Lead Service Line Management Program

Happening Now

In 2024, the EPA is strengthening their regulations to keep lead out of the public's drinking water. This means that the City of Clemson has begun conducting an investigation into the pipe material directly servicing every household and business in the city.

The City is developing an inventory to identify the pipe material of every service line. This will be accomplished using historical data, manual inspections, and help from YOU.

The City of Clemson's water has consistently been verified as safe and clean, and these new regulations should not be cause for concern among our community. The City of Clemson has an experienced water system team dedicated to completing this inventory process with transparency and thoroughness.

It should be noted that in over 40 years, City of Clemson water system employees have never found lead service lines in the city's water system.

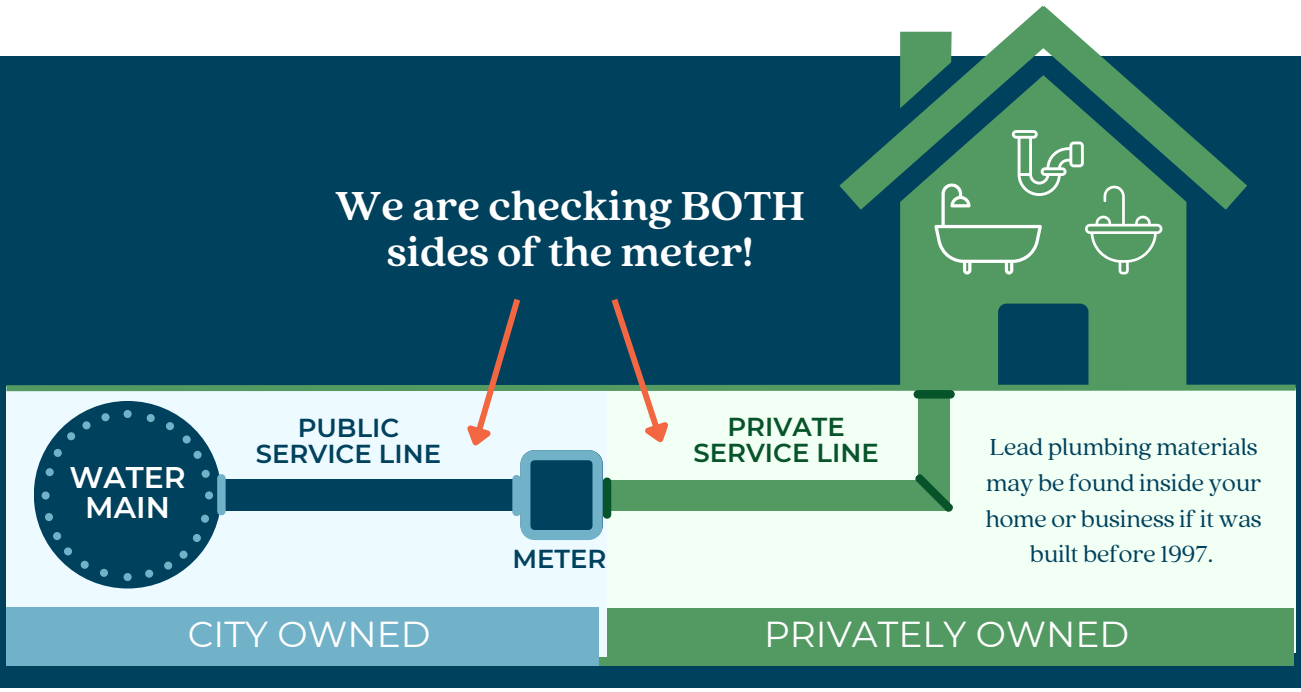
What Can You Do?

If your home or business has a privately owned service line of unknown material in our system, you will receive a survey by mail with further instructions. Please fill this out promptly if you have knowledge of the pipe material on the private side of your meter. If you are unable to identify your pipe material, refrain from digging up the pipe on your own. The City will begin a manual inspection of all service lines with unconfirmed pipe material in the Summer of 2023.

If you do not receive a survey via mail, please do not be concerned. This indicates that our records show your home or business does not have a private lead service line.

Additionally, if you are concerned about lead in your interior household plumbing, the Center For Disease Control's website has more information on keeping your household safe.

For more information on the EPA's new rules, visit their webpage dedicated to resources on the changes.



