A galvanized line that is connected downstream of a lead gooseneck, pigtail, fitting, or connection is not considered a GRR. However, the LCRI may still require removal of lead gooseneck, pigtail, fittings, or connectors and any downstream galvanized lines as part of the lead service line replacement plan.

## How is each portion of the service line material categorized in the LCRR?

The rule requires the water system to collect material data on both the water-system-owned portion of the service line (water main to the meter) and the customer-owned portion of the service line (meter to the building inlet).

The water system must identify all service lines, regardless of usage. Irrigation services, fire services, and currently dormant services all must be inventoried. The service line could be repurposed in the future for potable, active use. Several parts of the LCRR use the inventory, including the LSL replacement plan, customer notification, and selecting appropriate compliance sample tap sites.

### All water systems must develop and submit to us an initial inventory by October 16, 2024.

Each portion of all service lines served by all water systems must be categorized in the following manner.

- ◆ **Lead** where the service line is made of lead.
- ◆ **Galvanized Requiring Replacement** (GRR) where a galvanized service line is or was at any time downstream of a lead service line or is currently downstream of a “Lead Status Unknown” service line. If the water system is unable to demonstrate that the galvanized service line was never downstream of a lead service line, it must presume there was an upstream lead service line.
- ◆ **Non-lead** where the service line is determined through an evidence-based record, method, or technique not to be lead or galvanized requiring replacement. Sampling for lead and copper in the LCRR in non-lead systems requires additional knowledge of service line material. ODW encourages the water system to classify the actual material of the service line (i.e., plastic or copper) as often as possible. ODW also encourages the water system to classify the connection for its cross connection control program.
- ◆ **Lead Status Unknown** where the service line material is not known to be lead, galvanized requiring replacement, or a non-lead service line, such as where there is no documented evidence supporting material classification.

## How does a water system document each service line?

The LCRR requires that each service line or portion of the service line where ownership is split must be categorized separately. We require the data to be submitted using IEPA's [example lead inventory Excel template](#). If you would like to submit the data in a different format, please check with your ODW regional engineer. Group A water systems classified as non-transient non-community (NTNC) typically are connected directly to the source and do not contain service lines. Examples are schools, churches, and private businesses. The NTNC water systems will need to inventory all piping from the source to the building inlet.

## How does a water system access information regarding the private/customer owned service line?

If a review of historic records results in a water system classifying a private service line as unknown, you will need to communicate with property owners to determine the type of material.

You may request customers to self-report their service line material. See Section 5.1.1 and Appendix C of EPA's Guidance for Developing and Maintaining a Service Line Inventory ([epa.gov](http://epa.gov)) for information on customer self-identification and examples of customer service line material instructions.

## Another idea is to educate customers about the importance of the service line inventory and to obtain permission for water system personnel to access the home for service line material investigation. How do I determine if there is a local lead ban prior to 1986?

You will need to search historic plumbing codes to determine if lead service lines and/or lead goosenecks were not allowed by an earlier municipal/local code, prior to the SDWA lead ban date of 1986. If you find code language that does not explicitly specify lead as an approved material, you may assume that lead is not approved. However, if you know of or find lead pipe installed during the time of the ban, you may not use the earlier date to classify service lines as "non-lead". If you have already learned about an earlier lead ban date, please consider sharing that date and evidence with [LCRRassistance@doh.wa.gov](mailto:LCRRassistance@doh.wa.gov) and your neighboring water systems to help inform about the use of lead pipe in your region.

We hired a consultant to look into historic plumbing codes. At the time of this update, Seattle King County has documentation of an earlier date.

## How do I identify the service line materials?

The rule requires a water system to review existing records and data to learn about the materials used when the service line was constructed. The following are examples of records to review.

- ◆ Construction and plumbing codes or ordinances.
- ◆ County permitting records to obtain construction dates of structures.

