



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

**Welcome to the Iowa DNR Lead
Service Line Inventory Template
Roll Out!**

Agenda

- Overview of EPA Final Guidance Requirements and Recommendations
- Overview of Iowa DNR LSLI Template
- Overview of Required Boxes
- Overview of Optional and Auto-populated Boxes
- Q and A
- How to get CEUs

EPA Final Guidance

Chapter 1-Introduction

LCRR Requirements

- All CWSs and NTNCWSs must develop an inventory of service lines that meets the LCRR requirements, including service line materials classification, information sources, and public accessibility (40 CFR § 141.84(a)).
- Water systems must submit their initial inventories to their state by October 16, 2024 (40 CFR § 141.84(a)(1) and 141.90(e)(1)).
- All CWSs and NTNCWSs must notify all persons served by the water system at the service connection with a lead, GRR, or lead status unknown service line within 30 days of completing their service line inventory (40 CFR § 141.85(e)).
- All LCRR requirements other than the initial inventory requirements are subject to change under the LCRI.

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

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Chapter 1-Introduction

Recommendations (Not Required under the LCRR)

- Water systems should not wait until their inventories are complete to begin conducting LSLR. Replacing LSLs while developing the inventory may create synergies or introduce opportunities for cost-savings.
- This guidance covers the lifecycle of the inventory, including inventory creation, inventory updates, material investigations, system reporting, state review, and public accessibility of service line information. The inventory is based on the best available data and should improve over time with updated information.
- States may have passed laws or regulations for a service line inventory that are more stringent than the federal inventory requirements.
- For water systems, a comprehensive and accurate service line inventory will facilitate LCRR compliance, improve LSLR program efficiency, provide greater public health protection, potentially assist in obtaining external funds for inventory development and LSLR, and provide potential cost savings.
- For states, a robust inventory will provide information for oversight and reporting.

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Chapter 2-Elements of the Inventory

LCRR Requirements

- The inventory must include all service lines connected to the public water distribution system regardless of intended use (40 CFR § 141.84(a)(2)). Lead connectors, gooseneck, and pigtails are not required to be included unless required by the state.
- The inventory must include information on both the system- and customer-owned portions where ownership is split (40 CFR § 141.84(a)(4)).
- Service lines must be classified as lead, GRR, non-lead (or the actual material), or lead status unknown service lines (or unknown) (40 CFR § 141.84(a)(4)).
- A classification of non-lead must be supported by evidence-based records, methods, or techniques to prove it is not lead or GRR (40 CFR § 141.84(a)(4)(iii)).
- The water system must create and maintain an inventory that includes the exact address associated with each service line connected to the public water system (40 CFR § 141.84(a)).
- An inventory of lead and GRR service lines must be made publicly available, but the LCRR does not require the publicly available inventory to include the specific address of each lead and GRR service line. System may use a location identifier for any lead and GRR service lines (40 CFR § 141.84(a)(8)(ii)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

LCRR & LSLi

SL Category	Description
Lead	SL made of lead (confirmed lead)
Galvanized Requiring Replacement (GRR)	Is or was at any time downstream of LSL or if no record of NOT being downstream of LSL
Non-Lead (NL)	Evidence-based record, method, or technique – may classify as actual material (i.e., copper, plastic) as an alternative to classifying as “Non-lead”
Lead Status Unknown (LSU)	SL material is not known

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Chapter 2-Elements of the Inventory

Recommendations (Not Required under the LCRR)

- EPA encourages water systems to consider including street addresses, when available, as their location identifier for all service lines in its public-facing inventory. Identifiers should be significantly detailed to allow the identification of a specific service line.
- EPA encourages water systems to expand their inventories to include service line subclassifications, other plumbing components such as lead connectors, and other details such as source of information, pipe diameter, and installation date.

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Chapter 3-Inventory Planning

LCRR Requirements

- Systems must identify and track information on service line material as they are encountered in the course of normal operations (40 CFR § 141.84(a)(5)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

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Chapter 3-Inventory Planning

Recommendations (Not Required under the LCRR)

- EPA recommends systems consider a continuous improvement approach for inventory development.
- The inventory is a living dataset that is continually improved over time with new and better information including when LSLs are replaced.
- Interviews with experienced staff and plumbers can help focus the inventory effort and locate system records.
- Water systems should consider interviewing neighboring water systems about regional construction practices.
- Systems can use a variety of formats for the inventory; however, an electronic format is recommended over paper or PDF formats.
- Water systems should consider developing or modifying SOPs to document how they will collect service line information during normal operations and update their inventories.
- Inventory activities should be considered as something that can be worked into the day-to-day activities of the system rather than treated as an independent effort.
- EPA encourages water systems to partner with plumbers and other third parties to obtain information on service line materials.

