



the Pipeline

Lead & Copper and Your Drinking Water


The news headlines may not tell you all you need to know about the potential for lead and copper in your drinking water. Safeguards for lead and copper in drinking water have been in place since the 1970's with enactment of the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act. Regulatory measures taken during the last two decades have greatly reduced exposure to lead in tap water. The purpose of the original Lead and Copper Rule (LCR) was to protect public health by minimizing lead and copper levels in drinking water for all water systems in the United States. Beginning in 1991, water providers across the country were required to follow regulations that mandated routine monitoring and reporting of lead and copper in each water system. Powdersville Water took the regulations seriously then, and we do now as the Rule is being updated and will be rolled out by 2024.

What did the 1991 Lead and Copper Rule accomplish?

The 1991 LCR established action limits for systems across the country that detected lead and/or copper of significant levels in their drinking water. All water systems were required to perform periodic sampling of their systems, and if the action limit of .015 mg/L (milligrams per liter or parts per thousand) for lead, or 1.3 mg/L for copper, was exceeded in 10% of the monitoring locations, the water system was required to undertake additional actions to lower these levels. *To put these numbers in perspective, .015mg/L (or .015 parts per million) is equivalent to 15 micrograms or 15 parts per billion. A part per billion would be like one drop from an eye dropper in a tractor trailer fuel tanker. We are talking very small concentrations that only specialized lab equipment can detect.*

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Before updating the service connection, a Meter Technician exposes the water meter and service lines.

Lead & Copper and Your Drinking Water (continued)

The most common way for lead to get into your tap water is from household plumbing. Lead can leach from solder used in household copper plumbing and from metal faucets and fixtures that are made from brass. Since the SCDHEC's lead-free ban went into effect in November 1988, restricting any use of lead-based piping or plumbing in public water systems and household plumbing materials, Powdersville Water has made a concerted effort to make sure no materials in the water system contain lead and copper.

The EPA's Lead and Copper Rule has recently been revised, and by 2024 new requirements will be mandated for all water systems to strengthen efforts to ensure there is no lead or copper of significant amounts in the public's drinking water. Powdersville Water wants to proactively get ahead of the new rule to make sure that our water remains safe for all customers.

Is there a problem with lead and copper in Powdersville?

For more than two decades, Powdersville Water has been monitoring the water distribution system for lead and copper, and the results have shown no regulatory concerns. Over 25 years of lab results back this claim, and the age of the distribution system is also an advantage against lead and copper. Powdersville Water began operations in 1971, being a young system compared to most others. This means Powdersville Water's infrastructure was

largely constructed of PVC pipe and materials that were lead free. Older systems, constructed up through the mid-1950's, are more likely to have lead service line fittings or lead joint pipe. Powdersville Water has *never* used either of these, a key reason why our lead and copper samples have met regulatory limits over the past 25 years.

The New Rule

Even though the new EPA Rule does not go into effect until 2024, Powdersville Water has proactively looked at all requirements of the new Rule to ensure that we perform all monitoring in the best way possible. "The new Rule has changed the way we choose sampling locations," Executive Director, Dyke Spencer, said. Spencer continued, "We will now complete in-depth research in two areas to ensure compliance. We must be able to prove that we do not have lead service lines in our system. We have already inventoried over 2,500 customer service lines connected to our system to prove there are no lead service lines. We have also researched our record drawings to identify housing developments that predate 1988, so that we can target

those areas for older household plumbing that could possibly have issues with lead-based solder used in their plumbing. If any are found, we want those locations to be sampling sites for the new Rule, because we see those as the worst case scenarios. The staff will also look very closely at all primary schools and daycare facilities. We plan to pre-sample the locations where pre-1988 plumbing may exist to see if there are early indications of lead in their drinking water caused by older plumbing. As you can see, most of our early focus will be placed on private premises where we have no jurisdiction. We know our distribution network is clean. Therefore, it will be important to have full cooperation from our customers, as we conduct the preliminary testing and develop the new monitoring network to meet EPA's new criteria."

Every employee at Powdersville Water understands the importance of water quality and how vital it is to the community's health. Each year Powdersville Water obtains more than 750 routine samples to ensure disinfectant levels are adequately maintained throughout the system. For the past four years, we have worked with Anderson County School District One to perform flushing and testing for lead and chlorine at schools when they open after summer and Christmas breaks. When there is little to no water being used during school breaks, leaching of old plumbing can occur. Also, disinfectants, like chlorine can dissipate with little to no water use, which can create poor water quality. Powdersville Water is not required by regulation to perform this work and is one of the few water systems in South Carolina that works with the local school district to provide this service.

