On Cue with DEQ Drinking Water

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Assessing Lead in Drinking Water in Arizona Schools & Day Care Facilities

How-To-Manual Offers an Opportunity for Water Providers to Assist Facilities Serving Children

A unique opportunity for public water utilities to protect the health of Arizona's youth is presented with the recent publication of a 28 page guidance manual to assess lead in drinking water in Arizona schools and day care centers.

Distribution of the manual provides a chance for water systems to partner with local school and day care facilities to ensure that lead contamination is not a problem and students are not at risk from this potentially harmful pollutant. Providers can voluntarily offer assistance to develop a plumbing profile, determine proper sampling locations, make laboratory referrals, or recommend and implement correctional measures. They can also participate in public awareness efforts.

Local school districts and day care centers have received a copy of the state manual which was produced by ADEQ's Children's Environmental Health Project. ADEQ Director Steve Owens initiated the manual when dangerous levels of lead were found in Washington D.C. area drinking water used by school children.

Water is routinely tested by school districts, and to date there is no known lead contamination at an Arizona school, according to Director Owens. As a precautionary measure, the informational how-to manual advises schools and day care centers what steps they should take to monitor lead levels as well as measures to correct problems if they are detected.

Background

Lead is a toxic metal that can cause serious damage to the brain, kidneys, nervous system and red blood cells. Children are especially at risk because of their absorption of nutrients through rapid physical development. Lead has been linked to learning disabilities, hearing loss, attention deficit disorders, and irreversible neurological damage.

The major source of exposure for children in the United States is lead-based paint and lead-contaminated dust found in older buildings. However, lead in drinking water in schools and child care centers is also a concern.

Lead contamination can occur even if a school's water provider is in compliance with drinking water regulations because schools can have extended periods of non-use that may allow lead to leach out of plumbing and water fixtures into water ***within a building's plumbing system***. This could occur over weekends, holiday breaks, or summer recess.

Even with new fixtures, lead can be present in various parts of the plumbing system such as lead solder, brass fixtures, and lead or galvanized pipes.

The amount of lead leached will depend on many factors such as length of contact time, type of construction materials, pH, and temperature of the water. In addition, chlorine levels, velocity of flow, age and condition of pipes and the presence of electrical wires grounded to water pipes can affect the rate at which water absorbs lead.

"The best way to be certain that lead is not a problem is to test for its presence and fix any problems that are found," Director Owens said. "We developed this manual out of an abundance of caution to help schools eliminate potential environmental risks from lead to our kids' health. We wanted to be proactive and get this information out to the schools, rather than waiting for a problem to develop."

Guidance Document

The manual outlines a process to help school/day care administrators and system operators:

- Assess a school's plumbing system for potential lead contamination by developing and understanding a profile of the facility plumbing;
- Collect drinking water samples for analysis by a licensed laboratory by determining sampling locations and conducting initial and follow-up screening;
- (If there is lead contamination detected by sampling and analysis) identify actions that can be taken to resolve the immediate problem as well as control it through long-term measures;
- Provide public education and public notice with an effective communication strategy.

Since the ADEQ manual has been widely distributed to schools and day care facilities, voluntary implementation of the testing program is key. Drinking water providers can play a proactive role to protect youth from lead exposure by forming partnerships with local authorities to promote awareness and ensure drinking water is tested and monitored for the toxic metal.

Copies of the manual can be obtained from ADEQ's Web site at www.azdeq.gov/download/lead.pdf.

For Further Information

ADEQ, WQD, Drinking Water Section (602) 771-4644
www.epa.gov/safewater/dwinfo.htm
www.epa.gov/safewater/lead/leadfacts.html
EPA Safe Drinking Water Hotline (800) 426-4791