

## **FAQ's About Lead in Drinking Water**

U.S. water operators are required to comply with all federal Safe Drinking Water Act rules and state regulations, including the Lead and Copper Rule. The City of Springfield is in compliance with all state and federal drinking water regulations. The city's highly qualified professionals take their jobs of protecting public health by providing safe drinking water very seriously. When compliance issues arise, the city promptly notifies customers.

None of the public water mains in the Springfield system are made of lead; they are made of cast iron, ductile iron, or concrete. However, because some water service lines, home plumbing, fixtures, and solder may contain lead materials or parts, precautions are taken to prevent lead from leaching into the water customers rely on at the tap. Below are frequently asked questions and answers on lead in water.

### ***What is lead?***

Lead is a common naturally occurring metallic element that can be found in air, soil, and water. It is also a powerful toxin that is harmful to human health. Lead was commonly used in gasoline and paint until the 1970s and is still sometimes found in products such as ceramics, batteries, ammunition, and cosmetics. Lead was used for centuries in plumbing because of its pliability and resistance to leaks; in fact, lead's chemical symbol, Pb, is derived from the Latin word for plumbing. In 1986, U.S. Congress amended the Safe Drinking Water Act to prohibit the use of pipes, solder, or flux that were not "lead free." At the time "lead free" was defined as solder and flux with no more than 0.2% lead and pipes with no more than 8%. In 2014, the maximum allowable lead content was reduced from not more than 8% to not more than a weighted average of 0.25% of the wetted surface of pipes, pipe fittings, plumbing fittings, and fixtures. In general, buildings in Springfield built in 1952 and prior may have lead water pipes because in 1952 City Commission adopted revisions to the Building Code that excluded lead as an approved pipe material.

### ***Why is lead a health risk?***

Lead is a toxic metal that can cause immediate health effects at high doses and long-term health effects if it builds up in the body over many years. Lead can cause brain and kidney damage in addition to effects on the blood and vitamin D metabolism. Pregnant women and young children are particularly vulnerable because the physical and behavioral effects of lead occur at lower exposure levels in children than in adults. In children, low levels of exposure have been linked to central and peripheral nervous system damage, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells. While people are more commonly exposed to lead

through paint, soil and dust, U.S. EPA estimates infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water.

### ***How do I know if my drinking water contains lead?***

Because it is colorless and tasteless, lead is not readily apparent in water. In fact, the only way to know for certain whether your drinking water contains lead is to have your water tested by a certified laboratory. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.ohio.gov/ddagw/labcert.aspx> or by calling (614) 644-4245.

### ***How does lead get into drinking water?***

None of the city's main water lines running beneath the streets are made of lead. However, in some older homes lead may be present in the pipe connecting the home to the water system—known as a service line—or in the home plumbing. Lead in service pipes, plumbing, or fixtures can dissolve, or particles can break off into water and end up at the tap.

### ***How much lead in water is too much?***

Lead can be harmful even at very low levels and can accumulate in our bodies over time, so wherever possible steps should be taken to reduce or eliminate your household's exposure. While risks vary based on individual circumstances and the amount of water consumed, no concentration of lead is considered "safe." Households with pregnant women, infants, or young children are most vulnerable to the harmful effects of lead at low levels.

### ***What can I do to reduce or eliminate lead from my drinking water?***

1. ***Run the tap to flush your pipes.*** The most effective way to reduce exposure is to run the tap for at least 30 seconds if you haven't used your water for six hours or more.
2. ***Clean your faucet aerator.*** Lead particles from pipes, fittings, or solder can get trapped in your faucet aerator. Remove and clean aerators every few months. (The aerator is the removable screen on the end of your faucet.)
3. ***Use cold water for cooking and drinking.*** Lead dissolves more easily in hot water. Use only cold water for cooking, drinking, or making baby formula. Boiling water does not remove lead. Flushing hot water tanks periodically is advisable.

4. *Know how your home is wired.* A grounding wire attached to pipes may cause materials to corrode more. Check with a licensed electrician to see if there is another location for this wire.
5. *Have your home tap water tested.* Contact the Ohio EPA for a list of certified labs that test for lead in water. Call 614-644-4245 or visit [www.epa.ohio.gov/ddagw/labcert](http://www.epa.ohio.gov/ddagw/labcert).
6. *Use a water filter.* If your water has elevated levels of lead, consider purchasing a home filter certified to remove lead. Find out more on filter certification at [www.nsf.org](http://www.nsf.org).

***Are there special steps I should take to protect my developing baby, infant or young children?***

Households with pregnant women, infants or young children should be especially aware of the potential for lead exposure through drinking water. If you suspect there may be lead in your home plumbing, consider having your water tested at a certified laboratory. If lead is detected, consider purchasing a filter certified for lead removal or using an alternate source of water until the problem is corrected. Babies and young children are most vulnerable to the harmful effects of lead at low levels. U.S. EPA estimates infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water.

