

Health Effects, Sources of Lead

Studies have shown that lead can negatively affect almost every organ and system in the body and can result in serious health problems. Lead can build up and be stored in the body, causing long-term damage to all age groups. Adults can experience decreased kidney function, reproductive problems, heart disease and high blood pressure. Low levels of lead in the blood of children can result in physical and cognitive decline, such as decreases in IQ and attention span, slow growth or learning and behavior problems. Children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Learn more about preventing childhood lead poisoning at cdc.gov/lead.



Sources of Lead

Lead can be found in the air, the soil, the water and inside the home. Most sources result from human activities. A few examples of sources of lead are:

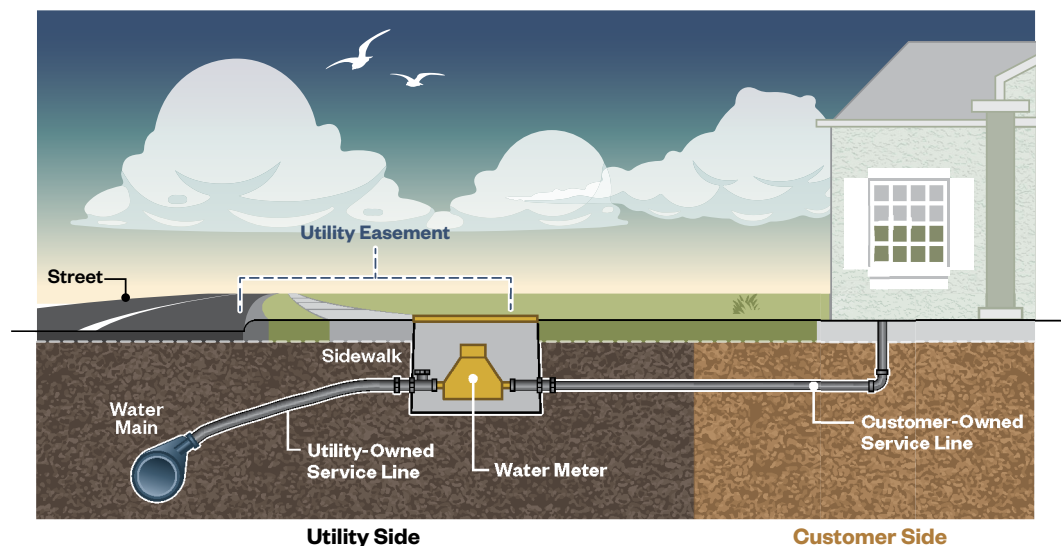
- Lead-based paint
- Lead-contaminated dust or soil
- Pottery, pewter and brass fixtures
- Food
- Cosmetics
- Lead on clothing or shoes carried from work areas or certain hobbies
- Toys, playground equipment and children’s metal jewelry

Lead in Drinking Water

Lead pipes are more likely to be found in older cities and homes built before 1986. Lead is seldom found as a natural contaminant in drinking water or in North Carolina’s water supplies, such as rivers and lakes; however, lead can enter the drinking water because of corrosion, or wearing away, of materials containing lead in household plumbing. These materials include pipes made of lead or lead-based solder used to join copper pipe, brass and chrome-plated brass faucets. Water service lines, which connect between the water meter box and the building or home, also could be made of lead. When present, lead service lines are typically the most significant source of lead in the water. SGWASA does not have record of any publicly-owned lead service lines and is currently evaluating private service line materials.

Lead Leaching Factors

When tap water stays in contact with plumbing and pipe materials for an extended amount of time, lead inside the piping has a greater opportunity to leach out into the drinking water. This means that the first water drawn from the tap after several hours of unuse (such as in the morning or later in the afternoon) can contain higher levels of lead.



Lead Reduction Steps

SGWASA

SGWASA does not have record of any publicly-owned lead service lines and is currently evaluating private service line materials. However, galvanized iron or steel water service line materials have the potential to have absorbed lead if materials containing lead or lead solder were ever connected upstream. The presence of lead pipes, lead plumbing materials or galvanized pipes does not mean there is lead in the drinking water. SGWASA customers may opt to follow lead reduction steps if concerned.



Run water to flush out lead.

After the tap has been unused for several hours, flush the water before using it for drinking or cooking. The longer water resides in plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet for about five minutes before drinking. To conserve water, capture and reuse the flushed water to irrigate a landscape plant or for cleaning.



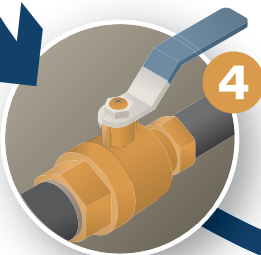
Use only cold water for cooking, drinking and preparing baby formula.

Do not cook with or drink water from the hot water tap. Hot water releases more lead from plumbing materials than cold water. If hot water is needed, draw water from the cold tap and then heat it.



Use bottled or filtered water.

Use bottled water or water that has been run through a filter certified as NSF 53 for lead removal and NSF 42 for particulate removal, for drinking and cooking. Maintain and replace filter device in accordance with the manufacturer's instructions to protect water quality.

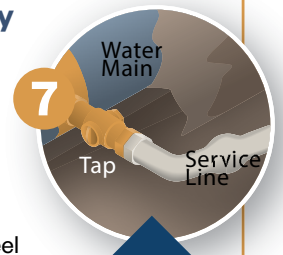


Identify and replace plumbing fixtures containing lead.

Plumbing fixtures installed prior to 2014 could contain higher levels of lead and should be replaced with new faucets. Current regulations have established a maximum lead concentration at an average of 0.25% for drinking water fixtures.

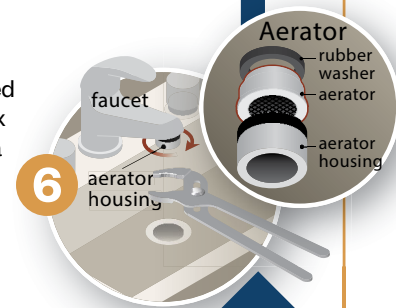
Determine if the private property has a service line made of lead or galvanized iron.

The presence of lead solder or lead service lines does not indicate that lead is present in the drinking water; however, lead materials increase the risk of lead seeping into the drinking water. Galvanized iron or steel water service line materials also have the potential to have absorbed lead if materials containing lead or lead solder were ever connected upstream. If that occurred, the absorbed lead could release into drinking water.



Clean aerators.

Aerators/screens should be cleaned periodically (once every three to six months) and more often following a service line replacement (once a month for six months). Aerators should be replaced if worn or damaged.



Test water for lead.

The NC Department of Health and Human Services provides a list of certified laboratories for water testing. If water tests show elevated lead levels, implement steps one through five. An elevated level of lead is considered any amount higher than zero for homes or facilities with infants, young children or pregnant women. Otherwise, elevated is considered 10 parts per billion or more.

