



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

LCRR Service Line Inventory

Developing a SLI and Investigating Unknowns

Sean Earley
GA EPD
Drinking Water Compliance Unit

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LEAD AND COPPER RULE REVISIONS (LCRR)

What is the LCRR?

- Published by EPA on January 15, 2021 (40 CFR §141.80-93)
- Establishes Service Line Inventory (SLI)
- Other changes:
 - Lead and Copper Tap Monitoring*
 - Lead Service Line Replacement (LSLR)*
 - Testing in Elementary Schools and Licensed Childcare Facilities*

* Subject to change under the LCRI



Disclaimer

This document provides recommendations to public water systems in developing and maintaining a service line inventory. The guidance within this document can be used to comply with the requirements under the Lead and Copper Rule Revisions (LCRR) that are in effect at the time of document publication. **As described in the Environmental Protection Agency's (EPA's) *Federal Register* notice of December 17, 2021 ("Notification of conclusion of review"), EPA intends to publish a proposal to revise the LCRR and take final action on the proposal by October 16, 2024, but EPA does not expect to propose changes to the requirements for information to be submitted in the initial service line inventory. However, the rulemaking could include changes to the requirements for inventory updates (USEPA, 2021a).** This guidance



LEAD AND COPPER RULE REVISIONS (LCRR)

Lead and Copper Rule Improvements (LCRI)

- Expected proposed rulemaking:
 - Requirement to **replace all Lead Service Lines** (LSLs)
 - New **compliance tap monitoring** requirements
 - New **action and trigger levels**
- Initial Service Line Inventory requirements to remain the same

The screenshot shows the EPA website's navigation bar with the EPA logo and search bar. Below the navigation bar, the page title is "Ground Water and Drinking Water" with a "CONTACT US" link. A sidebar on the left lists various topics: "Ground Water and Drinking Water Home", "Basic Information", "Private Wells", "Consumer Confidence Reports", "Regulatory Requirements", "Standards and Regulations", and "All Drinking Water Topics". The main content area features the heading "Lead and Copper Rule Improvements" and a "Background" section. The background text states: "There is no safe level of lead exposure. In drinking water, the primary source of lead is from pipes, which can present a risk to the health of children and adults. The U.S. Environmental Protection Agency (EPA) is committed to using every tool available to protect all Americans from lead in drinking water. As part of a [whole of government plan](#) to deliver clean drinking water, and replace lead pipes, EPA is developing a new proposed rule, the **Lead and Copper Rule Improvements (LCRI)**, that will strengthen the [Lead and Copper Rule \(LCR\)](#). First promulgated in 1991, the LCR regulates lead and copper in public drinking water systems."

LCRI expected 4Q2023*



SERVICE LINE INVENTORY (SLI) OVERVIEW

Who

- Community Water Systems (**CWSs**)
- Non-Transient Non-Community Water Systems (**NTNCWSs**)

What

- Initial Service Line Inventory
- All service lines (SLs) regardless of classification

When

- **October 16, 2024**
- Update due **July 1** each year



SERVICE LINE INVENTORY (SLI) OVERVIEW

Public Outreach Requirements

- All water systems must make their SLIs publicly available
 - Population \geq 50,000 – available online
 - CCRs must indicate where customers can find their SLI or get a copy
- Service Line Consumer Notices
 - within 30 days of submitting the SLI
 - Proof/Certification due to the GA EPD each year on or before **July 1**

WATER SERVICE LINE INVENTORY

We're taking a look at our water service lines to get an inventory of lead, non-lead, galvanized and unknown service line types.

This inventory is part of the Environmental Protection Agency's Lead and Copper Rule. It will help us build a database and take action to maintain our high water quality, meet all guidelines and protect public health.

We're committed to the protection of public health and to the quality management of water and wastewater services.

We'll contact you if any action needs to be taken at your service address.