Where is Powdersville Water on lead and copper?

Though Powdersville Water has a good "track record" for many years, showing little to no lead or copper in the water system, we are still taking a closer look at the piping and materials that are used beyond

the meters where PW's jurisdiction ends. The only way to effectively do this is to determine which taps are most likely to see problems from old household plumbing that was installed prior to 1988. Then, based upon the new Rule, a new monitoring network will be developed to monitor the "worst-case-scenarios" found in the system to demonstrate the new regulations can be met. If a problem is detected, there are currently very few options for customers to receive government assistance to correct lead-based plumbing issues that are on private property. Hopefully, this does not become a major issue for the Powdersville system.

The results of Powdersville Water's efforts to stay ahead of the revised Lead and Copper Rule (LCR) by taking inventory of private service line material uncovered at the meter, and background sampling of primary schools and daycare facilities will be posted at <https://powdersvillewater.org> for public viewing. Education is

a key component to the success of this program. The LCR is somewhat confusing, so hopefully, this newsletter will help your understanding of the requirements. Below is a diagram from the EPA that visually shows what has been discussed so far.

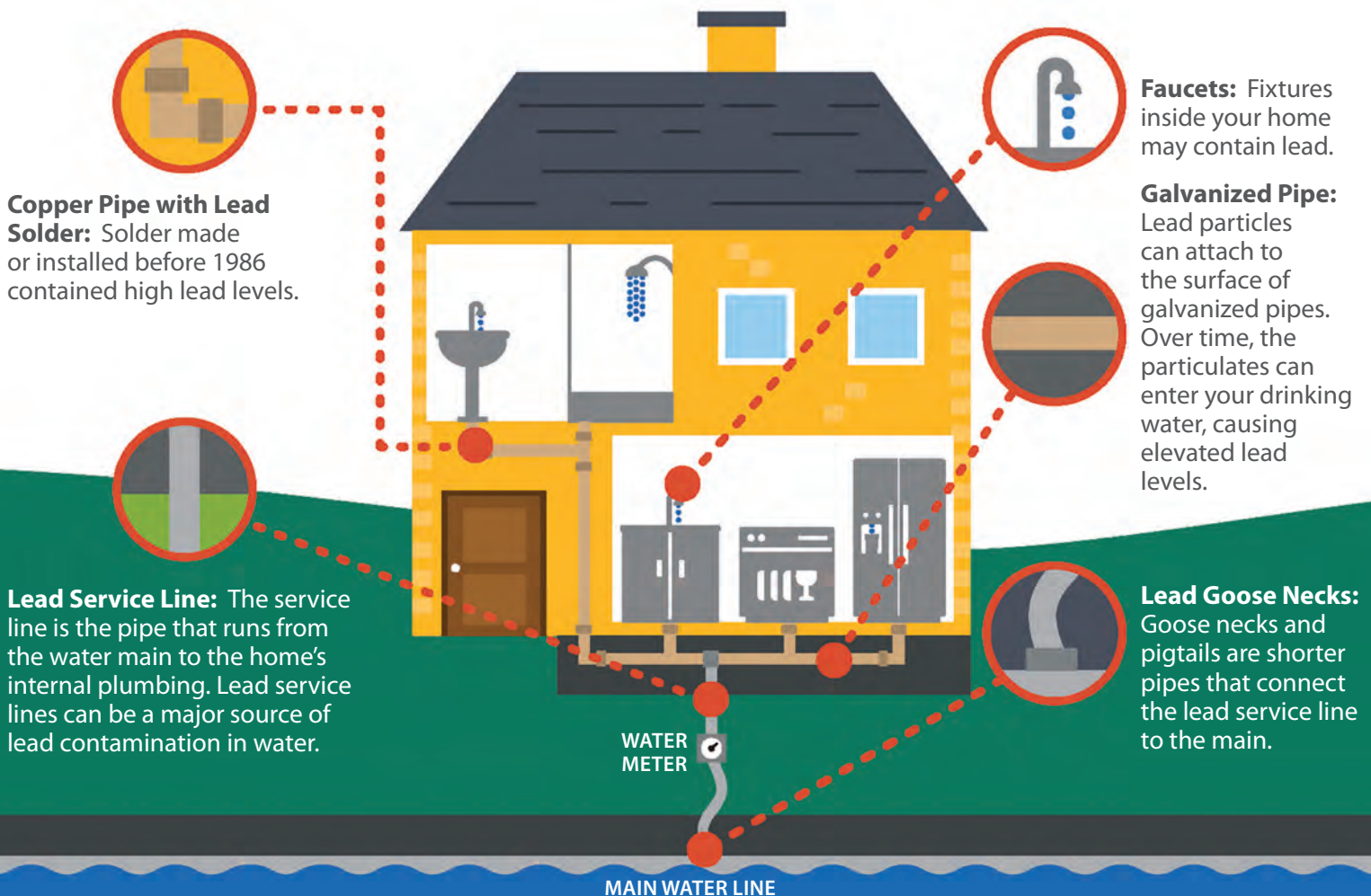
What can I do to protect myself and my family?