***Is it safe to shower in water that contains lead?***

Because lead is not absorbed through the skin, bathing or showering in water containing lead is not considered a health risk.

***What does the City of Springfield do to prevent lead from getting into tap water?***

Springfield has an effective corrosion control strategy. To assist with preventing corrosive conditions that could cause leaching of lead, certified water operators add sodium hexametaphosphate to the water ahead of the rapid sand filters. The treatment process produces water that is slightly scaling (0 - +4) on the calcium carbonate saturation index, which creates a coating inside the pipes to serve as a barrier between the pipes and water.

Under the existing operating conditions, calcium carbonate precipitation and the addition of sodium hexametaphosphate represent an optimized corrosion control strategy. It protects public health and the city's infrastructure by avoiding corrosive conditions that could cause premature pipe failure.

Testing is done to ensure that optimal water quality parameters are met and that the treatment process continues to perform well. As required by Ohio EPA, 30 homes in the Springfield water distribution system are tested every three years for lead.

In addition to the optimal treatment process, when city-owned lead water service lines are encountered, those lines are replaced. (Service lines are the smaller water lines coming off the city's larger main water lines. From the main line to the shut off valve near the curb or sidewalk, the service line is city responsibility. From the valve to the home is homeowner responsibility, along with the plumbing inside the home.)

***Where can I review the results of Springfield's required lead in water testing?***

The results are published in the annual [Consumer Confidence Report \(CCR\)](#), which is mailed to customers each summer and is posted on the city's website. In 2014, the results ranged from below detectable limits (BDL) to 7.54 parts per billion (ppb), which is far below the USEPA lead action level of 15 ppb.

***How do I know if my home has a lead service line or lead plumbing?***

In Springfield, lead service lines are mostly in homes constructed before 1953. View the [Lead Service Line Map and Building Characteristics Map](#) to learn what is known about the service line connecting your home to the system or call 937-525-5800.

You may be able to determine on your own if your service line is made of lead. Service lines typically enter the home in the basement or crawl space. If the pipe is lead, it will have a dull finish that shines brightly when scratched with a key or coin. Using a magnet can also help you identify a lead pipe, because even a strong magnet will not cling to lead. Click [here](#) for step-by-step instructions on how to identify a lead service line.

***Who owns the lead service line?***

In Springfield, lead service lines are owned by the City of Springfield from the city's main line to the shut off valve near the curb or sidewalk, and the rest of the line is owned by the property owner. Replacing the entire lead service line is therefore a shared responsibility between the city and each customer.

***I live in an older home with older plumbing. How can I know if there may be lead at my tap?***

The only way for a customer to know with certainty if there may be lead at the tap is to have the water tested by a certified laboratory. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.ohio.gov/ddagw/labcert.aspx> or by calling (614) 644-4245. Information on lead in drinking water, testing methods, and

steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

All customers can protect themselves from lead or other contaminants by following this recommendation, regardless of the age of a home: whenever water in a building has not been used for six hours or more, run the tap for at least 30 seconds or until the water is cold. This ensures you are pulling fresh water from the city's mains, not what has been sitting in a building's pipes.

***I'm in a new house. Am I at risk?***

Very few homes constructed after 1952 have lead service lines, and those built after 1988 were required to use plumbing materials with no more than 8% lead. If you are concerned, consider having your water tested by a certified laboratory. Contact the Ohio EPA for a list of certified labs that test for lead in water. Call 614-644-4245 or visit [www.epa.ohio.gov/ddagw/labcert](http://www.epa.ohio.gov/ddagw/labcert).

***Do all home filters and other water treatment devices remove lead?***

No. If you purchase a water filter or home treatment device, make sure it is independently certified for lead removal and that you maintain it properly. Find out more on filter certification at [www.nsf.org](http://www.nsf.org).

***Can my pets drink water with lead?***

Lead can impact animals the same way it does humans. Because domestic animals consume a relatively high volume of water relative to their body weight, pet owners with lead in their home plumbing may want to take precautions.

***Is water the only source of lead in homes and businesses?***

No. In fact, lead in drinking water generally represents only about 20% of total exposure, according to the U.S. Centers for Disease Control and Prevention. However, drinking water can account for more than half of lead exposure in children because of their lower body weight. Additionally, because no level of lead is considered safe, completely eliminating potential sources of lead is strongly advised.

For questions on Springfield's water quality, please call the Water Treatment Plant Lab at 937-525-5883. For more information on lead at the tap, visit [www.DrinkTap.org](http://www.DrinkTap.org).