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Chapter 4-Historical Records Overview

LCRR Requirements

- Water systems must use any information on lead and galvanized iron or steel that it has identified pursuant to 40 CFR § 141.42(d); review the records explicitly identified in the LCRR; as well as use any additional resource, information, or identification method required by the state to develop the initial inventory (40 CFR § 141.84(a)(3)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

EPA Final Guidance

Exhibit 4-1: Requirements for Historical Records Review for Initial Inventory Development under the LCRR

Type of Historical Records	Regulatory Requirement (citation)	Primary Uses for Inventory Development (Including but not limited to)
Previous Materials Evaluation	Water systems must use the information on lead and galvanized iron or steel that it identified under 40 CFR § 141.42(d) when conducting the inventory of service lines in its distribution system for the initial inventory (40 CFR § 141.84(a)(3)).	<ul style="list-style-type: none">• Reporting construction materials present in their distribution systems.• Identifying LSL material for subset of sites that were used for lead and copper tap monitoring.



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Type of Historical Records	Regulatory Requirement (citation)	Primary Uses for Inventory Development (Including but not limited to)
<p>Construction and Plumbing Codes and Records</p>	<p>Systems must review all construction and plumbing codes, permits, and existing records or other documentation which indicates the service line materials used to connect structures to the distribution system to identify service line materials for the initial inventory (40 CFR § 141.84(a)(3)(i)).</p>	<ul style="list-style-type: none"> • Identify when LSLs were allowed/specified or banned from use. • Identify service areas most likely to have LSLs by home/building construction date and service line size. • Review construction and plumbing permits for identification of service line (system- and/or customer-owned) and plumbing materials.



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Type of Historical Records	Regulatory Requirement (citation)	Primary Uses for Inventory Development (Including but not limited to)
Water System Records	Systems must review 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, to identify service line materials for the initial inventory (40 CFR § 141.84(a)(3)(iii)).	<ul style="list-style-type: none"> Identify service line material for system- and customer-owned sides.
Distribution System Inspections and Records	Systems must review all inspections and records of the distribution system that indicate material composition of the service connections that connect a structure to the distribution system to identify service line materials for the initial inventory (40 CFR § 141.84(a)(3)(iii)).	<ul style="list-style-type: none"> Identify service line material for system- and customer-owned portions. Verify construction and water system records.



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Type of Historical Records	Regulatory Requirement (citation)	Primary Uses for Inventory Development (Including but not limited to)
State Requirements	Systems must review any resource, information, or identification method provided or required by the state to assess service line materials, to identify service line materials for the initial inventory (40 CFR § 141.84(a)(3)(iv)).	<ul style="list-style-type: none">• Identify service line material for system- and customer-owned portions.

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Chapter 4-Historical Records Overview

Recommendations (Not Required under the LCRR)

- Water systems should document the records they reviewed as a best practice and include the source of material classification in their inventory.
- Water systems should continue to gather information on service line materials after they have been classified and assess the accuracy of historical records.
- If systems find certain historical records to be unreliable, they should consider reclassifying service line materials that rely solely on those records as “unknown” until additional information can be gathered.
- Water systems should incorporate previous reviews (as required by the LCRR and other reviews done to comply with LCR or other proactive activities) into their initial inventory and document the date and scope of the reviews. Records already reviewed for service line material information do not need to be reviewed again.
- Tap cards are often handwritten index cards that contain the installation date, pipe diameter, and pipe material. The LSLR Collaborative recommends digitizing tap cards as one of the first steps in building an inventory.