- ◆ Water system distribution maps, engineering drawings, or capital improvement plans.
- ◆ Water system standard operating procedures.
- ◆ Historical records on each service connection and meter installation, such as maintenance records or work orders.
- ◆ Inspections and records of distribution system.
- ◆ Customer Service Inspection records.

## **If a review of historic records results in a water system classifying a private service line as unknown, what alternative methods has the state approved to identify type of material?**

After using historic records, pipe dating, pipe diameter, and visual inspection as discussed in the [Lead Service Line Inventory Guidance 331-711 \(PDF\)](#), the state approved the following methods to help you identify service line materials.

**Interviews**—Interviews with experienced system staff and plumbers may be used to focus the inventory effort and verify utility practices. Classifications of service line materials based on interviews, however, should not be used as a sole source of information for the initial inventory. Systems may consider interviewing their neighboring water systems to inquire about regional practices. A significant number of field verifications are needed to validate staff interviews.

**Physical visual inspection**—Physical inspection of the piping is an acceptable method to determine the material of a service line. You may visually inspect the service line at the meter or valve box. We require a minimum of one point of inspection to confirm material at a location that the water system feels captures accurate information. A record of the physical visual verification must be made by the water system. Customers may also assist with a visual inspection (e.g., by using scratch or magnet tests or lead paint test kits) to help identify the material of the customer-owned portion of the service line. The water system should develop a check list and instructions for customers and obtain a written record and photograph for verification. The water system will need to ensure the customer verification is appropriate prior to creating a record of the service line. Examples of cities using customers' verification are included in the U.S. EPA's inventory guideline section 5.1.1.

**Statistical Approach**—For water systems that have found no lead service lines but still have unknowns, this approach is strongly recommended. Water systems must demonstrate a minimum of 95 percent level of statistical confidence. Using a statistical approach requires identifying how many unknown service lines must be physically inspected and then randomly selecting service lines for physical inspection. Please refer to [Statistical Guidance for Group A PWS Evaluation of Unknown Service Lines 331-723 \(PDF\)](#).

**Predictive models**—Predictive models look for patterns in a known dataset to develop algorithms to determine what material may be located in an area with unknown material service lines. The predictive models are not 100 percent accurate, but they are a useful tool to find areas that need more attention or additional verification. The water system needs to identify as many service lines as possible using the means described above and in EPA Guidance Section 6 and 7 before using the model to predict the remaining unknown lines. Using representative known

data on service line material improves the accuracy and reliability of the model. More accurate identification methods will be needed for older service lines.

**Water quality sampling**—We do not recommend using water quality sampling to determine the existence of lead service lines.

**Emerging methods**—Researchers are developing new service line material identification methods. The water system will need to pilot any emerging method of identification on known lead service lines and non-lead service lines to determine the effectiveness of the product prior to engaging with us to receive approval for the method.

If you have questions regarding any of these methods, please contact our Engineering and Technical Services (ETS) staff at [ODW ETS Services](#) or talk to your ODW [regional engineer](#).

## **What information does a water system need to share with its customers?**

Water systems must make the inventory information available to their customers. Water systems are required to notify all customers served by lead service lines, GRRs, or lead status unknown service lines within 30 days of completion of the inventory.

Service lines classified as Unknown are treated as lead service lines in the LCRR. Annual public notification to each customer with an unknown service line is required. The LCRR describes a disturbance where notification and flushing instructions are required for any act that causes the individual service line water to be shut off. The LCRR further describes a disturbance as the replacement of a meter, gooseneck, pigtail, or connector where pitcher filters and public education are also required, 40 CFR, §141.85 (f).

Water systems must make their service line inventory that includes a location identifier or specific address for any lead line or galvanized line requiring replacement publicly available, per 40 CFR, §141.84 (a)(8)(i). Water systems serving more than 50,000 people must post their inventory online. CWSs and NTNCs must include instructions in their Consumer Confidence Reports on how to access the inventory. When a water system has no lead, GRR, or lead status unknown service lines in its inventory, it may meet LCRR public availability requirements by providing a written statement in lieu of publishing the inventory. The written statement must also include a general description of methods used to make the determination that the system contains only non-lead service lines and a signature by an authorized representative of the water system.

