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## Portsmouth Water Division

### Lead - Frequently Asked Questions and Answers Updated April 26, 2016

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

Lead is a naturally occurring metal that is harmful if inhaled or swallowed. Lead can be found in air, soil, dust, food, and water.

#### **How can I be exposed to lead?**

The most common source of lead exposure is from paint in homes and buildings built before 1978. Lead-based paint and lead-contaminated dust are the main sources of exposure for lead in U.S. children. Lead-based paints were banned for use in housing in 1978.

Although the main sources of exposure to lead are ingesting paint chips and inhaling dust, lead also can be found in some household plumbing materials and some water service lines. The Environmental Protection Agency estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water. Infants who consume mostly mixed formula can receive 40 to 60 percent of their exposure to lead from drinking water.

#### **What are the risks of lead exposure?**

Lead can cause a variety of adverse health effects when people are exposed to it. These effects may include increases in the blood pressure of some adults; delays in normal physical and mental development in babies and young children; and, deficits in the attention span, hearing, and learning abilities of children.

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

Lead has not been detected in our source water or in the treated water flowing through the distribution system. More commonly, lead leaches into water over time through corrosion—a dissolving or wearing away of metal caused by a chemical reaction between water and your plumbing. Lead can leach into water from pipes, solder, fixtures, faucets (brass) and fittings. The amount of lead in your water depends on the types and amounts of minerals in the water, how long the water stays in the pipes, the water's corrosivity, and water temperature. Note: The City of Portsmouth implemented a Lead & Copper Corrosion Control Program in 2003 and has been in compliance requirements since its inception. The general purpose of the Lead & Copper Corrosion Control Program is to minimize the potential for water supplied by the City to leach potentially harmful metals such as lead and copper from pipes, fixtures and solder containing lead. The City of Portsmouth water supply sources do not contain measureable quantities of lead or copper.

- Corrosion of indoor plumbing can be effected by:
  - Water that has been put through a water softening system can accelerate the leaching of lead and copper and other metals from your household plumbing and water fixtures.
  - Hot water - Avoid cooking with or drinking water from the hot water tap. Hot water can dissolve lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it.
  - If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. Do not attempt to change the wiring yourself, because improper grounding can cause electrical shock and fire hazards.

### **How will I know if my drinking water has lead in it?**

The Portsmouth Water Division regularly tests the water at a selected number of homes according to the EPA's sampling requirements. If more than 10 percent of the samples show lead at above 15 micrograms per liter, we are required to notify all of our customers and provide instructions on what to do to limit lead exposure as required by the New Hampshire Department of Environmental Services (NHDES).

You can also have your water tested for lead. Since you cannot see, taste, or smell lead dissolved in water, testing is the only sure way of telling whether there are harmful quantities of lead in your drinking water. A list of certified laboratories is available at the NHDES website at:

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/documents/labs-private-wells.pdf>

### **Is my home at risk for lead plumbing?**

The EPA defines high-risk homes as follows:

- Homes with a lead service line that connects the water main (located under the street) to your home's internal plumbing.
- Homes with copper pipe and lead solder built after 1982 and before 1988.
- Homes with lead pipes.

In 1986, Congress enacted the "lead ban," which stated that not only public water systems, but also anyone else who intends to install or repair drinking water plumbing connected to a public water system, must use "lead free materials." As a result, homes built in or after 1988 are far less likely to have lead solder.

### **I'm concerned my home may have lead plumbing. How can I find out?**

If you're concerned your home plumbing may contain lead pipes (lead is a dull gray metal that is soft enough to be easily scratched with a house key) or if you see signs of corrosion (frequent leaks, rust-

colored water), you may want to have your water tested by a state certified laboratory. Testing is the only way to confirm if lead is present or absent.

### What Do Lead Service Lines Look Like?<sup>1</sup>



Lead service lines are generally a dull gray color and are very soft. You can identify them easily by carefully scratching with a key. If the pipe is made of lead, the area you've scratched will turn a bright silver color.

