



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

LCRR Service Line Inventory

Developing a SLI and Investigating Unknowns

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GRWA 2023 Spring Conference
May 11, 2023



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) Requirements for:
 - Community Water Systems (CWS)
 - Non-Transient Non-Community Water Systems (NTNC)
- Establishes other changes to:
 - Lead and Copper Tap Monitoring*
 - Lead Service Line Replacement (LSLR)*
 - Testing in **Elementary** Schools and **Licensed** Childcare Facilities*

Lead and Copper Rule Improvements (LCRI)

- EPA is expected to propose rulemaking to replace all Lead Service Lines (LSLs), establish new compliance tap monitoring requirements, establish new action and trigger levels, and prioritize underserved communities
 - LCRI is expected in late 2023 or early 2024, but will be proposed prior to October 16, 2024
- Most of the LCRR is subject to change, except the Initial Service Line Inventory requirements

* Subject to change under the LCRI



SERVICE LINE INVENTORY (SLI) OVERVIEW

SLI - Who, What, and When?

- All **CWS** and **NTNCWS** must develop and submit a SLI to the GA EPD on or before **October 16, 2024**
 - SLI Updates are due each year by **July 1**
- Must be **completed** using the **GA EPD Service Line Inventory Spreadsheet** format
- Includes **all service lines** regardless of classification
- An Initial SLI must be completed even if all service lines have been classified as Non-Lead
- Water systems that have identified all their service lines as Non-Lead in either their initial inventory or an inventory update are not required to submit inventory updates to the GA EPD





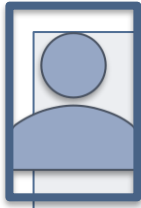

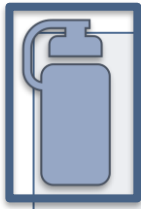


SERVICE LINE INVENTORY (SLI) OVERVIEW

Public Outreach Requirements

- All water systems must make their SLIs publicly available
 - Water systems with a **population $\geq 50,000$ must make their inventory available online**
- CCRs must indicate where customers can find their SLI or get a copy
- **Service Line Consumer Notices** must be completed **within 30 days of submitting the SLI** and proof/certification is due to the GA EPD each year on or before **July 1**



