

GET THE LEAD OUT

Lead and Galvanized Steel Service Lines



No safe level of lead in drinking water

The impact of early childhood exposure to lead lasts a lifetime. No level of lead exposure is considered safe for children—even small amounts cause reduced IQ, attention difficulties, and underperformance in school. Adults can also experience health effects from exposure to lead, including kidney problems and high blood pressure.

Why are lead and galvanized steel service lines a problem?

In the past, lead was used because of its abundance, low cost, and corrosion resistant properties. Lead was used for many years as the main component in service lines in some parts of the country. Unfortunately, records are not available for all locations where lead pipes were used in our nation's infrastructure.

Water treatment plants can add minerals to the water to form a protective layer in the pipes, which helps prevent the water from pulling lead from pipes. However, even with corrosion control, lead service lines can still contribute to lead in tap water.

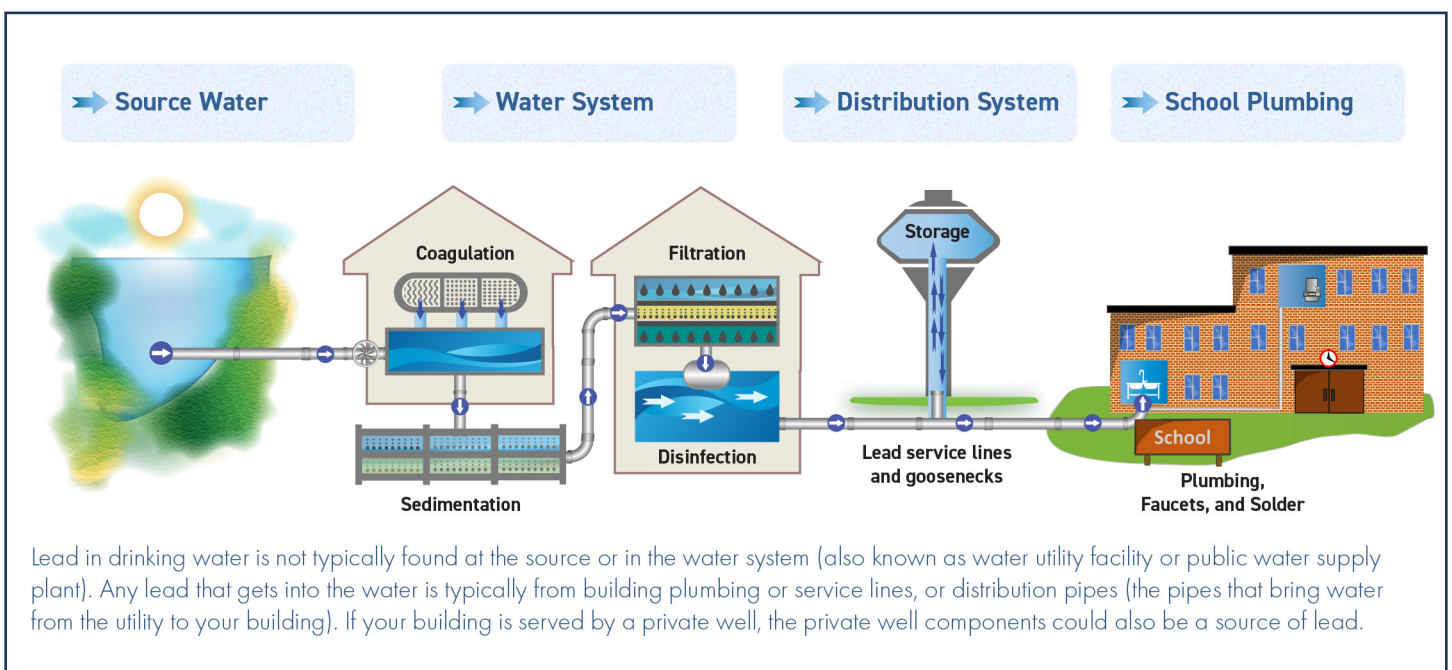
Galvanized steel pipes can also be a source of lead. The zinc coating of galvanized steel pipes can contain some lead. In fact, during the early 1900s some galvanized steel pipes were coated inside with lead instead of zinc. In addition, lead can accumulate on the interior surface of galvanized steel pipes that are or have ever been downstream of lead pipes.

How does lead get into drinking water?

Lead in drinking water generally comes from components of the pipes, plumbing, solder, and fixtures. Lead can get into water from water infrastructure that contains lead, particularly if the water is corrosive, or if the water sits for a long time in the pipe or fixture.

What is a service line?

This is the pipe that connects your home or building to the main water line coming from your water utility or your private well.



Do I have lead service lines, galvanized steel service lines, or goosenecks?

Lead service lines, galvanized steel service lines, and goosenecks were used in many parts of the country to connect water mains coming from the water treatment plant to home or building plumbing. Water system records do not always identify the locations of lead service lines. However, you can check for lead service lines on your property yourself.

