



City of
Cheyenne
BOARD OF PUBLIC UTILITIES

Lead Service Line Response Plan

Board of Public Utilities

Cheyenne, Wyoming

Public Water System ID – WY5600011

Contact Information

Director – (307) 637-6460

Water Treatment Manager – (307) 632-9890

Operations and Maintenance Manager – (307) 637-6471

Engineering and Water Resources Manager – (307) 637-6416

Public Affairs Coordinator – (307) 637-6469

GIS Supervisor – (307) 637-0845

Introduction

On April 27, 1943, the City of Cheyenne established the Board of Public Utilities (BOPU) to oversee and manage the city's water and sewer systems. The BOPU's mission is to *"Sustain Cheyenne's essential water resources to realize our community's potential."* The BOPU's vision states *"We will set the standard of excellence in the water and wastewater industry. We will be a leader in service to our customers. We will be responsible stewards in managing and protecting our water resources, the environment, the health and safety of our employees and community."*

Currently, the BOPU supplies water to approximately 78,000 customers, including those within the city limits, South Cheyenne Water and Sewer District, FE Warren Air Force Base, and parts of Laramie County, serving residential, commercial, industrial, and agricultural needs. In alignment with the BOPU's mission and vision, this Lead Service Line Response Plan outlines the strategies BOPU will implement to comply with the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act Lead and Copper Rule. These recent updates require the BOPU to collaborate with customers to identify and replace lead-containing service line components and to meet stricter lead sampling and reporting standards. These actions aim to significantly reduce lead exposure in drinking water, safeguarding public health.

Initiatives:

- **Educate and Engage:** Provide comprehensive outreach and education to help customers prevent and reduce lead exposure.
- **Service Line Inventory:** Develop and maintain a thorough inventory of all service lines.
 - **Quality Assurance:** Continuously verify and update service locations and details to ensure accuracy.
 - **Publicly Accessible Map:** Offer an online map for customers to review their status and monitor progress.
- **Customer Notifications:** Inform and educate customers, including new tenants or owners, with validated lead service lines, galvanized requiring replacement, and unknown material.
- **Water Filtration:** Distribute filtration pitchers to customers with identified lead service line components.

Water Distribution System Background

Lead, a naturally occurring, soft, and malleable metal, has been widely used in plumbing systems due to its workability. However, the health risks associated with lead exposure, particularly in drinking water, were not fully understood until recent decades. Today, lead is recognized as a significant health hazard, especially for children, leading to stringent regulations like the EPA's Lead and Copper Rule (LCR).

Since the inception of Cheyenne's water system in 1877, lead pipe components were commonly used for service connections, particularly between the water main and curb stop, with galvanized pipes often extending to homes and businesses. By the 1930s, copper began to replace lead and galvanized pipes in new installations. The use of lead components decreased significantly between the 1950s and 1985. Service lines installed after 1950 show a decreasing likelihood of containing lead components moving closer to 1985. The use of lead components was officially banned in 1986 by the U.S. EPA under the Safe Drinking Water Act, which defined "lead-free" plumbing as containing less than 8% lead in pipes and 0.2% in solder.

In 1991, the EPA's LCR mandated that water suppliers monitor lead levels in drinking water and implement corrosion control measures if lead concentrations exceed 0.015 milligrams per liter (mg/L). Following this, BOPU adjusted Cheyenne's water treatment process by blending 75% surface water with 25% groundwater to control corrosion and prevent lead from leaching from service lines, fixtures, or faucets.

The 2021 revisions to the LCR introduced more stringent requirements, including the development of lead service line inventories and replacement plans, increased sampling, and enhanced public education.

Lead can enter the water through pipes, service lines, plumbing, and fixtures that contain lead. This occurs more readily in water with low pH or low mineral content, which can corrode pipes and release lead. Several factors influence lead levels in water:

- **pH:** Cheyenne's water is adjusted to a pH of approximately 7.8 to reduce the risk of lead dissolution. Water with a pH below 7.0 is acidic and more likely to dissolve lead from pipes.
- **Alkalinity:** Cheyenne's water is adjusted to an alkalinity of 40-100 mg/L as CaCO₃ to stabilize pH levels and resist corrosion.
- **Exposure Time:** Longer contact between water and lead pipe increases lead levels. Removing lead-containing plumbing fixtures and flushing stagnant water from pipes can reduce exposure.
- **Temperature:** Warmer water can dissolve more lead. Cheyenne's water typically ranges from 45°F in winter to 60°F in summer.

As Cheyenne continues to modernize its water infrastructure, the BOPU remains committed to safeguarding public health by adhering to EPA regulations and proactively addressing the risks associated with lead in drinking water. Through ongoing monitoring, and public education, we aim to minimize exposure and ensure that Cheyenne's water system meets the highest water quality standards. Our efforts reflect a long-term commitment to providing clean, safe water for all customers.

Public Outreach and Education

The BOPU will implement a targeted outreach and education program designed to raise community awareness and involvement. This effort will include distributing clear educational materials and resources about the health risks of lead exposure and the necessity of replacing lead service lines. BOPU will also provide practical advice on using consumer filters, proper service line and plumbing flushing practices, and the importance of regular water sampling and testing. To ensure all residents have the information they need, BOPU will utilize a variety of digital platforms. An online map will provide a detailed service inventory with estimated lead likelihood, while our website and social media channels will feature educational material, Frequently Asked Question (FAQs), and additional resources to keep the community informed and engaged.

