

3Ts for Reducing Lead

in Drinking Water in Schools

Nearly 56 million Americans, including 53 million children, spend their days in schools. School officials need to know if the drinking water students, teachers, and staff consume contains elevated levels of lead because exposure to lead can cause serious health problems, particularly for young children. To help schools safeguard their occupants' health, the U.S. Environmental Protection Agency (EPA) developed the *3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance*. It provides the information schools need to:

- ▶ Identify potential sources of lead in their facilities,
- ▶ Monitor school drinking water for elevated lead levels,
- ▶ Resolve problems if elevated lead levels are found, and
- ▶ Communicate about their lead control programs.

Although public water systems that supply water to most schools may meet EPA's lead standards, lead can still get into school drinking water. As water moves through a school's plumbing system, lead can leach into the drinking water from plumbing materials and fixtures that contain lead. Testing is the best way for schools to know if there are elevated levels of lead in a facility's drinking water.

Ensuring that the water provided in your school is safe for children to drink is a fundamental responsibility. In addition to the health advantages, schools that voluntarily test drinking water and make information about their program available to the public will enjoy the following benefits:

- ▶ Enhanced credibility
- ▶ Positive publicity
- ▶ Parental and community support
- ▶ Stature as a standard-setting "best practices" facility

Health Effects of Exposure to Lead

Infants and children exposed to lead can experience:

- ▶ Delays in physical and mental development
- ▶ Lower IQ levels
- ▶ Reduced attention span
- ▶ Learning disabilities
- ▶ Hearing loss
- ▶ Hyperactivity
- ▶ Poor classroom performance



3Ts of Reducing Lead in Drinking Water in Schools

EPA developed the 3Ts (Training, Testing, and Telling) to help schools implement simple strategies for managing the health risks of lead in school drinking water.

- ▶ **Training** school officials to raise awareness of the potential occurrences, causes, and health effects of lead in drinking water; assist school officials in identifying potential areas where elevated lead may occur; and establish a testing plan to identify and prioritize testing sites.
- ▶ **Testing** drinking water in schools to identify potential problems and take corrective actions as necessary.
- ▶ **Telling** students, parents, staff, and the larger community about monitoring programs, potential risks, the results of testing, and remediation actions.

DOWNLOAD The *3Ts For Reducing Lead In Drinking Water In Schools: Revised Technical Guidance* at no cost by visiting www.epa.gov/safewater/schools or order a free copy by calling the Safe Drinking Water Hotline at 1-800-426-4791.



Sources of Lead Exposure

Lead is distributed in the environment by natural and human-made activity. (Past human activities are the major source of lead in the environment.)

Possible sources of lead include:

- ▶ **Lead-based paint** that can flake off into soil, window sills, or floors
- ▶ **Lead in the air** from industrial activities
- ▶ **Dust and soil** from roadways and streets where automobiles, which used leaded gas, travelled
- ▶ **Lead dust** brought home by industrial workers on their clothes and shoes
- ▶ **Lead in water** from the corrosion of plumbing products containing lead

Although most lead exposure occurs when people eat paint chips and inhale dust, EPA estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water.

Potential Sources of Lead In Drinking Water

- ▶ Lead solder
- ▶ Lead pipe and pipe fittings
- ▶ Fixtures, valves, meters and other system components containing brass
- ▶ Sediments

Start Your Lead in Drinking Water Control Program Today

The first step to implementing a successful lead control program is to read the recommendations found in the *3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance*. Schools can follow the straightforward guidance found in the 3Ts to:

- ▶ **Collect information on school drinking water and identify assistance to help implement a school lead control program.** The 3Ts provides tips on finding past testing results; asking water utilities for help or financial assistance; reaching out to state drinking water programs for support; and evaluating existing resources.
- ▶ **Develop a plumbing profile.** A plumbing profile helps schools identify potential problem areas and assess factors that contribute to lead problems. Lead contamination may not occur uniformly throughout a building and the 3Ts describes various factors that affect the likelihood of lead contamination in order to identify those areas as priorities for testing. Chapter 3 of the guidance provides tips on developing a school plumbing profile.
- ▶ **Develop a drinking water testing plan.** The results of a plumbing profile will help schools create their testing plans. Key issues to consider include who will be in charge of the effort; who will collect and analyze the samples and maintain records; and where samples will be taken. Chapter 3 of the guidance helps schools answer these questions and suggests possible sources of assistance for school testing efforts.
- ▶ **Test the facilities' drinking water for lead.** EPA recommends a two-step sampling process to test for lead in drinking water. The two-staged process will help schools determine if particular outlets have elevated lead levels *and* locate the source of the problem. The recommended testing plan allows schools to determine if the source of lead is at the sampled outlet or within the facility's interior plumbing. Schools will find detailed and easy-to-follow instructions on testing for lead in water in Chapter 4.
- ▶ **Correct problems when elevated lead levels are found.** Addressing elevated lead levels in school drinking water typically requires temporary and permanent solutions. Chapter 5 recommends short-term solutions to reduce the risk of exposure to lead in drinking water in schools and provides suggestions for permanent solutions, such as replacing pipes, fixtures, or faucets containing lead with lead-free alternatives.
- ▶ **Communicate with the school community about a school lead control program.** Lead is a serious public health risk and monitoring school drinking water for lead is one important way schools can protect their community's health. Schools will benefit if they communicate about their lead monitoring program with students, teachers, staff, parents, and other members of the school community. Chapter 6 of the guidance provides communication strategies and sample materials schools can use.



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