Each water system must maintain the inventory information and be prepared to discuss it with us if we request additional information such as part of an investigation aligned with lead monitoring.

## **What is happening with schools and child care centers relating to LSLI and monitoring?**

Schools, licensed child daycare and early learning facilities that are service customers of a regulated Group A or B water system are required to monitor for lead in drinking water. Schools

are required to monitor per Chapter 43.70.830 RCW and Chapter 28A.210.410 RCW requires drinking water outlets in school buildings built, or with all plumbing replaced, before 2016 be tested for the presence and level of lead contamination by June 30, 2026, and every five years thereafter. Childcare programs in Washington are required to test their drinking water for lead per Chapter 110-300-0235 WAC.

Water systems serving schools and childcare facilities must inventory the service lines. Future monitoring locations specifying schools and childcare facilities as part of the LCRR/LCRI is yet to be determined.

- ◆ [Lead in School Drinking Water](#)
- ◆ [Lead in Childcare Drinking Water](#)
- ◆ [Lead Test Results from Drinking Water in Schools](#)

## **Is there funding available to develop the inventories and replace lead service lines?**

There are opportunities for funding for the work required to do the inventory and replacement of lead lines. Please visit our [Drinking Water State Revolving Fund program webpage](#).

## **What is changing with a water system's lead and copper monitoring schedule?**

There will be changes to the tiering criteria in EPA's upcoming LCRI. Water systems should continue to use their current lead and copper sampling plans based on the tiering criteria as listed in our publication [Lead and Copper Monitoring 331-111 \(PDF\)](#). We will learn more when EPA shares the LCRI rule language proposed for Fall 2023.

## **If a water system is replacing lead pipe, GRR or lead goosenecks, connectors or fittings, what procedures should be followed to prevent lead exposure to customers?**

The LCRR requires the water system that has an approved replacement plan to follow procedures to prevent lead exposure to customer during construction. We recommend a water system conducting construction on any lead pipe, GRR, gooseneck, connector or fitting to:

- ◆ Determine the service line material on the landowner/customer property.
  - If the landowner/customer is unwilling to allow the water system to determine the service line material, the water system should document the interactions with the landowner/customer.
  - If the landowner/customer-owned service line is also lead, the water system needs to inform the customer of the lead service line and work with the landowner/customer to remove all lead materials at the same time.
  - The water system is not required to bear the cost of the replacement of the portion of the affected service line not owned by the water system.

- If the landowner/customer-owned service line is lead and the landowner/customer is unwilling to replace the service line, the water system may continue the water-system-owned user service line replacement.
- ◆ Provide the person served by the water system at the service connection with educational information about the potential for elevated lead levels in drinking water as a result of the disturbance.
- ◆ Provide the person served at the service connection with flushing instructions for the building following the replacement.
- ◆ Offer to the consumer to take a follow-up tap sample after completion of the service line replacement.

## **What if I don't complete the initial inventory?**

Not completing a LSLI by October 16, 2024, is considered a treatment technique violation (health based). A Tier 2 public notice is required.

## **What if I don't submit an inventory to the state?**

Not submitting a LSLI to the state by October 16, 2024, is considered a reporting violation. A Tier 3 public notice is required.

## **What if I fail to make the inventory publicly accessible or if the system has no lead, GRR, or unknown I fail to issue a statement declaring the distribution system has no lead?**

This is a treatment technique violation. A Tier 2 public notice is required.

## **For more information**

Find more publications on our [Publications and Forms webpage](#).

Contact our nearest regional office from 8 AM to 5 PM, Monday through Friday.

[Eastern Region](#), Spokane Valley 509-329-2100.

[Northwest Region](#), Kent 253-395-6750.

[Southwest Region](#), Tumwater 360-236-3030.



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