If your home, or other residential or commercial property, was constructed before 1988, try to determine if copper plumbing pipe was used. If so, the pre-1988 copper was probably joined using lead-based solder, which could be leaching into your drinking water. You should contact our Customer Service Department at (864) 269-5440 option 4, so that we can possibly include your location in the required monitoring network that will be developed. Also, see if you can determine if the sink fixtures in your kitchen and/or bath may be

made of brass. Older brass fixtures can even leach lead in homes with PVC plumbing lines. Powdersville Water has no way of gathering this information without your help.

Regardless of where you are, you should always flush water fixtures for 30 seconds every time you plan to cook or consume water from a tap. You might use that first draw to wash your hands, since lead and copper concentrations in water are usually the highest in the first draw from the tap. Expelling the "first flush" of water will typically reduce the levels of lead and copper, if they are present. You never know how long the water has been in the pipes prior to turning the handle. Flushing the fixture a bit is a good measure to incorporate into your daily routine and is recommended by the American Water Works Association (AWWA).

Also, consider water temperature. As water increases in temperature during the warmer months, it



What can I do to protect myself and my family? (continued)

becomes more aggressive, or “hungry,” and it is more likely to dissolve metallic material. Powdersville’s water is not aggressive by nature, but keeping water temperature in mind is a healthy practice whether you are at home or traveling.

Public water fountains are something else to consider. Always turn the fountain on and let it run until you hear, or feel, the refrigerator/cooler turn on in the fountain. This will signal you that the warmer/standing water has moved through the copper coil. Then, you can take your drink from the fountain.

In the office or workplace, consider how long your plumbing has been idle when returning to work. After a weekend, you should run several fixtures for the same 30 second flush to get fresh water in the lines before you make the coffee and others occupy the building.



Take action!

Customers can now take action by adopting the habits previously mentioned and by contacting Powdersville Water with a completed survey to provide more information about the plumbing materials in your house or building. An online form has been created to help you provide information regarding

your plumbing material. If you are a Powdersville Water customer and know the type of plumbing material in your home, visit <https://powdersvillewater.org> to complete and submit the *Lead and Copper Customer Input Form*. If you do not have access to a computer and wish to complete the form, please call our Customer Service Department at (864) 269-5440 option 4 and a Customer Service Representative will be happy to assist.

For additional information

Visit the EPA website at www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water to learn more about lead in drinking water.

MESSAGE FROM THE MANAGER



Lead and Copper in Drinking Water—

that quickly sounds scary to the reader. Powdersville Water customers have nothing to fear. We have been monitoring our system by the regulations for decades, and we have never seen levels of lead or copper in our water that require regulatory action. Lead seems to be the main culprit that shows up in other water systems across the country. You may recollect the Flint, Michigan story in the news in 2015. Typically, lead in drinking water is present in a few scenarios. In some older systems constructed before the mid-1950’s, lead service lines or fittings called “goosenecks” are now leaching lead into the water that their customers are drinking. On the customer side, houses built prior to 1988 may have copper plumbing with lead solder or brass sink/tub fixtures that contain lead. These items could also be leaching lead into the customers’ drinking water, even though our water system is clean.

We have never seen lead-based pipe or goosenecks in Powdersville Water’s network of pipes. Our only concern with the new regulation is what may be installed in the plumbing

of our customers, where we have no jurisdiction. The way we see it, our job is to educate our customers on this subject, assist in determining if they should have any concerns, and continue to test the entire system so that we remain clean and in compliance with the regulations.

There are several helpful tips in this newsletter, and I encourage you to read them. I also encourage you to give this some thought, which would help determine if you may be at risk. If you think you are, let our Customer Service group know. We want to help you, but each of you must do your part . . . answer the questions and let us know what you find. We will be working on collecting data for the next 18 months, so let us know if we can be of service. We need your help for this to be effective, and together, we can be!

Thank you,
Dyke Spencer,
Executive Director