CALL
254-299-2480

If you have questions about the water service line inventory:

VISIT
wacowater.com

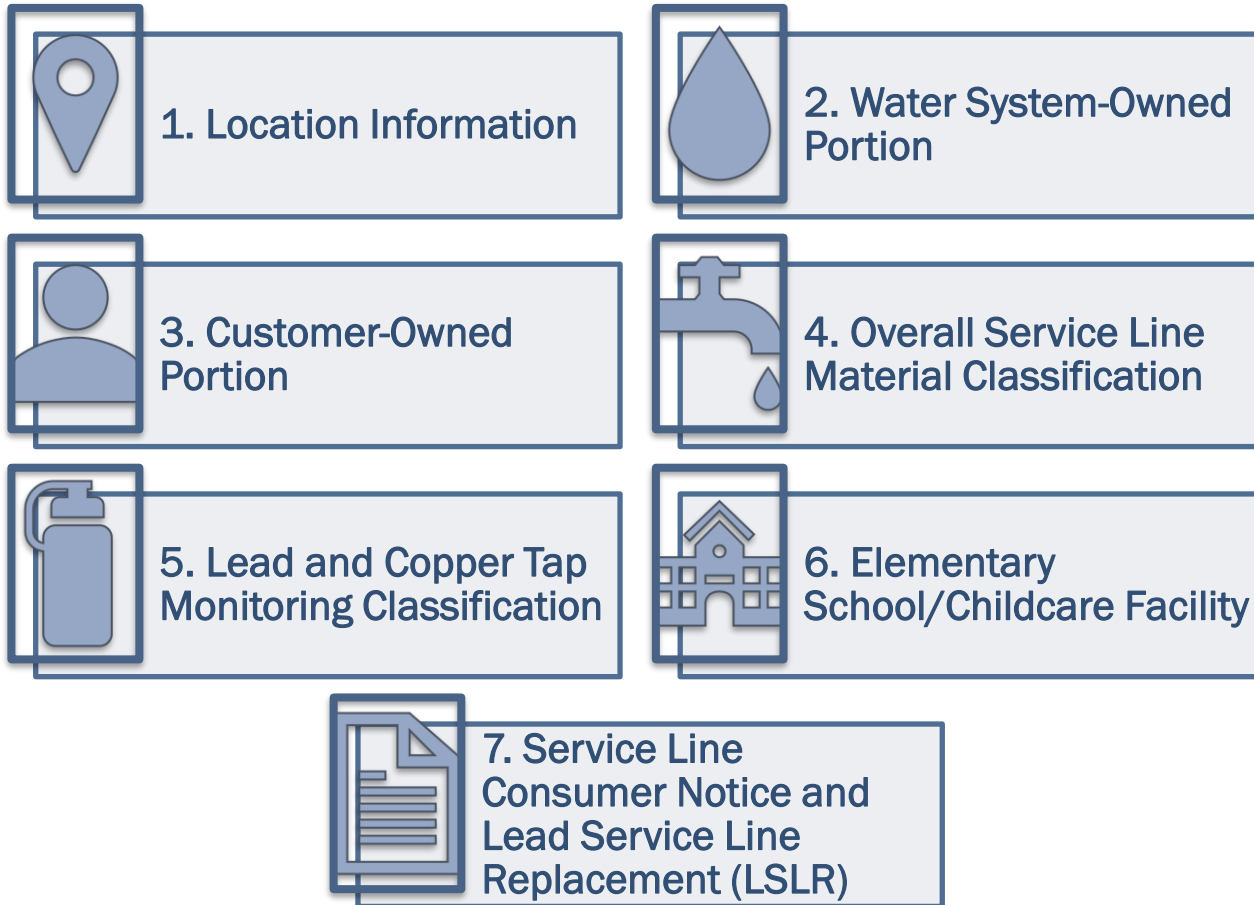
CONTACT US
on the 187 Water App

Waco Water Utility Services
PO Box 2570
Waco, Texas 76702

Scan the QR code to get more info or to let us know what kind of service line you have.