Timeline

Winter 2023 | Spring 2023 | Summer 2023 | October 2024

Fall 2019 - Winter 2023 – Digitization of city utility records began in 2019. Using this database, the dedicated Lead & Copper team analyzed water system records to determine which buildings did not have lead service lines. In addition, work crews began conducting service line material identification during routine maintenance and repairs.

Spring 2023 – Water customers identified to have a private service line of unknown material will be mailed a survey with information regarding further steps. The survey will be linked via QR code and include instructions for customers to verify the material of the pipe entering their home. Customer participation means that fewer yards will be disturbed during the next identification phase.

Summer 2023 – City Water Department work crews will begin physically inspecting customer homes and businesses to determine service line materials.

October 2024 – The City of Clemson will submit the developed inventory to SC DHEC and the EPA. Our goal is to have no service lines with an unknown material type by this date. A map documenting the city's inventory data by address will be made available to the public. The City will begin testing childcare facilities and primary schools for lead on a five-year cycle.

Watch this video to learn more about lead in your home

Lead Service Line Management Frequently Asked Questions

The City of Clemson is supplied lead-free water from the Anderson Regional Joint Water System, and local water mains do not add lead to the water. According to the CDC, "The most common sources of lead in drinking water are lead pipes, faucets, and plumbing fixtures". While the city has no jurisdiction over household plumbing, we are responsible for ensuring that the service lines connecting buildings to water mains in our service area are lead-free.

This page is a resource to help our customers understand why we are taking action, and details what steps we are taking to keep our drinking water safe. We have gathered additional resources on how households can protect themselves from lead exposure in their drinking water.

It should be noted that in over 40 years, City of Clemson water system employees have never found a lead service line in the city's water system.

Does City of Clemson water contain lead?
The local distribution pipes ("mains") that carry drinking water to our community are made mostly of iron, PVC, and ductile iron, and do not add lead to water. To protect our customers, the City of Clemson monitors and adjusts the water's chemistry to prevent any corrosion that may result in lead at the tap. Most lead in household water comes from the interior plumbing, not from the local water supply. However, if your home or business has a lead service line connecting the building to the water main, there is a risk of lead contamination in your drinking water.

It should be noted that in over 40 years, City of Clemson water system employees have never found lead pipes in the city's water system.

Why is the City taking action now?
The Environmental Protection Agency (EPA) and federal government have been working since the 1980s to protect drinking water from lead contamination. Over the years, several revisions to the original Lead and Copper Rule have strengthened regulations. Recently, the EPA has further revised this rule, making several key improvements to monitoring the level of lead in our system, going into effect in 2024. First, the City of Clemson is required to develop an inventory of every service line in the City's water system. Second, the action level for lead testing has been lowered to further restrict the allowable amount of lead particles in drinking water. Third, the City of Clemson will conduct a lead test on the drinking water of every primary school and day-care in the City's system once every five years starting in 2025.

How is the City developing the service line inventory?