Do not use a knife or other sharp instrument and take care not to puncture a hole in the pipe.

Note: Galvanized piping can also be dull gray in color. A strong magnet will typically cling to galvanized pipes, but will not cling to lead pipes.



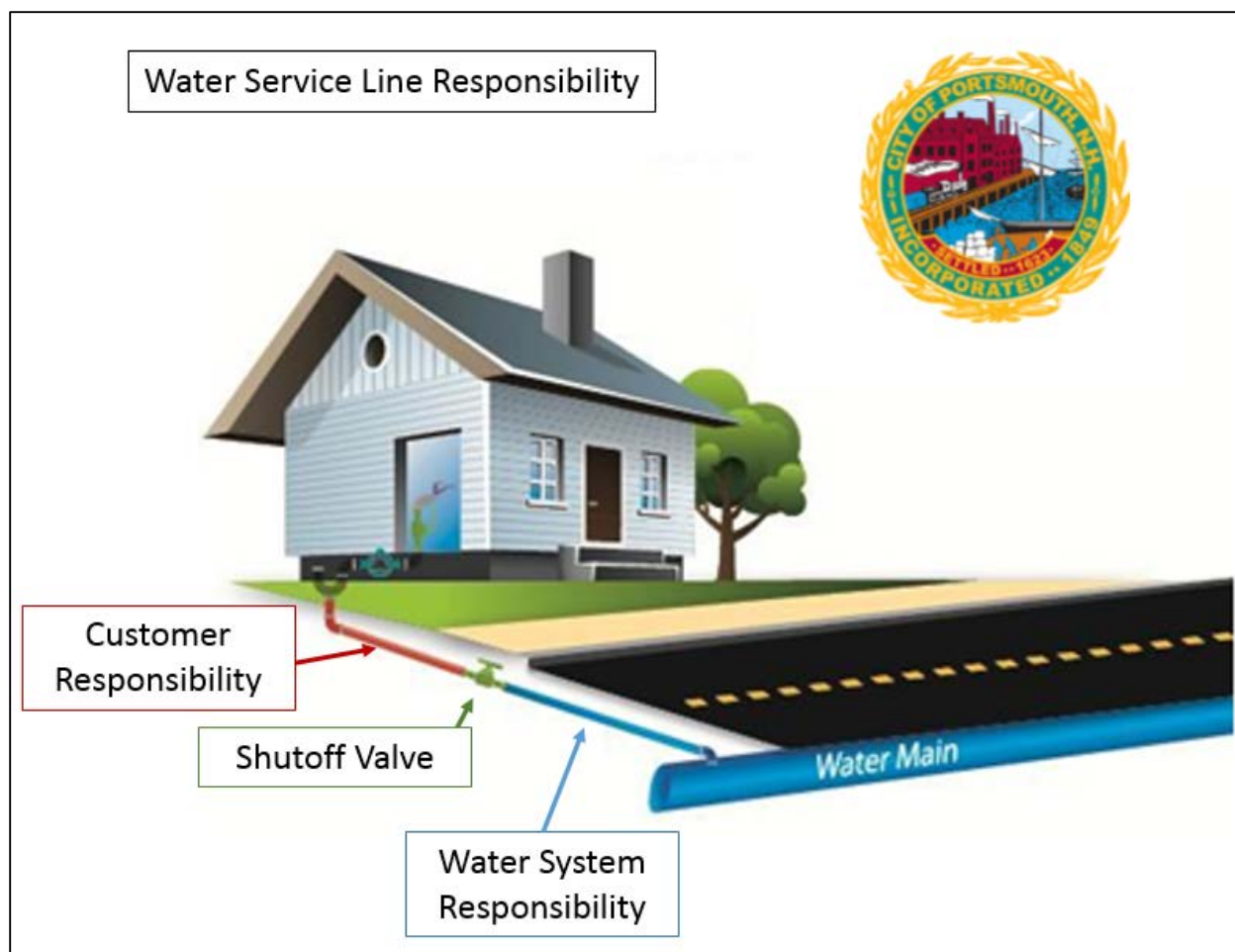
Lead service lines can be connected to the residential plumbing using solder and have a characteristic solder "bulb" at the end, a compression fitting, or other connector made of galvanized iron or brass/bronze.

