

Model State Legislation: “Get the Lead Out of School Drinking Water Act”

Frequently Asked Questions

Q. Why do we need to regulate lead in drinking water in schools?

- A. Lead is a poisonous heavy metal that can affect almost every organ and system in the human body, often with irreversible effects. Children and pregnant women are particularly vulnerable. Lead can be present in our drinking water because it is contained in plumbing fixtures, fittings, pipes, and solder. Many schools and buildings that house day care facilities are old and have old plumbing with high lead content, and even new plumbing often is not free of lead.

Schools are the places where children spend the most time when not at home, making schools important places to address environmental hazards. From the first bus run, through the school day, and to after-school activities, children can spend over 35 hours per week at school. In addition to children, school staff can also be at risk. Women comprise a majority of the staff at schools and child care facilities, and many of them are of child-bearing age or can be pregnant.

Q. Who is most affected by lead?

- A. Young children and fetuses are most susceptible to the adverse effects of lead. Even at very low levels once considered safe, lead can cause serious, irreversible damage to the developing brains and nervous systems of babies and young children.¹ Lead can decrease a child’s cognitive capacity, cause behavior problems, and limit the ability to concentrate—all of which, in turn, affect the ability to learn in school.² Children with serious lead-related brain impacts are less likely to graduate from high school and more prone to delinquency, teen pregnancy, violent crime, and incarceration.³

Lead can cross the placental barrier of a pregnant mom into the womb and harm the fetus.⁴ As the Centers for Disease Control and Prevention (CDC) notes, “Even low-level lead exposures in developing babies have been found to affect behavior and intelligence. Lead exposure can cause miscarriage, stillbirths, and infertility (in both men and women).”⁵ And, even in otherwise

¹ Advisory Committee on Childhood Lead Poisoning Prevention, Centers for Disease Control and Prevention, “Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention,” 2012, www.cdc.gov/nceh/lead/acclpp/final_document_030712.pdf.

² Ibid.

³ Ibid; see also J.P. Wright et al., “Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood,” *PLoS Med.* 5, no. 5 (May 27, 2008): 2008: e101, www.ncbi.nlm.nih.gov/pmc/articles/PMC2689664/; S.D. Lane et al., “Environmental Injustice: Childhood Lead Poisoning, Teen Pregnancy, and Tobacco,” *J Adolesc Health* 42, no. 1 (Jan. 2008):43-9.; R. Nevin, “How Lead Exposure Relates to Temporal Changes in IQ, Violent Crime, and Unwed Pregnancy,” *Environ Res.* 83, no. 1 (May 2000):1-22; R. Levin, “Reducing Lead in Drinking Water,” U.S. Environmental Protection Agency, 1986, <https://nepis.epa.gov/Exe/ZyPDF.cgi/2000911C.PDF?Dockey=2000911C.PDF>.

⁴ CDC, “Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women, 2010,” www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf.

⁵ CDC, “Lead: Information for Workers: Health Problems Caused by Lead,” last updated September 2013, www.cdc.gov/niosh/topics/lead/health.html.

healthy adults, lead exposure can cause adverse cardiovascular and kidney effects, cognitive dysfunction, and elevated blood pressure.⁶

Q. Is there any safe level of lead?

A. No. The [Centers for Disease Control and Prevention \(CDC\)](#),⁷ [American Academy of Pediatrics](#)⁸ and the [World Health Organization](#)⁹ all state that there is no safe level of lead exposure.

Q. Does this model legislation apply only to public schools?

A. No. It applies to all types of schools – public, private, and charter schools. It also applies to child care facilities. The reason for this broad coverage is that all children face the risk of ingesting lead from drinking water – they face the same risks of lead contamination whether they are cared for in schools or in child care facilities.

Q. Does the U.S. Environmental Protection Agency (EPA) regulate lead in drinking water in schools and child care facilities?

A. Generally, no. EPA only has a voluntary program set forth in its “3Ts – Training, Testing, and Taking Action”¹⁰ toolkit (updated September 2018). It provides useful information, but unless a school or child care facility operates its own drinking water system, EPA does not require them to reduce lead in drinking water. In 1988, Congress established a mandatory testing program in schools, but it was struck down on technical grounds. [Acorn v. Edwards](#), 81 F.3d 1387 (1996). That’s why it’s so necessary for states to take the lead and adopt a program to reduce lead in drinking water in schools.

Q. What are the key provisions of this model legislation? What does it require?

A. In a nutshell, this model legislation requires that schools and day care facilities install and maintain filters on drinking water sources, test the water for lead concentrations once each year (after installation of the filters), and then remediate if the filtered water still contains lead, as necessary.

⁶ CDC, Adult Blood Lead Epidemiology & Surveillance (ABLES), last updated December 2015, www.cdc.gov/niosh/topics/ables/description.html.

⁷ CDC, “What Do Parents Need to Know to Protect Their Children?,” https://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm.