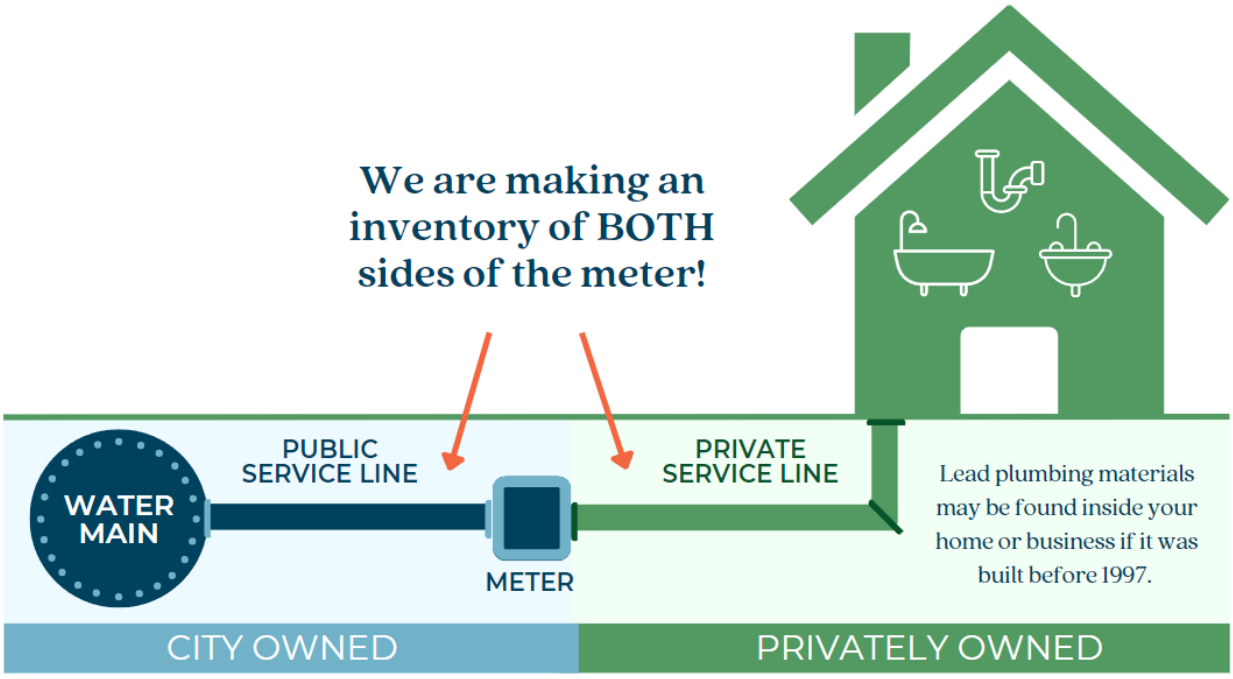
- Analyze city water system records to determine service lines of known material. (Completed March 2023)
- Send survey to customers with unknown materials on the private side of the service line for optional self-reporting. (In Progress Spring 2023)
- Physically inspect water lines at every address with unknown materials by digging a small hole on either side of the water meter. This will be performed

by the City's experienced work crew using a piece of equipment called a jet-vac truck. (Expected to start Summer 2023)
- Submit inventory to SC DHEC & the EPA. (October 2024)
- Make inventory available to the public via City of Clemson website. (October 2024)

How does lead get into water?
Lead is a naturally-occurring element found in the earth's crust. Historically, lead has had many commercial and industrial applications that increased its presence in our homes, schools, and communities, including in paint, piping, gasoline, cosmetics, soldering materials, and other materials. Lead is considered hazardous to human health. Today, lead use is restricted in many household products and materials, helping reduce lead exposure and protect community health. This regulation extends to lead monitoring, management, and restriction in drinking water resources.

It is important to note that when water leaves the City's water supplier, it is lead free. However, lead may enter drinking water through its interaction with lead service lines and plumbing materials in a customer's home or business. Plumbing materials of concern include lead or galvanized pipes in the home, lead solder used in plumbing, and some brass fixtures (read more here from the EPA). Corrosion or wearing away of lead-based materials can add lead to tap water, especially if water sits for a long time in the pipes before use.

What is a service line?
A service line (SL) is the pipe that connects your house to the water main in the street. The service lines that run from older homes (usually those built before 1940) to the utility water main could be made from lead. Over time, many of these older service lines have been replaced, but your home could still have one.



What is the lead action level?
The lead action level is an EPA drinking water standard that indicates the effectiveness of corrosion control methods employed by water systems. Even with the presence of lead materials, effective corrosion control methods should produce samples with lead levels lower than the action level. If lead concentrations exceed an action level of 15 ppb (parts per billion) in more than 10% of customer taps sampled, actions such as replacing lead service lines, informing the public, and exploring alternative water treatment methods must be taken.

The City of Clemson has never surpassed the EPA's Lead Action Level in its required testing since 1992 when testing started.

How can I tell if my home has a Lead Service Line?
The City of Clemson's Lead & Copper Team is confident that no lead service lines exist in the city. However, the highest risk homes are those built before 1940 and in disadvantaged neighborhoods. If you would like to verify the material of your service line leading directly to your home, follow this guide by the EPA. By October 2024, residents will be able to access service line information about their homes via the City of Clemson website.

If a Lead Service Line is found, will the City replace it?
The City is not responsible for replacing the privately owned portion of the SL between the meter and the house. We believe it is highly unlikely to find a lead service line, but, the City will replace the publicly owned portion of a lead SL between the water main and the meter if one is found. This will be done in a timely manner in accordance with inspection verification and/or customer replacement.