### Will my water utility replace my lead service line?

The Portsmouth Water Division is responsible for the service line from the water main until it reaches the shutoff valve which is most often located at the property line. The service line from the shutoff into a building the customer's responsibility. Therefore, any lead services lines on a customer's property are not part of the public water system and are the responsibility of the property owner.

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<sup>1</sup> USEPA (2013), <http://epa.gov/region5/water/chicagoserviceline/>



### How can I reduce my exposure to lead in my drinking water?

There are many steps you can take to reduce your exposure to lead in drinking water:

- **Run your water to flush out lead.** If it hasn't been used for several hours, run the water for three to five minutes to clear any lead that may be in the water. (To conserve water, remember to catch the flushed tap water for plants or some other household use such as cleaning.)
- **Always use cold water for drinking, cooking, and preparing baby formula.** Never cook with or drink water from the hot water tap. Never use water from the hot water tap to make formula.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Periodically remove and clean the faucet screen/aerator.** While removed, run the water to eliminate debris.
- **You may consider investing in a home water treatment device or alternative water source.** When purchasing a water treatment device, make sure it is certified under [NSF/ANSI 53](#)

to remove lead. Search for certified products at [NSF International](#) (800-NSF-8010) or [Water Quality Association](#) (630-505-0160).

- **Identify and replace plumbing fixtures containing lead.** Brass faucets, fittings and valves may leach lead into drinking water. Products sold after Jan. 4, 2014, must by law, contain very low levels of lead. Section 1417 of the Safe Drinking Water Act (SDWA) establishes the definition for “lead free” as a weighted average of 0.25% lead calculated across the wetted surfaces of a pipe, pipe fitting, plumbing fitting, and fixture and 0.2% lead for solder and flux. The Act also provides a methodology for calculating the weighted average of wetted surfaces. The Act prohibits the “use of any pipe, any pipe or plumbing fitting or fixture, any solder, or any flux, after June 1986, in the installation or repair of (i) any public water system; or (ii) any plumbing in a residential or non-residential facility providing water for human consumption, that is not lead free.”
- **Have a licensed electrician check your wiring.** Your home electrical system may be attached to your service line or elsewhere in your plumbing. If this connection is electrified, it can accelerate corrosion. Check with a licensed electrician to correct ground faults and evaluate your local electric code to determine if your wiring can be grounded elsewhere. **DO NOT** attempt to change the wiring yourself because improper bonding or grounding can cause electrical shock and fire hazards.

#### **Should I test my children for exposure to lead?**

Children at risk of exposure to lead should be tested. Your doctor or local health center can perform a simple blood test to determine your child’s blood-lead level.

#### **Additional information**

Read the Portsmouth Water Division’s annual Water Quality consumer confidence report (CCR) on the City of Portsmouth’s website at: <http://cityofportsmouth.com/publicworks/waterqualityreports.htm> or call (603) 427-1530 if you have any questions.

Information about lead and copper corrosion control is available from the NHDES:

<http://des.nh.gov/organization/divisions/water/dwgb/lead-copper/index.htm>

And from the EPA:

<http://www.epa.gov/dwreginfo/lead-and-copper-rule#additional-resources>

And from the National Lead Information Center: 1-800-424-LEAD (or visit: [www.epa.gov/lead](http://www.epa.gov/lead))

\* Information for these Frequently Asked Questions was adapted from the American Water Works Association’s document “Communicating About Lead Service Lines: A Guide for Water Systems Addressing Service Line Repair and Replacement.”