Checking for lead and galvanized steel service lines

To check for lead service lines on your property, you'll need a metal tool, such as a screwdriver, and a magnet.

What is a gooseneck?

A gooseneck or pigtail is a short piece of lead pipe that was used to connect the water main to customer's service lines.

Step 1. Locate Where the Water Line Enters the Building

Depending on where you live, this can be in the basement or lowest level, near the water meter. In other locations, the water meter and valve may be in an underground box, near the street. Once you locate your inlet, you can identify the inlet valve going into the building.

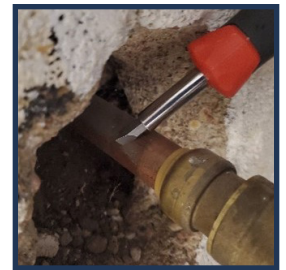


Step 2. Scratch off Rust or Corrosion on the Outside of the Pipe

Find a place to examine the pipe that goes into the building. If there is a covering around the pipe, uncover or unwrap the pipe first.

If the pipes are made of plastic, you can stop here.

If the pipe material is not easily visible because of rust or corrosion, use the metal tool to scrape off a section of that rust or corrosion large enough to see what is underneath, and to be able to touch the magnet to the pipe.



Step 3. See if the Magnet Sticks to the Pipe

If the **magnet sticks, the pipes are most likely galvanized steel**, which is typically a dull gray, or iron, which is typically a reddish, brown color when rusted. A magnet will not stick to lead or copper pipes.

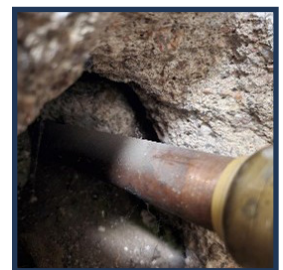


Step 4. If the Magnet Does Not Stick, Check the Color of the Pipe

If the magnet does not stick, the pipes must be lead or copper. You can distinguish between these by the color (both are typically shiny):



Lead pipe is silver or gray.



Copper pipe is the color of a penny or may be green like the Statue of Liberty.

IMPORTANT!

If the magnet sticks, this is not a lead pipe. However, galvanized steel or iron pipes could have lead lining on the inside.

If you are not comfortable completing these steps or suspect you have lead or galvanized steel pipes, we suggest you consult a plumber for verification.

If you found plastic or copper pipes at this location, you made important progress in narrowing down the possible sources of lead in water. However, this does not confirm the composition of all piping and plumbing leading to your tap. Finding the source of lead is a complicated process that can involve the building owner/resident, a plumber, public utility staff, and state or county environmental health specialist.

See <https://www.lslr-collaborative.org/identifying-service-line-material.html> for more information and sample photos.



What to do if I have lead or galvanized steel service lines

- Contact your utility to discuss the process of replacing a service line and to learn about any programs already underway. Recent changes to the U.S. Environmental Protection Agency's Lead and Copper Rule require water utilities to replace 3% of their lead service lines annually.
- Full lead service line replacement can be costly (\$2,400-\$7,100¹), check in with your local health department and utilities to see if there is any funding support.
- In the meantime, take measures to minimize the lead in water used for drinking and cooking, for example, by using a water filter certified to remove lead.

Testing recommendations

Regardless of what pipe material you find, you should test the water at all your cooking and drinking taps for lead. Lead in water can vary from tap to tap, even if you do not have lead service lines. Child care centers, schools, and households should test water for lead at least every three years, and after any changes are made to the water supply or renovations done on the building. The only way to identify whether lead is in your water is to test it at the tap.

More information

Clean Water for US Kids
www.cleanwaterforUSkids.org

RTI International
3040 E. Cornwallis Road, PO Box 12194
Research Triangle Park, NC 27709-2194 USA

More resources

This informational flyer was developed for RTI International's Clean Water for US Kids™ program. For additional resources please refer to the following links:

Check out our other Get the Lead Out flyers

- **No-cost and Low-cost solutions to eliminate lead at the tap in drinking and cooking water** (<https://www.cleanwaterforuskids.org/cms/documents/6/LeadWaterSolutions.pdf>)
- **How to Choose a Water Filter to Remove Lead** (https://www.cleanwaterforuskids.org/cms/documents/5/Get_The_Lead_Out.pdf)

- **Lead Service Line Replacement Collaborative** (<https://www.lslr-collaborative.org/>)
- **Interactive app from NPR on identifying lead service lines** (<https://apps.npr.org/find-lead-pipes-in-your-home/en/#intro>)
- **Step-by-step guide to identifying lead pipes, from the U.S. EPA** (<https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead-0>)



Clean Water For US Kids™

¹ US Environmental Protection Agency. (October 2019) Economic Analysis for the Proposed Lead and Copper Rule Revisions. <https://www.regulations.gov/document/EPA-HQ-OW-2017-0300-0003>