



## **Lead in Drinking Water — School Information Sheet**

The Division of Public Health (DPH) and the Department of Education (DOE) are committed to ensuring safe drinking water in all Delaware schools. This includes monitoring for the presence of lead in water systems and working with schools to help them reduce or eliminate any issues. Initial samples indicate lead may only be an issue at a limited number of fixtures in a small number of schools and did not indicate school wide problems. Resampling is occurring based on prioritization with resampling of schools with one or more exceedances having begun in April continuing until completion. Once completed, schools with samples at 50% of the EPA MCL will be done next.

### **Lead Risk**

Lead is toxic to children and adults. Young children are particularly vulnerable to lead because the physical and behavioral effects of lead occur at lower exposure levels in children than in adults. A dose of lead that would have little effect on an adult can have a significant effect on a child. In children, low levels of exposure have been linked to damage to the central and peripheral nervous system, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells. The Environmental Protection Agency (EPA) estimates that drinking water can make up 20% or more of a person's total exposure to lead.

### **Health Effects of Lead on Children**

- Behavior and learning problems
- Hyperactivity and lower IQ
- Slowed Growth
- Hearing Problems
- Anemia (low levels of red blood cells)

### **How Lead Can get in Your Child's School Water**

Lead can enter drinking water when plumbing materials containing lead corrode. The most common sources of lead in drinking water are copper pipe with lead solder, galvanized pipe, faucets, lead goose necks, and lead service lines (LSL). Typically, the most significant source of lead in water is due to LSLs. LSLs are lead pipes that connect the school or facility to the water main. Lead pipes are more likely to be found in structures built before 1986. For schools without LSLs, the most common lead source is plumbing with lead solder and brass or chrome-plated brass faucets.



Lead in drinking water sources. Source: W.K. Kellogg Foundation, *Managing Lead in Drinking Water at Schools And Early Childhood Education Facilities* (February 2016), reproduced from Edwards, 2009.

A number of factors are involved in the extent to which lead enters the water, including the chemistry of the water, temperature of the water, amount of wear in the pipes, how long the water stays in pipes (i.e., if the building was closed for a while and no water was run), and the amount of lead the water comes into contact with. To determine the source of lead in drinking water, specific sampling methods and onsite observations are used by experts during their assessment. Once the source has been identified, short-term and long-term solutions to the facility can be recommended by DPH.

## Solutions to Reduce Lead in Drinking Water

### Short-term

- Clean the faucet aerator
- Develop and implement a flushing program
- Install a point-of-use filter
- Temporarily shut off faucet or valve if site is used for consumption

### Long-term

- Replace the fountain/fixture
- Replace pipes or plumbing containing lead/lead solder
- Remove lead service lines

## What DPH and DOE are doing

DPH and DOE have completed preliminary sampling throughout all the school districts and charter schools in Delaware. Schools with results in exceedance of 0.015 mg/L are being resampled to better gauge risk, identify the source of lead and guide next steps. DPH will continue providing technical assistance to DOE and individual schools for exceedances, resampling, and risk reduction moving forward.

For more information or questions contact DPH, Health Systems Protection at <mailto:HSPContact@delaware.gov>

**Resources:**

- CDC “Sources of Lead: Water” <http://www.cdc.gov/nceh/lead/tips/water.htm>
- EPA “3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities” <https://www.epa.gov/system/files/documents/2021-07/epa-3ts-guidance-document-english.pdf>
- EPA “Basic Information about Lead in Drinking Water” <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>