7 ELEMENTS OF THE GA EPD LCRR SERVICE LINE INVENTORY

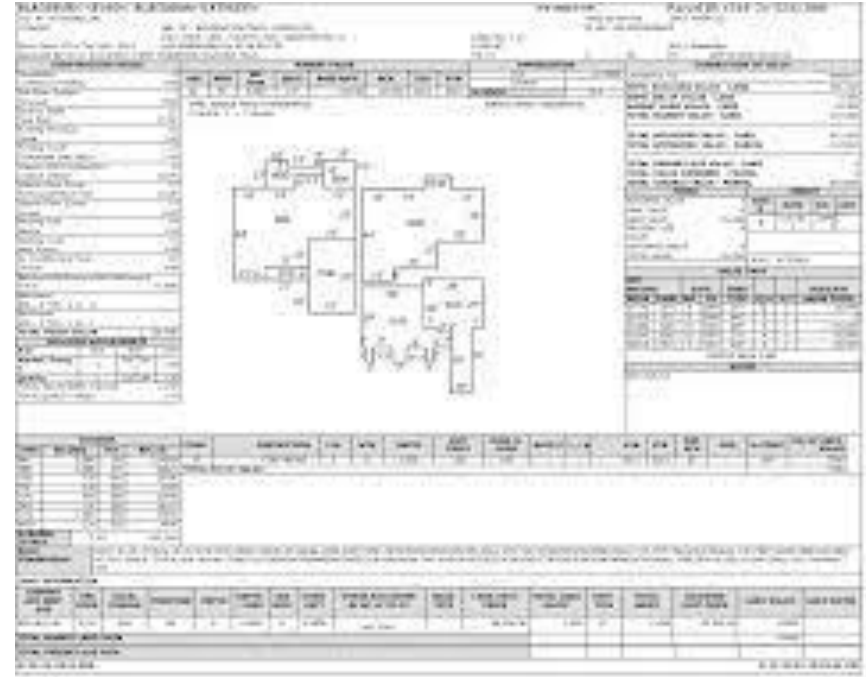




INITIAL SCREENING PROCESS

Use of available historical documentation to assist in narrowing the initial dataset (Service Lines)

- Building Records
- Tax Records
- Internal Reports (Service Line Diameter)
- Local/State Codes and Ordinances
- Service lines installed **on or after January 1, 1990** can be classified as **Non-Lead**





Starting Dataset

Initial Service Line List

Lead Ban/Year Built

Local Ordinance or Code, Building Records

Pipe Diameter and Other Historical Records

Lead Status Unknown
Investigation Needed





Identify Dataset/Compile List of Service Lines
(Tax/Billing Records)

1st Screening
(Lead Ban/Building Date)

2nd Screening
(Pipe Diameter Records)

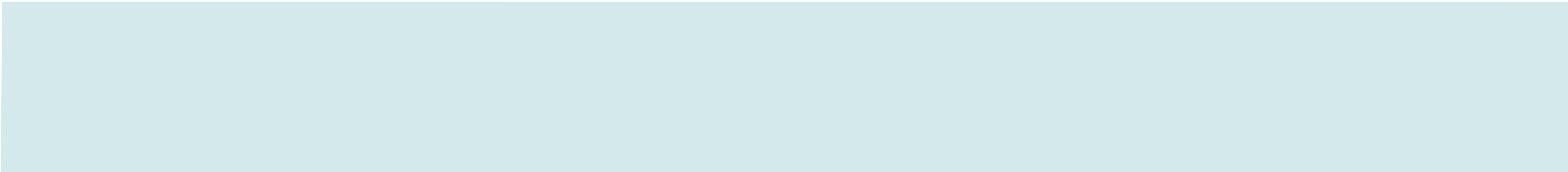
3rd Screening
(Other Historical Documentation)

Lead Status Unknowns

Compile Documentation and Update SLI

Field Investigation

Field Verification





FIELD INVESTIGATIONS

Lead Service Line Replacements (LSLR) will be based on the Initial Service Line Inventory Overall Service Line Classifications

- **Lead Status Unknown will be treated like Lead** and subject to the LSLR schedule determined by the Lead and Copper Rule Revisions (LCRI)
- Water systems should **minimize the number of Lead Status Unknown** service lines on the Initial Service Line Inventory through field investigations
- Water systems should **prioritize certain areas for Field Investigation and Lead Service Line Replacement**



FIELD INVESTIGATIONS

When conducting Field Investigations consider:

1. Completeness/Accuracy of Historical Documentation
2. Normal/Routine Operations (Meter Replacements, Maintenance, Complaints)
3. Previous Investigations
4. Number of Lead Status Unknown
5. Resources Needed (Manpower, Funding, Time, Effort)

*When prioritizing Field Investigations consider:

1. Prioritize Vulnerable or environmental justice populations
2. Target areas with the most unknowns
3. Prioritize investigations by the likelihood of finding lead service lines
4. Use field investigations to verify historical records