⁸ American Academy of Pediatrics: Lead Exposure in Children, <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/Lead-Exposure-in-Children.aspx>

⁹ World Health Organization: Lead Poisoning and Health, <https://www.who.int/en/news-room/fact-sheets/detail/lead-poisoning-and-health>.

¹⁰ USEPA, 3Ts for Reducing Lead in Drinking Water Toolkit, <https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit>.

- Q. What is the level of lead concentration in drinking water at which schools and child care facilities need to take action after testing?**
- A. The maximum level for lead in school drinking water recommended by the [American Academy of Pediatrics](#)¹¹ is one part per billion (1 ppb). There is no safe level of lead for our children, but right now this is the level at which lead can be detected most reliably through testing by a certified lab. Schools are required to provide alternative water sources pending remediation under the model bill.
- Q. Why does this model legislation mandate the installation of filters first and then testing?**
- A. The reason is simple: testing programs around the country demonstrate that lead is prevalent in drinking water in schools, and the levels can change a lot from day to day. In other words, we know that lead will be detected in unfiltered drinking water in schools. This is because virtually no installed plumbing fixtures are completely free from lead. Even today, federal law allows up to 0.25 percent of lead in plumbing fixtures and fittings; older plumbing can contain much higher amounts of lead. We also know that filtration works when filters are properly installed and maintained. Washington, D.C. took the necessary step to require filtration first and then testing. That sequence best protects our children. This model legislation follows that necessary approach.
- Q. Are drinking water fountains and plumbing fixtures that are completely free from lead available for use in schools?**
- A. Generally, no. Federal law allows up to 0.25 percent of lead in plumbing fixtures and fittings (and allows them to be called “lead-free” even if they contain this much lead).¹² To date, while there are a few claimed truly no-lead plumbing products, plumbing manufacturers generally have not successfully produced such products that are truly free of all lead.
- Q. The model legislation refers to “first-draw” and “follow-up” samples. What are those?**
- A. First-draw and follow-up samples are two kinds of drinking water samples that are taken at schools. Both samples are collected before the facility is open and before any fixture is used. The first draw sample would be collected after overnight stagnation – when water sat in the pipe for at least 8 hours, with a range from 8-18 hours. It’s called “first-draw” because it’s collected immediately after opening the faucet or valve. Follow-up flush samples are taken after the water has run for 30 seconds. The first draw could identify lead in the outlet itself, while the follow-up flush sample could determine if the lead is in the interior plumbing.

¹¹ American Academy of Pediatrics: With No Amount of Lead Exposure Safe for Children, American Academy of Pediatrics Calls For Stricter Regulations, available online at <https://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/With-No-Amount-of-Lead-Exposure-Safe-for-Children,-American-Academy-of-Pediatrics-Calls-For-Stricter-Regulations.aspx>.

¹² See EPA, Use of Lead Free Pipes, Fittings, Fixtures, Solder and Flux for Drinking Water, available online at <https://www.epa.gov/dwstandardsregulations/use-lead-free-pipes-fittings-fixtures-solder-and-flux-drinking-water>.

Q. How can schools pay for the filters, testing, and other improvements to keep our kids safe?

A. When a state legislature adopts this model legislation, it should also commit to funding the required filtration, testing, and remediation. In other words, schools should not have to pay for this program out of their already-stretched school budgets. This model legislation also identifies other potential federal funding sources under the Affordable Care Act, the national school breakfast and lunch programs, the Child and Adult Care Food Program, and an EPA lead in school drinking water testing grant program. The federal government also has some funds available under the America's Water Infrastructure Act and the Water Infrastructure Finance and Innovation Act to help schools and child care facilities address lead in water issues.¹³

Q. Would this legislation place a burden on schools and child care facilities?

A. While the requirements in this model legislation would add more responsibilities to schools and child care facilities, the health risk to children is so great and thus requires this stepped-up response to keep them safe. The state department of health (or other state agency that regulates drinking water) is required to provide guidance to schools and child care facilities, including training to school custodians on maintenance of filters and plumbing fixtures.

Q. Will parents and staff be informed of test results?

A. Yes. Sharing of information is a central and critical part of this model legislation. Schools and child care facilities would be required to provide information on the health effects of lead exposure, lead testing results, and remediation plans. The test results are also required to be submitted to the state in a common electronic format so that anyone can review and analyze the data.

Q. Does this legislation include replacement of lead service lines?

A. Yes. While schools are less likely to have lead service lines than private homes (because their higher water needs require a bigger pipe coming into the schools that would not typically be a lead service line), some schools and child care facilities may have lead service lines. In those instances, the water utility providing the water is required to replace the lead service lines at no cost to the school or child care facility.

¹³ For a summary of these provisions, including the \$20 million in federal funding already appropriated to help schools and child care centers test for lead, and authorization for additional funds to help them address their lead in water issues, see Congressional Research Service, America's Water Infrastructure Act of 2018 (P.L. 115-270): Drinking Water Provisions, March 28, 2019, available online at <https://crsreports.congress.gov/product/pdf/R/R45656>.