Even if my home does not have a Lead Service Line, how might my water be at risk for lead exposure?
Other potential sources of lead in drinking water are found in home plumbing. These include lead pipes, solder from copper pipes (pre-1986), and brass faucets. Getting your water tested for lead is the best way to verify the extent, if any, of lead contamination in your drinking water. Before 2014, drinking water pipes and fixtures could contain up to 8% lead.

Do faucets contain lead?
Prior to 1997, most faucets were constructed of brass or chrome-plated brass, which may contain lead (the main metals in brass are copper and zinc). Water sitting for several hours or overnight in a brass faucet can leach lead from the brass faucet interior. This may produce high lead levels in the first draw of drinking water. Later regulations mandated that most faucets purchased after 1997 contain less than 8% lead, reducing the possible leaching of lead. The Safe Water Drinking Act was updated in 2011 to require all faucets to contain no more than a weighted average of 0.25 percent lead in relation to its wetted surface. This rule took effect 3 years later, on January 4, 2014.

How can I tell if my faucet is "lead-free"?
Responding to recent regulations, faucet manufacturers have decreased or eliminated the lead in residential kitchen faucets, bathroom faucets, bar faucets,

drinking fountains, and ice makers. Starting January 4, 2014, all faucets will be produced with no more than a weighted average of 0.25 percent lead with respect to the wetted surface. The national standard for certifying plumbing fixtures "lead-free" status is determined by the National Sanitary Foundation (NSF) - the standard is International Standard 61-Section 9. New faucets meeting the NSF 61 standard will have NSF 61/9 stamped on the new faucet's cardboard box. For more information on lead-free fixtures including catalogs and website directories, contact NSF at 1-800-NSF-MARK or www.nsf.org.

Are there any faucets with no lead at all?
Some faucet manufacturers produce plastic faucets that have virtually zero lead. Other manufacturers are substituting other metals for the lead in the brass, inserting copper tubes inside the brass faucets, or applying special coatings on the inside of the faucets in order to minimize or eliminate lead leaching. With the recent legislation, more and more faucet manufacturers are advertising faucets that adhere to the new "lead-free" definition allowing a maximum of 0.25 percent lead.

Do I really need to replace my faucet if it was made before 1997?
In extreme cases, older faucets can contribute up to one-third of the lead in water that has been sitting in the pipes for several hours. Other sources include plumbing such as pre-1988 lead solder joints in copper pipes or a lead service line. Residents who let the water run at the tap in the morning for at-least one minute and use cold water for cooking should have little concern with respect to lead in the drinking water. If residents are still concerned, more information on lead testing will be available soon.

Do some new plumbing fixtures still contain lead?
Federal and State lead regulations do not cover any pipes, pipe fittings, plumbing fittings, or fixtures, that are used exclusively for non-potable services like manufacturing, industrial processing, irrigation, outdoor watering, or other uses where the water is not anticipated to be used for human consumption. This includes toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are two inches in diameter or larger. Other fixtures that may contain lead in home plumbing include cover hose bibs, bathtub fixtures, and shower heads.

Be sure that only valves and filters intended for drinking water supply are used in any home plumbing project.

Is drinking water the main source of lead exposure?
Lead contamination from lead-based paint, dirt, and dust accounts for most of the exposure. Lead from drinking water can make up to 20 percent of a person's total exposure to lead.

The most cost effective ways to minimize lead exposure from drinking water are:

- flush the kitchen faucet for one minute in the morning or after coming home from school/work,
- use only cold water for drinking and cooking, and
- get your water tested.

I have children in my home, how can I protect them from lead exposure?
The South Carolina Department of Health and Environmental Control (SC DHEC) has information on childhood lead poisoning prevention through its website.

The NSF certifies plumbing fixtures, water filters, and bottled water. Information about their program can be reached at 1-800-NSF-MARK or through their website.

The Environmental Protection Agency (EPA) operates a National Lead Information Center and can be reached at 1-800-424-LEAD or through its website.

Will my child's school or child care facility be tested for lead?
All elementary schools and childcare facilities receiving water from the City of Clemson will have their water tested for lead. This process will occur between 2024 and 2029, with 20% of facilities being tested each of the five years. Secondary schools may receive testing upon the schools request, if necessary.

Any facility built after January 1, 2014 is excluded from testing.

Contact Information
For the quickest response to additional questions, please direct all inquiries regarding the Lead Service Line Management Program to nolead@cityofclemson.org.

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