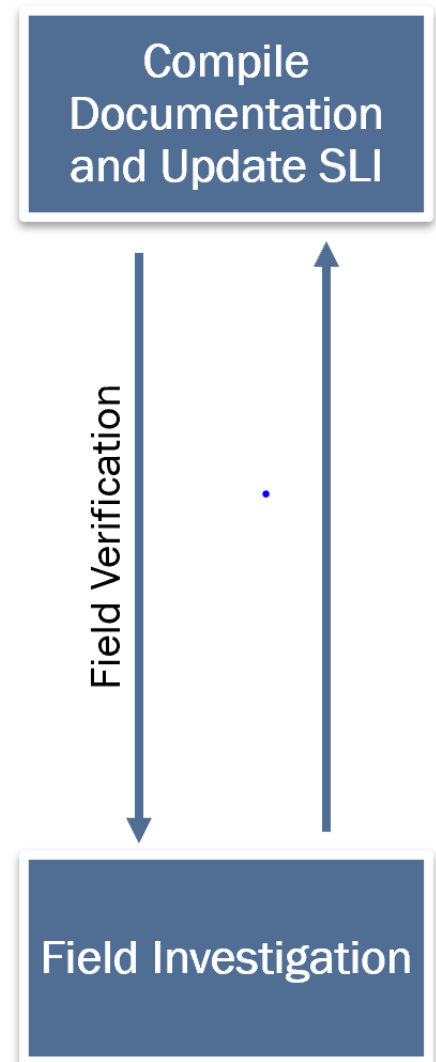
** EPA's Guidance for Developing and Maintaining a Service Line Inventory*



VERIFICATION

Verification Program

- Continue to gather information on service line materials after service lines have been classified and assess the accuracy of both records and field investigations through verification.
- Establish target percentage and goal prior to field investigations
- Random sampling that represents the water system or subset





USING FIELD INVESTIGATIONS TO VERIFY HISTORICAL RECORDS

1. Select random set of addresses

- Locations where service line material has been assigned based on historical records



2. Use one or more of the investigation methods

- Identify the service line material for both the water system and customer-owned portions



3. Compare field results to historical records.

- If field and historical records do not match, the water system should reassess the use of the historical records in question and update their inventory





SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Interviews

- Relevant knowledge of historical records and events from experienced staff or water professionals
- Should be used as **supporting information** and not a sole source of information
- Interviews **MUST** be documented
 - Inclusion of names, credentials, and descriptions
- **Highly recommend water systems conduct field verification of classifications that utilize Interviews**





SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Visual Inspection/Customer Identification

- E.g., Visual Inspection by water system personnel, customer, CCTV...
- Highly recommend **visual inspections are conducted by trained water system personnel**
- If visual inspection is completed by customers, the GA EPD recommends **customers submit a photograph** to the water system
 - **Water systems are encouraged to review photographs submitted by customers and confirm material classification**

Exhibit 5-5: Lead Pipe at a Curb Stop



Source: LSLR Collaborative, 2021 from Philadelphia Water Department, PA

Exhibit 5-6: Examples CCTV Camera Pictures for LSL, non-LSL, and Unable to Determine



Lead Service Line

Non-Lead Service Line

Unable to Determine

Pittsburgh, PA (Bolenbaugh 2018 AWWA ACE)

Source: Baribeau, 2021



SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Excavation/Pot-holing

- Water **systems** may need to excavate soil and potentially remove portions of the road, sidewalk, or other obstacles to determine service line materials
- More information on specifics in **EPA's Guidance for Developing and Maintaining a Service Line Inventory**
- If a **Lead Service Line or Galvanized Requiring Replacement** service line is disturbed during the excavation, both EPA and the GA EPD recommend replacing it right away.
 - The customer should also be alerted of the disturbance and be provided information on how to reduce lead levels, such as flushing