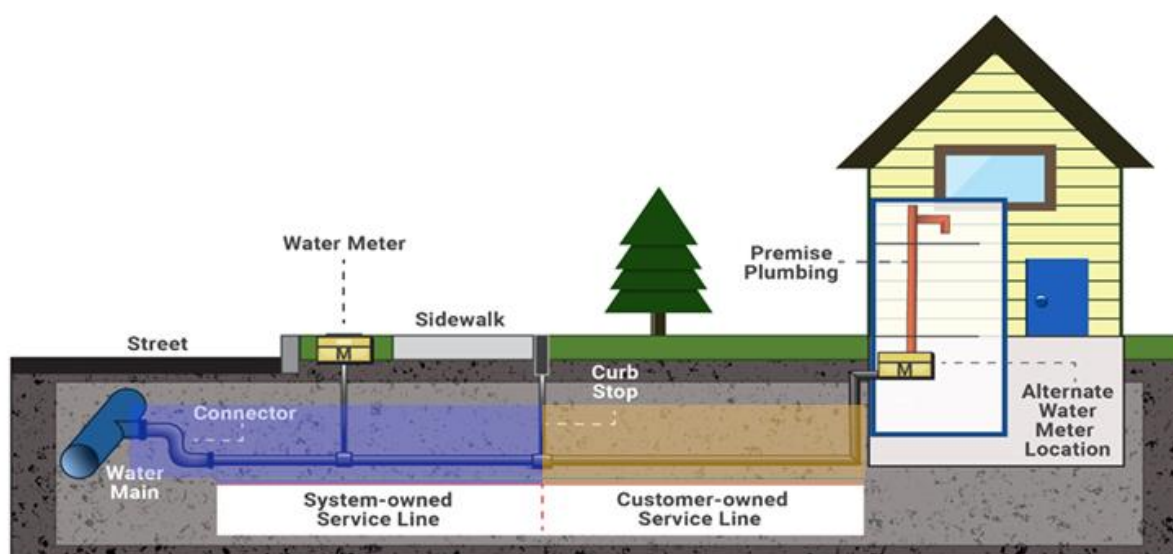
Validated Lead Service Line Notifications

When conducting routine operations, BOPU staff may discover service lines with lead components. In such cases, a BOPU representative will promptly notify the owner or tenant within 30 days, providing educational resources in line with EPA guidelines and offering a water filtration pitcher. Such findings are documented in the Geographic Information System (GIS) and linked to the location in the BOPU's utility

billing system to ensure future occupants are informed. Additionally, the BOPU will develop a standard operating procedure to ensure all lead components are accurately recorded, and that current and future customers receive notifications, resources, and guidance to protect them from lead exposure.

Lead Service Line Inventory (LSLI) Program

Until 2022, the BOPU did not own or maintain service lines beyond the water main connector. Since then, the BOPU operates as a split ownership utility, meaning it shares responsibility for service lines with property owners. In this arrangement, the BOPU owns and maintains the section of the service line from the water main to and including the curb stop or shutoff, while property owners are responsible for the portion from the curb stop to their home. This structure necessitates collaboration between the BOPU and property owners to effectively identify and mitigate potential lead risks in the service lines.



To comply with the U.S. EPA's Revised LCR, the BOPU must develop and maintain a Lead Service Line Inventory (LSLI) by October 16, 2024. The BOPU is actively digitizing all known service line locations using GIS technology. This process involves mapping service lines, curb stops, shutoffs, and water main connections to ensure accurate documentation of all customer locations. GPS coordinates of curb stop, and shutoff locations are used to accurately align the digitized service lines. Field crews are diligently locating and documenting any missing records, enabling the BOPU to efficiently identify and address lead service lines, thereby protecting public health and meeting federal requirements.

Initial EPA Lead Service Line Classification

The initial EPA Lead Service Line (LSL) classification mandates utilities to categorize all service lines in their distribution systems based on the presence of lead. This process involves identifying and inventorying lines as lead, non-lead, galvanized requiring replacement, or unknown. Due to the lack of records before 2022, the BOPU has classified most services as unknown in the initial inventory. Future EPA initiatives will guide the BOPU in investigating and validating these service lines, which is crucial for identifying lead service lines and prioritizing their replacement.

Publicly Accessible Map

To comply with EPA requirements, the BOPU will maintain a publicly accessible online map that displays service line types as documented in the Lead Service Line Inventory (LSLI). This map is designed to provide information to all customers within BOPU's potable distribution system. The map will be interactive and user-friendly, with updates made regularly as new data is collected from the field. The map's functionality will evolve over time, ensuring that residents have access to the most current information available.

Conclusion

The BOPU is dedicated to ensuring the safety of Cheyenne's water supply through rigorous compliance with EPA regulations and a commitment to public outreach, education, and transparency. The Lead Service Line Response Plan emphasizes the importance of proactive communication with residents, providing clear information, resources, and guidance to mitigate lead exposure. By maintaining an accurate Lead Service Line Inventory, offering a publicly accessible map, and developing standard operating procedures, the BOPU is focused on safeguarding public health and fostering trust within the community.