7 ELEMENTS OF THE GA EPD LCRR SERVICE LINE INVENTORY

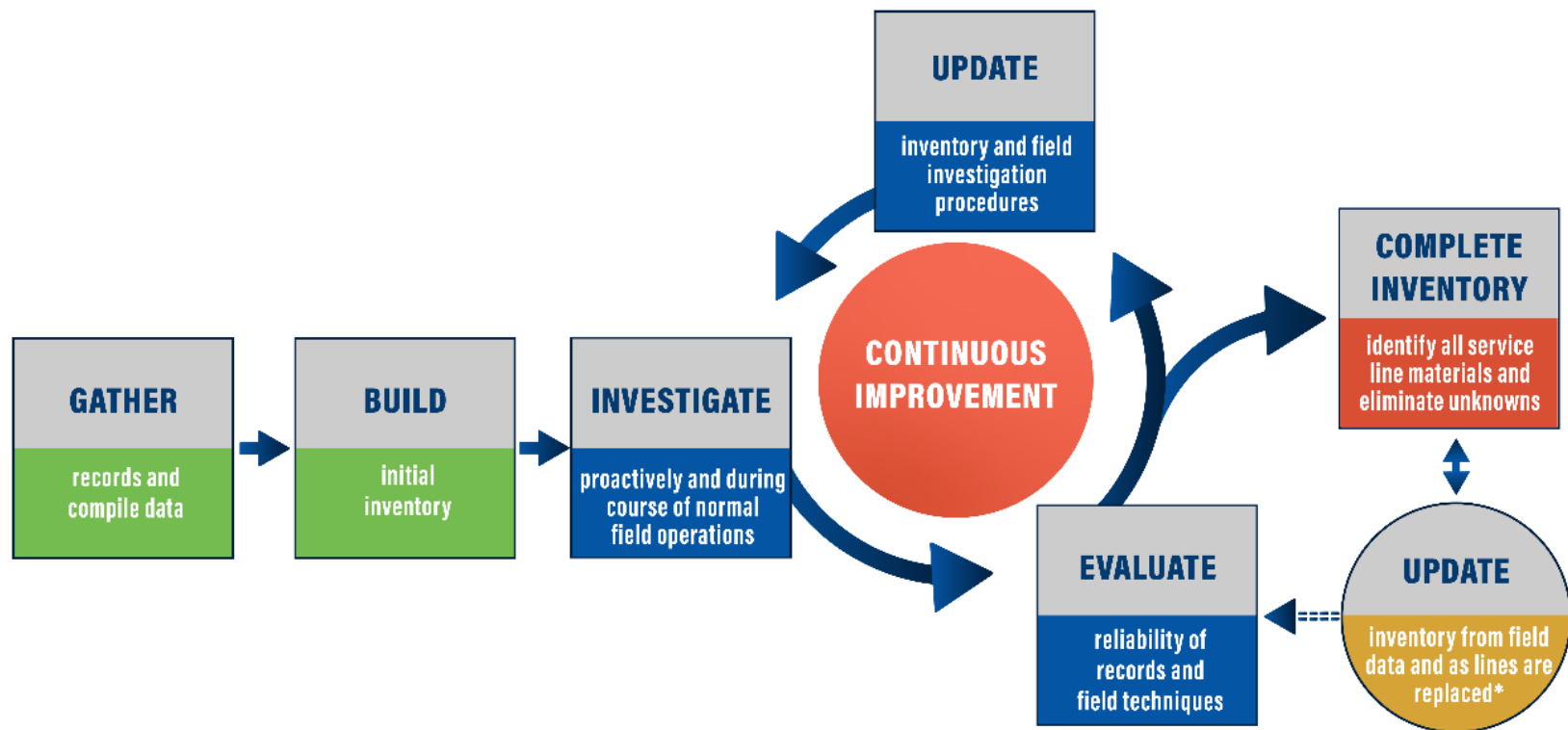
-  1. Location Information
-  2. Water System-Owned Portion
-  3. Customer-Owned Portion
-  4. Overall Service Line Material Classification
-  5. Lead and Copper Tap Monitoring Classification
-  6. Elementary School/Childcare Facility
-  7. Service Line Consumer Notice and Lead Service Line Replacement (LSLR)



SERVICE LINE INVENTORY (SLI) DEVELOPMENT

Developing a process by which a water system will approach and develop a Service Line Inventory needs to take into account multiple factors such as the expected level of effort and availability of resources

- Water systems should treat the inventory as a *living dataset*
 - The number of unknowns in the inventory should decrease as systems gather new information
 - Identify and track information on service line material as they are encountered during routine operations
- The GA EPD highly recommends systems consider developing **Standard Operating Procedures (SOPs)** or modifying existing SOPs



*Discrepancies may be occasionally encountered. If they are repeatedly encountered, systems should reassess their confidence in their inventory's accuracy.

Replace Lead Service Lines

Replacing lead service lines can occur anytime in the steps shown

Source: *Guidance for Developing and Maintaining a Service Line Inventory* (USEPA, 2022).



INITIAL SCREENING PROCESS

Make 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

Water systems should continue to gather information on service line materials after service lines have been designated as Non-Lead and assess the accuracy of records through verification.



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
(Pine Diameter Records)

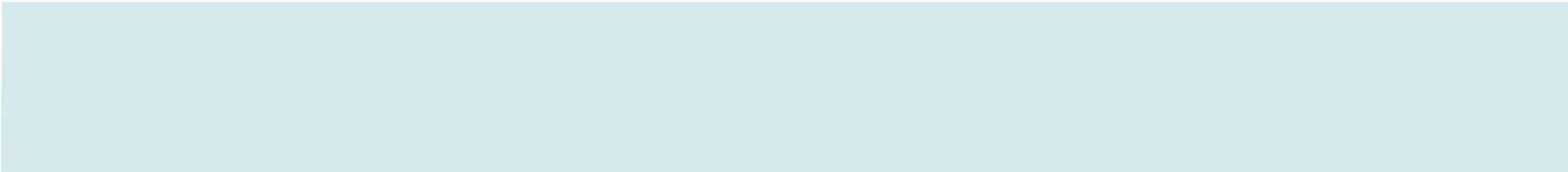
3rd Screening
(Other Historical Documentation)

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*



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**



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
- Highly **recommend** that verification of predictive modeling data is 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.



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?

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