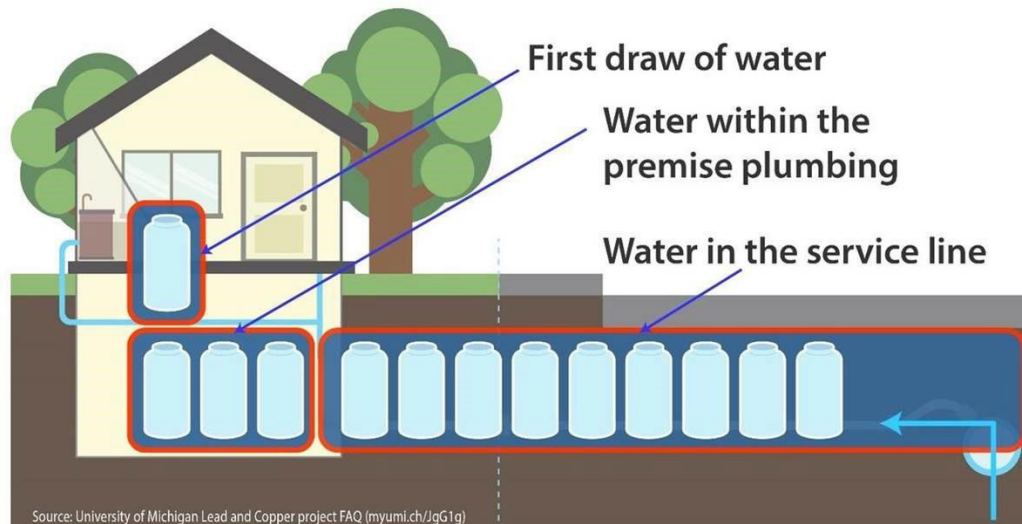




SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Water Quality Sampling

- Viable screening method for identifying the presence of Lead Service Lines but may not reliably detect the absence of Lead Service Lines.
- Relies heavily on proper and consistent sampling procedures and establishing a community specific threshold
 - Highly recommend trained water system personnel collect samples and samples are analyzed at a certified laboratory
- Water systems **MUST** make documentation available to the GA EPD outlining the criteria used to classify services line materials and justification for use





WATER QUALITY SAMPLING

1. Targeted Service Line Sampling

- Flush out the volume of water in the premise **plumbing**
- Sample collected from the service line

2. Flushed Sampling

- Flush out the volume of water in the premise **plumbing** for a set period of time
- Sample Collected from the customer's interior tap

3. Sequential Sampling

- Series of consecutive samples collected from an interior tap after a stagnation period



SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Predictive Modeling

- Dependent on representative data
 - Must be **Quality Data** obtained through previous investigation
- Use caution - few existing studies
- Water systems **must supply documentation to the GA EPD outlining the criteria used to classify service lines and justification for its use, including what confidence threshold is used**
- **Verification** of predictive modeling data **must be** thoroughly conducted



SERVICE LINE IDENTIFICATION AND INVESTIGATION METHODS

Emerging Technologies/Other Methods

- Service line material identification technology is the subject of ongoing research. **If a water system chooses an investigation method not specified by the State** under 40 CFR §141.84(a)(3)(iv), **State approval is required**. If a water system wishes to submit an investigation method for approval, please contact the GA EPD Compliance Unit.
- **Electrical Resistance Testing** - Not currently approved**



Helpful SLI Resources

- *LCRR- 40 CFR §141.80-93*
- *GA EPD LCRR Service Line Inventory Spreadsheet*
- *GA EPD LCRR SLI Guidance*
- *EPA's Guidance for Developing and Maintaining a Service Line Inventory*
- *EPA LCRI*



QUESTIONS?

Sean Earley

GA EPD Drinking Water Compliance Unit

Sean.Earley@dnr.ga.gov

470-251-2624

Manny Patel

GA EPD Drinking Water Program

Manny.Patel@dnr.ga.gov

470-524-0585

Tamara Frank

GA EPD Drinking Water Compliance Unit

Tamara.Frank@dnr.ga.gov

470-524-0750

Jennifer Morson

GA EPD Drinking Water Compliance Unit

Jennifer.Morson@dnr.ga.gov

470-524-0576



Mandatory Virtual Training for your Lead Service Line Inventory

Service line inventories must be submitted to GA EPD utilizing your PWS Portal account from 120Water. Register and attend one of the trainings to gain access to your account to prepare for your submission.

Instructions for Water Utilities:

Scan the QR code below to register for an upcoming 120Water virtual training. Once you have scanned the code, you will see a form to fill out on the website. Please fill this out with your information, so that we can ensure you are enrolled in the training that's best for you.

Scan me



or visit:

120water.com/ga-state-training-registration-qr