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Chapter 5-Service Line Investigation Methods

LCRR Requirements

- Water systems should be aware of identification methods provided or required by their state under the LCRR (40 CFR § 141.84(a)(3)(iv)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

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Chapter 5-Service Line Investigation Methods

Recommendations (Not Required under the LCRR)

- Service line investigation methods can be used to verify historical records and gather information when service line material is unknown.
- Investigative methods include visual observation, water quality sampling, and excavation.
- Many systems have enlisted the public's help in visually identifying service line material where the service line enters the building.
- Water quality sampling has been used to identify the presence of LSLs. There are several approaches in the literature – including to establish a system-specific threshold above which may indicate the presence of an LSL.
- Some water systems have found water quality sampling and CCTV to be reliable in positively identifying LSLs but not in confirming the absence of LSLs.
- Mechanical and vacuum excavation can be used to visually inspect service line material. Mechanical inspection can be more accurate than vacuum excavation if it exposes a larger length of service line but is often more expensive and likely to disturb or damage service lines and nearby infrastructure.
- Predictive models have been used to estimate the probability that a service line is lead, prioritize areas for service line investigations, and to expedite LSLR.
- Water systems should select the method(s) that are best suited to their particular distribution system and community, considering cost, labor skill requirements, disruption to homeowners, overall time, and accuracy.

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Chapter 6-Developing and Updating the Inventory

LCRR Requirements

- All systems, including systems with all non-lead service lines, must create and submit their initial inventory of service lines to their state by **October 16, 2024** (CFR § 141.90(e)(1), USSPA, 2021d). Water systems must begin tracking materials as they are encountered during normal operations before the rule compliance date (40 CFR § 141.84(a)(5)).
- Non-lead service lines must be determined through an evidence-based record, method, or technique not to be lead or GRR (CFR § 141.84(a)(4)(iii)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

EPA Final Guidance

Chapter 6-Developing and Updating the Inventory

Recommendations (Not Required under the LCRR)

- Water systems should begin engaging customers and conducting proactive, on-site service line material investigations as soon as possible to improve their inventory, verify existing records, and reduce the number of unknowns. Water systems should capture as much information as possible for unknowns and consider assigning a likelihood that they are lead.
- Non-lead classification could be based on when LSLs were banned and service lines were installed, along with pipe diameter (most LSLs are less than 2 inches).
- When systems have conflicting records of service line materials, they should consider classifying the line as unknown (or lead if one or more information sources suggest lead is present) until the conflict is resolved.
- EPA discourages water systems from submitting an initial inventory with all unknowns.
- The inventory is a living document that should be continually improved over time.

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Chapter 7-Public Accessibility

LCRR Requirements

- Water systems must make an inventory of the lead and GRR service lines publicly accessible. The publicly accessible inventory must include a location identifier associated with each lead or GRR service line (CFR § 141.84(a)(8)(i)). The identifier could be a specific address; however, this is not required under the LCRR.
- Water systems serving more than 50,000 people must provide their inventory online (40 CFR § 141.84(a)(8)(ii)).
- Non-lead systems can fulfill the requirements to make the inventory publicly accessible by providing a statement they have no LSLs and including a general description of how they made that determination (CFR § 141.84(a)(9)).
- CWSs must indicate in their CCR how to access service line inventory information. Non-lead CWSs must also include a statement they have no LSLs in their CCR (40 CFR § 141.84(a)(10)).
- Within 30 days of completion of the initial inventory, systems must notify persons served by lead, GRR, and lead status unknown lines (40 CFR § 141.85(e)).

Source: Guidance for Developing and Maintaining a Service Line Inventory (August 2022)

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Chapter 7-Public Accessibility

Recommendations (Not Required under the LCRR)

- Water systems should consider their data sharing infrastructure, customer demographics, and staff limitations when selecting the best method for sharing data with the public.
- An interactive online mapping application can be an effective means for distributing service line inventory information and allows users to comprehensively evaluate a water system's service line materials anywhere there is access to a basic computer and internet.
- Accessibility and inclusivity considerations should be made throughout the map development process, e.g., using a color-blind safe color scheme, providing alternate text that can be read aloud using software for the visually impaired, using simple or defined terminology, and offering text in multiple languages.
- Other online data sharing options are available for water systems, such as online cloud-based sharing, online spreadsheet, FTP/SFTP server, and website hosted download.
- Non-web-based data sharing options include printed service line or tabular data as well as information on water utility mailings or newsletters.
- Active community participation in the inventory process helps cultivate a more robust inventory dataset.
- EPA suggests water systems update their inventories in real-time or as close as possible.

Wrap-Up

Where to find resources

- EPA Final Guidance
 - https://www.epa.gov/system/files/documents/2022-08/Inventory%20Guidance_August%202022_508%20compliant.pdf
- Template and recorded trainings can be found at:
 - <https://www.iowadnr.gov/Environmental-Protection/Water-Quality/Drinking-Water-Compliance/Lead-Service-Line-Inventories>

Wrap Up

Contact Us

- Questions, comments, concerns:
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